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Exam Name: Microsoft Power Platform Developer



## 01 - Create a technical design

### Case study

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At the end of this case study, a review screen will appear. This screen allows you to review your answers and to make changes before you move to the next section of the exam. After you begin a new section, you cannot return to this section.

To start the case study

To display the first question in this case study, click the Next button. Use the buttons in the left pane to explore the content of the case study before you answer the questions. Clicking these buttons displays information such as business requirements, existing environment, and problem statements. If the case study has an All Information tab, note that the information displayed is identical to the information displayed on the subsequent tabs.

When you are ready to answer a question, click the Question button to return to the question.

### Background

Bellows Sports is the region's newest, largest, and most complete sports complex. The company features baseball and soccer fields and two full-size hockey rinks. The complex provides coaching, recreational leagues, a pro shop, and state-of-the-art customer and player amenities.

The company is organized into the following divisions:

Baseball

Hockey

Soccer

Bellow Sports runs tournaments several times per year. Each tournament runs six weeks.

### Current environment

#### Requirements

Bellow Sports tracks players and events in Microsoft Excel workbooks and uses email to communicate with players, partners, and prospective customers. The company uses a proprietary cloud-based accounting system.

The company relies on referrals from athletes for new business. Bellows uses a third-party marketing company to gather feedback and referrals from athletes. The third-party marketing company uploads a Microsoft Excel file containing lists of potential customers and players to the FTP site that Bellows Sports maintains.

### Tournaments

Customer information is stored in the Accounts entity. Each tournament record must list the associated sales representative as the tournament owner. When team members create tournament records they must enter the start date for a tournament. The end date of the tournament must be automatically calculated.

### Registration form

You must create a form to allow players to register for tournaments. The registration form must meet the following requirements:

Division	Requirement
Baseball	Capture the age and weight of the player. The height field must not display.
Hockey	Capture the age, height, and weight of the player.
Soccer	Capture the age of the player. The height and weight fields must not display.

Each division has tournaments that take place in specific locations. Users must be able to select the division for a tournament location.

Information about upcoming tournaments must be pre-located into the registration form when the registration form loads.

The form must include a custom button that sends an email confirmation to the player after the player registers.

The button must not be visible until after the form is saved.

### Security

The company identifies the following job roles:

Role	Tasks
Sales representative	These users will enter data into Dynamics 365 Customer Service.
Intern	These users will create Power Apps apps, and connectors, and create Power Automate flows.
Manager	These users will add users, assign security roles, and manage data storage.

You must grant users the minimum permissions required to perform their job tasks.

#### Data automation

Customer name must be added to Dynamics 365 Finance automatically after it is entered.

You must produce a report that details the number of registrations for a day and send the report as a PDF to the management team.

You must implement mechanisms to handle all code-related errors.

When a customer record is updated, the system must look up the account number for the customer in the accounting system.

Referrals must be imported into the system as soon as they are available.

#### Issues

##### Apps

The captions for the New and Save buttons do not render properly on the form.

Interns can create apps but cannot interact with their own data.

##### Portal

The query for all registered users must return the data categorized by division. Queries must return only the Name and Sport fields. Queries return all fields. The query is as follows:

```
GET [Organization URI]/api/data/v9.1/accounts?
&$orderby=Name, sport
&$filter=sport ne null
```

#### Solution checker issues

You run solution checker and observe Plug-in or workflow activity errors in the following code sets:

Set	Code	Error message
Code set 1	CS101 var columns = new ColumnSet(); CS102 columns.AllColumns = true; CS103 var query = new QueryExpression("account"); CS104 query.ColumnSet = columns; CS105 var results = service.RetrieveMultiple(query);	il-specify- column
Code Set 2	CS201 WebRequest request = WebRequest.Create ("https://www.bellows.com/api/stuff"); CS202 HttpWebResponse response = new HttpWebResponse(); CS203 CS204 response = request.GetResponse(); CS205 response.Close();	il-turn-off- keepalive

#### Code

The following code runs when the registration form loads. You must implement a mechanism to handle errors that occur in the code:

UpdateRecord.js (Line numbers are included for reference only.)

```
UR01  
UR02 var data =  
UR03 {  
UR04   "name" : "Updated Account"  
      "credithold" : true,  
      "description" : "This is an account update",  
      "revenue" : 10,000,  
      "Division" : 2  
UR05 }  
UR06
```

#### QUESTION 1

##### DRAG DROP

You need to select connectors for the app.

Which types of connectors should you use? To answer, drag the appropriate connectors to the correct requirements. Each connector may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:

Connectors	Requirement	Connectors
Create a custom connector.	View full registration records.	
Use an AppSource connector.	View customer names.	
Use a native application function.	View daily registrations.	
Create a connector with a Postman collection.		

Correct Answer:

Connectors	Requirement	Connectors
	View full registration records.	Create a custom connector.
	View customer names.	Use an AppSource connector.
Create a connector with a Postman collection.	View daily registrations.	Use a native application function.

Section:

Explanation:

Box 1: Create a custom connector A custom connector is a wrapper around a REST API (Logic Apps also supports SOAP APIs) that allows Logic Apps, Power Automate, or Power Apps to communicate with that REST or SOAP API.

Box 2: Use an AppSource connector You can only retrieve the Customer, UnifiedActivity, and Segments entities through the Power Apps connector. Other entities are shown because the underlying connector supports them through triggers in Power Automate.

Scenario: Customer information is stored in the Accounts entity.

Box 3: Use a native application function

You must produce a report that details the number of registrations for a day and send the report as a PDF to the management team.

Reference:

<https://docs.microsoft.com/en-us/connectors/custom-connectors/>

<https://docs.microsoft.com/en-us/dynamics365/customer-insights/audience-insights/export-power-apps>

## 02 - Create a technical design

Case study

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Background

Current environment

Adventure Works Cycles wants to replace their paper-based bicycle manufacturing business with an efficient paperless solution. The company has one manufacturing plant in Seattle that produces bicycle parts, assembles bicycles, and distributes finished bicycles to the Pacific Northwest.

Adventure Works Cycles has a retail location that performs bicycle repair and warranty repair work. The company has six maintenance vans that repair bicycles at various events and residences.

Adventure Works Cycles recently deployed Dynamics 365 Finance and Dynamics 365 Manufacturing in a Microsoft-hosted environment for financials and manufacturing. The company plans to leverage the Microsoft Power Platform to migrate all of their distribution and retail workloads to Dynamics 365 Unified Operations.

The customer uses Dynamics 365 Sales, Dynamics 365 Customer Service and Dynamics 365 Field Service.

Retail store information

Adventure Works Cycle has one legal entity, four warehouses, and six field service technicians.

Warehouse counting is performed manually by using a counting journal. All warehouse boxes and items are barcoded.

The Adventure Works Cycles retail location performs bicycle inspections and performance tune-ups.

Technicians use paper forms to document the bicycle inspection performed before a tune-up and any additional work performed on the bicycle.

Adventure Works Cycles uses a Power Apps app for local bike fairs to attract new customers.

A canvas app is being developed to capture customer information when customers check in at the retail location. The app has the following features:

- Customer selects yes or no if they are on the mailing list.
- Customer selects the amount of times they have visited the store.
- Customer selects the type of service needed.
- The search result returns all last name records that match the search term.

Technology

Requirements

A plug-in for Dynamics 365 Sales automatically calculated the total billed time from all activities on a particular customer account, including sales representative visits, phone calls, email correspondence, and repair time compared with hours spent.

A shipping API displays shipping rates and tracking information on sales orders. The contract allows for 3,000 calls per month.

Ecommerce orders are processed in batch daily by using a manual import of sales orders in Dynamics 365 Finance.

Microsoft Teams is used for all collaboration.

All testing and problem diagnostics are performed in a copy of the production environment.

Customer satisfaction surveys are recorded with Microsoft Forms Pro. Survey replies from customers are sent to a generic mailbox.

Automation

A text message must be automatically sent to a customer to confirm an appointment and to notify when a technician is on route that includes their location.

Ecommerce sales orders must be integrated into Dynamics 365 Finance and then exported to Azure every night.

A text alert must be sent to employees scheduled to assist in the repair area of the retail store if the number of repair check-ins exceeds eight.

Submitted customer surveys must generate an email to the correct department. Approval and follow-up must occur within a week.

Reporting

The warehouse manager's dashboard must contain warehouse counting variance information.

A warehouse manager needs to quickly view warehouse KPIs by using a mobile device.

Power BI must be used for reporting across the organization.

User experience

Warehouse counting must be performed by using a mobile app that scans barcodes on boxes.

All customer repairs must be tracked in the system no matter where they occur.

Qualified leads must be collected from local bike fairs.

Issues

Warehouse counting must be performed by using a mobile app that scans barcodes on boxes.



All customer repairs must be tracked in the system no matter where they occur.

Qualified leads must be collected from local bike fairs.

Internal

User1 reports receives an intermittent plug-in error when viewing the total bill customer time.

User2 reports that Azure consumption for API calls has increased significantly to 100 calls per minute in the last month.

User2 reports that sales orders have increased.

User5 receives the error message: 'Endpoint unavailable' during a test of the technician dispatch ISV solution.

The parts department manager who is the approver for the department is currently on sabbatical.

External

CustomerB reports that the check-in app returned only one search result for their last name, which is not the correct name.

Nine customers arrive in the repair area of the retail store, but no texts were sent to scheduled employees.

Customers report that the response time from the information email listed on the Adventure Works Cycles website is greater than five days.

CustomerC requested additional information from the parts department through the customer survey and has not received a response one week later.

### QUESTION 1

You need to improve warehouse counting efficiency.

What should you create?

- A. a flow that updates the warehouse counts as the worker performs the count
- B. a model-driven app that allows the user to key in inventory counts
- C. A Power BI dashboard that shows the inventory counting variances
- D. a canvas app that scans barcodes to allow a warehouse worker to select inventory counts

**Correct Answer: D**

**Section:**

**Explanation:**

Scenario: Warehouse counting is performed manually by using a counting journal. All warehouse boxes and items are barcoded.

### QUESTION 2

You need to replace the bicycle inspection forms.

Which two solutions should you use? Each answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. a flow that maps inspection data to Dynamics 365 Field Service
- B. a logic app that guides the technician through the inspection
- C. a canvas app that guides the technician through the inspection
- D. a model-driven app based on customer service entities

**Correct Answer: A, D**

**Section:**

**Explanation:**

Scenario: The Adventure Works Cycles retail location performs bicycle inspections and performance tune-ups.

Technicians use paper forms to document the bicycle inspection performed before a tune-up and any additional work performed on the bicycle.

A: The Dynamics 365 Field Service business application helps organizations deliver onsite service to customer locations. The application combines workflow automation, scheduling algorithms, and mobility to set mobile workers up for success when they're onsite with customers fixing issues.

D: Compared to canvas apps, model-driven apps in PowerApps are based on underlying data. Specifically, the data stored in Common Data Service (CDS). All model-driven apps are integrated into CDS. In fact, most Microsoft apps are integrated into CDS because most Microsoft apps, including the entire Dynamics 365 (D365) platform, are model-driven apps.

Incorrect Answers:



B: An Azure Logic App would not be fit for scale. Azure Logic Apps is a cloud service that helps you schedule, automate, and orchestrate tasks, business processes, and workflows when you need to integrate apps, data, systems, and services across enterprises or organizations.

Reference: <https://docs.microsoft.com/en-us/dynamics365/field-service/overview> <https://global.hitachi-solutions.com/blog/canvas-vs-model-driven-apps>

### 03 - Create a technical design

#### QUESTION 1

You are building a custom application in Azure to process resumes for the HR department.

The app must monitor submissions of resumes.

You need to parse the resumes and save contact and skills information into the Common Data Service.

Which mechanism should you use?

- A. Power Automate
- B. Common Data Service plug-in
- C. Web API
- D. Custom workflow activity

**Correct Answer: A**

**Section:**

**Explanation:**

Improve operational efficiency with a unified view of business data by creating flows that use Dataverse (Common Data Service has been renamed to Microsoft Dataverse as of November 2020).

For example, you can use Dataverse within Power Automate in these key ways:

Create a flow to import data, export data, or take action (such as sending a notification) when data changes.

Instead of creating an approval loop through email, create a flow that stores approval state in an entity, and then build a custom app in which users can approve or reject items.

Reference: <https://docs.microsoft.com/en-us/power-automate/common-data-model-intro>

#### QUESTION 2

A company manages capital equipment for an electric utility company. The company has a SQL Server database that contains maintenance records for the equipment.

Technicians who service the equipment use the Dynamics 365 Field Service mobile app on tablet devices to view scheduled assignments. Technicians use a canvas app to display the maintenance history for each piece of equipment and update the history.

Managers use a Power BI dashboard that displays Dynamics 365 Field Service and real-time maintenance data.

Due to increasing demand, managers must be able to work in the field as technicians.

You need to design a solution that allows the managers to work from one single screen.

What should you do?

- A. Add the maintenance history app to the Field Service Mobile app.
- B. Add the manager Power BI dashboard to the Field Service mobile app.
- C. Create a new maintenance canvas app from within the Power BI management dashboard.
- D. Add the maintenance history app to the Power BI dashboard.

**Correct Answer: D**

**Section:**

**Explanation:**

Power BI enables data insights and better decision-making, while Power Apps enables everyone to build and use apps that connect to business data. Using the Power Apps visual, you can pass context-aware data to a canvas app, which updates in real time as you make changes to your report. Now, your app users can derive business insights and take actions from right within their Power BI reports and dashboards.

Reference: <https://docs.microsoft.com/en-us/powerapps/maker/canvas-apps/powerapps-custom-visual>

#### QUESTION 3

A company has an application that provides API access. You plan to connect to the API from a canvas app by using a custom connector.

You need to request information from the API developers so that you can create the custom connector.  
Which two types of files can you use? Each correct answer presents a complete solution.  
NOTE: Each correct selection is worth one point.

- A. YAML
- B. WSDL
- C. OpenAPI definition
- D. Postman collection

**Correct Answer: C, D**

**Section:**

**Explanation:**

OpenAPI definitions or Postman collections can be used to describe a custom connector.

Reference: <https://docs.microsoft.com/en-us/connectors/custom-connectors/faq>

#### QUESTION 4

You plan to create a canvas app to manage large sets of records. Users will filter and sort the data.  
You must implement delegation in the canvas app to mitigate potential performance issues.  
You need to recommend data sources for the app.  
Which two data sources should you recommend? Each correct answer presents a complete solution.  
NOTE: Each correct selection is worth one point.

- A. SQL Server
- B. Common Data Service
- C. Azure Data Factory
- D. Azure Table Storage

**Correct Answer: A, B**

**Section:**

**Explanation:**

Delegation is supported for certain tabular data sources only. If a data source supports delegation, its connector documentation outlines that support. For example, these tabular data sources are the most popular, and they support delegation:

Power Apps delegable functions and operations for Microsoft Dataverse Power Apps delegable functions and operations for SharePoint Power Apps delegable functions and operations for SQL Server Power Apps delegable functions and operations for Salesforce reason 1--> Azure data factory is not mentioned in MS documentation reason 2 --> Azure is not an actual data (questions asks for data sources) source but ETL a service for scale-out serverless data integration and data transformation.<https://docs.microsoft.com/en-gb/powerapps/maker/canvas-apps/delegation-overview>

#### QUESTION 5

DRAG DROP

You are researching integrations with several external systems.  
Each integration has different requirements.  
You need to determine which data sources to use to meet each requirement.

What should you use? To answer, drag the appropriate data sources to the correct requirements. Each data source may be used once, more than one, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

**Select and Place:**





Answer Area		
Objects	Requirement	Object
Virtual entity	Support records that use an integer as a primary key.	
Custom connector	Ensure that data can be read and updated.	
	Ensure that data is available to all Common Data Service clients.	

Correct Answer:

Answer Area		
Objects	Requirement	Object
Virtual entity	Support records that use an integer as a primary key.	Virtual entity
Custom connector	Ensure that data can be read and updated.	Virtual entity
	Ensure that data is available to all Common Data Service clients.	Custom connector

Section:

Explanation:

Box 1: Virtual entity Initially, defining a virtual entity is the same as defining a custom entity: you specify the entity, attributes, and relationships for the new virtual entity type.

You can use GUIDs as primary keys in the external data source.

Box 2: Virtual entity Virtual entities enable the integration of data residing in external systems by seamlessly representing that data as entities in Microsoft Dataverse (Common Data Service), without replication of data and often without custom coding. Virtual entities support create, updates and delete of data in the external system.

Box 3: Custom connector A custom connector is a wrapper around a REST API (Logic Apps also supports SOAP APIs) that allows Logic Apps, Power Automate, or Power Apps to communicate with that REST or SOAP API.

Reference:

<https://docs.microsoft.com/en-us/powerapps/developer/common-data-service/virtual-entities/get-started-ve>

## QUESTION 6

HOTSPOT

You work for a staffing company that helps employees fill temporary jobs. Available temporary jobs are categorized and listed on a secure area of the company's website.

The company wants to eliminate manual work that relates to job and candidate management. The company plans to invite employers with available jobs and job candidates to view jobs by sending personalized invitations.

The company identifies the following requirements:

Human resources team members from the staffing company must be able to access the jobs listing and post available positions.

Employers seeking temporary employees must also be able to access the jobs listing and post available positions.

Approved job candidates must be notified about new positions for which they are qualified.

Approved job candidate must have an option to accept a job assignment directly from a notification.

You need to perform a gap analysis against the features and capabilities of the Power Platform.

Which features should you implement? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

**Answer Area**

**Requirement**

**Feature**

Create the job listings portal.

- Custom self-service portal for employers and a custom page for job candidates
- Custom self-service portal for both employers and job candidates
- Portal for job candidates and a custom self-service portal for employers
- Portal from blank for job candidates and employers

Create an app that lists available positions.

- Canvas app with push notifications
- Model-driven app with push notifications
- Portal app with push notifications

Create the app for employers who are seeking temporary employees.

- Entity from defined on the job custom entity
- Webform with target set to the job custom entity
- Web page defined on the job custom entity
- Web step with target set to the job custom entity

Create invitation parameters for job candidates.

- Configure a value for the Assigned to Account option only.
- Configure a value for the Execute Workflow on Redeeming Contact option only.
- Configure values for Assigned to Account and Execute Workflow on Redeeming Contact.
- Leave both Assigned to Account and Execute Workflow on Redeeming Contact empty.

Create invitation parameters for approved job candidates.

- Configure a value for the Assigned to Account option only.
- Configure a value for the Execute Workflow on Redeeming Contact option only.
- Configure values for Assigned to Account and Execute Workflow on Redeeming Contact.
- Leave both Assigned to Account and Execute Workflow on Redeeming Contact empty.

Answer Area:

Requirement	Feature
Create the job listings portal.	<ul style="list-style-type: none"> <li>Custom self-service portal for employers and a custom page for job candidates</li> <li>Custom self-service portal for both employers and job candidates</li> <li>Portal for job candidates and a custom self-service portal for employers</li> <li>Portal from blank for job candidates and employers</li> </ul>
Create an app that lists available positions.	<ul style="list-style-type: none"> <li>Canvas app with push notifications</li> <li>Model-driven app with push notifications</li> <li>Portal app with push notifications</li> </ul>
Create the app for employers who are seeking temporary employees.	<ul style="list-style-type: none"> <li>Entity from defined on the job custom entity</li> <li>Webform with target set to the job custom entity</li> <li>Web page defined on the job custom entity</li> <li>Web step with target set to the job custom entity</li> </ul>
Create invitation parameters for job candidates.	<ul style="list-style-type: none"> <li>Configure a value for the Assigned to Account option only.</li> <li>Configure a value for the Execute Workflow on Redeeming Contact option only.</li> <li>Configure values for Assigned to Account and Execute Workflow on Redeeming Contact.</li> <li>Leave both Assigned to Account and Execute Workflow on Redeeming Contact empty.</li> </ul>
Create invitation parameters for approved job candidates.	<ul style="list-style-type: none"> <li>Configure a value for the Assigned to Account option only.</li> <li>Configure a value for the Execute Workflow on Redeeming Contact option only.</li> <li>Configure values for Assigned to Account and Execute Workflow on Redeeming Contact.</li> <li>Leave both Assigned to Account and Execute Workflow on Redeeming Contact empty.</li> </ul>

**Section:**

**Explanation:**

Box 1: Custom self-service portal for both employers and job candidates

If you select an environment that contains customer engagement, you can create the following portals:

Customer self-service portal: A customer self-service portal enables customers to access self-service knowledge, support resources, view the progress of their cases, and provide feedback.

Partner portal: A partner portal allows every organization with resellers, distributors, suppliers, or partners to have real-time access to every stage of shared activities.

Employee self-service portal: An employee self-service portal creates an efficient and well-informed workforce by streamlining common tasks and empowering every employee with a definitive source of knowledge.

Box 2: Model-driven app with push notifications

Compared to canvas apps, model-driven apps in PowerApps are based on underlying data. Specifically, the data stored in Common Data Service (CDS).

Box 3: Webform with target set to the job custom entity

Box 4: Configure a value for the Execute Workflow on Redeeming Contact option only.

Execute Workflow on Redeeming Contact: A workflow process to be executed when the invite is redeemed. The workflow will be passed the redeeming contact as the primary entity.

Box 5: Configure the value for the Assigned to Account option only.

Assign to Account: An account record to be associated as the redeeming contact's parent customer when the invite is redeemed.

Reference:

<https://docs.microsoft.com/en-us/powerapps/maker/portals/portal-templates>

<https://global.hitachi-solutions.com/blog/canvas-vs-model-driven-apps>

<https://docs.microsoft.com/en-us/powerapps/maker/portals/configure/invite-contacts#invitation-attributes>

## QUESTION 7

### HOTSPOT

You create a suite of Power Platform-based order management canvas apps for a bakery that has five retail stores. Each store uses a tablet device to manage inventory and process orders.

You need to make the following changes to the original order tracking app:

When an online order for delivery is received, send the order to the bakery that is located closest to the order destination.

When an online order for pickup is received, require store staff to enter an estimated time in an app. Staff must prepare the order and then use the app to notify the customer when the order is ready.

Allow the store manager to personalize the company's corporate weekly newsletter and add store-specific specials.

You must minimize the amount of custom code and configuration required to implement the solution.

What should you use? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

### Hot Area:

Requirement	Implementation option
Determine which store is closest to the order destination.	<ul style="list-style-type: none"><li>Power Automate flow</li><li>Plug-in</li><li>Logic app</li></ul>
Estimate the time required to prepare an order and notify the customer.	<ul style="list-style-type: none"><li>New screen in an existing order canvas app</li><li>New canvas app</li><li>New logic app</li></ul>
Send the newsletter by email to customers.	<ul style="list-style-type: none"><li>Power Automate flow triggered from an email button</li><li>Power Automate flow triggered manually</li><li>Power Automate UI flow triggered from an email button</li></ul>

### Answer Area:

Requirement	Implementation option
Determine which store is closest to the order destination.	<ul style="list-style-type: none"> <li>Power Automate flow</li> <li>Plug-in</li> <li>Logic app</li> </ul>
Estimate the time required to prepare an order and notify the customer.	<ul style="list-style-type: none"> <li>New screen in an existing order canvas app</li> <li>New canvas app</li> <li>New logic app</li> </ul>
Send the newsletter by email to customers.	<ul style="list-style-type: none"> <li>Power Automate flow triggered from an email button</li> <li>Power Automate flow triggered manually</li> <li>Power Automate UI flow triggered from an email button</li> </ul>

**Section:**

**Explanation:**

Box 1: Power Automate flow

Do you want to get the user's location whose location is closest to the current device, then use key is to use Bing Map connector.

The Bing Map connector is available in the following products and regions:

Service	Class	Regions
Logic Apps	Standard	All Logic Apps regions <a href="#">except the following:</a> <ul style="list-style-type: none"> <li>- Azure China regions</li> </ul>
Power Automate	Standard	All Power Automate regions <a href="#">except the following:</a> <ul style="list-style-type: none"> <li>- US Government (GCC High)</li> <li>- China Cloud operated by 21Vianet</li> </ul>
Power Apps	Standard	All Power Apps regions <a href="#">except the following:</a> <ul style="list-style-type: none"> <li>- US Government (GCC High)</li> <li>- China Cloud operated by 21Vianet</li> </ul>

Box 2: New screen in an existing canvas app

Box 3: Power Automate flow triggered from an email button

Incorrect Answers:

UI flows brings Robotic Process Automation (RPA) capabilities to Power Automate. You can use UI flows to automate repetitive tasks in Windows and Web applications. UI flows records and plays back user interface actions (clicks, keyboard input, etc.)

Reference:

<https://docs.microsoft.com/sv-se/connectors/bingmaps/>



**QUESTION 8**

**HOTSPOT**

A client is deploying Dynamics 365 Finance without any third-party add-ons.

You need to select the appropriate solutions for the client.

What should you select? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

**Hot Area:**

The screenshot shows a hot area question interface with two scenarios and their corresponding solution dropdown menus. The interface is titled "Answer Area" and has two columns: "Scenario" and "Solution".

Scenario	Solution
Warehouse employees can use mobile devices to scan barcodes by using Dynamics 365 Finance.	<ul style="list-style-type: none"><li>Out-of-the-box</li><li>Logic apps</li><li>Power Automate</li><li>Common Data Service</li></ul>
The location of field technicians can be communicated with a text message from Dynamics 365 Field Service.	<ul style="list-style-type: none"><li>Common Data Service</li><li>Workflow</li><li>Power Automate</li></ul>

**Answer Area:**

Answer Area	Scenario	Solution
	Warehouse employees can use mobile devices to scan barcodes by using Dynamics 365 Finance.	<div style="border: 1px solid black; padding: 2px;"> <div style="background-color: #e0e0e0; padding: 2px; text-align: right;">▼</div> <div style="padding: 2px;">Out-of-the-box</div> <div style="padding: 2px;">Logic apps</div> <div style="padding: 2px;">Power Automate</div> <div style="padding: 2px;">Common Data Service</div> </div>
	The location of field technicians can be communicated with a text message from Dynamics 365 Field Service.	<div style="border: 1px solid black; padding: 2px;"> <div style="background-color: #e0e0e0; padding: 2px; text-align: right;">▼</div> <div style="padding: 2px;">Common Data Service</div> <div style="padding: 2px;">Workflow</div> <div style="padding: 2px;">Power Automate</div> </div>

**Section:**

**Explanation:**

Box 1: Out-of-the-box

Box 2: Workflow

Reference:

<https://docs.microsoft.com/en-us/dynamics365/field-service/mobile-power-app-system-barcode-scanning>

<https://docs.microsoft.com/en-us/power-automate/replace-workflows-with-flows>



**QUESTION 9**

**DRAG DROP**

A company uses Microsoft 365. You are developing a model-driven app.

The app must meet the following requirements:

Use SharePoint Online for document storage.

Send emails by using Exchange Online.

You need to configure integrations.

What should you configure? To answer, drag the appropriate configuration options to the correct requirements. Each configuration option may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

**Select and Place:**

**Configuration options**

- Server-side synchronization
- Server-based integration
- Dual-write
- System settings

**Answer Area**

**Requirement**

- Email
- Document storage

**Configuration option**

- Configuration option
- Configuration option

**Correct Answer:**

**Configuration options**

- 
- 
- Dual-write
- System settings

**Answer Area**

**Requirement**

- Email
- Document storage

**Configuration option**

- Server-side synchronization
- Server-based integration



**Section:**

**Explanation:**

Box 1: Server-side synchronization Configure default email processing and synchronization: set server-side synchronization to be the default configuration method for newly created users.

Box 2: Server-side integration.

If your organization is already using document management with Microsoft Dynamics CRM List Component, you must switch to server-based SharePoint integration.

If your organization has not deployed document management, when a System Administrator logs in an alert message will be displayed to enable server-based SharePoint integration.

**QUESTION 10**

A company plans to create an order processing app. When orders are created, the app will perform complex business logic and integrate with several external systems.

Orders that have a large number of line items may take up to six minutes to complete. Processing for each order must be completed in one operation to avoid leaving records in an incomplete state.

You need to recommend a solution for the company.

What should you recommend?

- A. an asynchronous workflow that uses a custom workflow activity
- B. a real-time workflow that uses a custom action
- C. a webhook that connects to an Azure Function
- D. an asynchronous plug-in

**Correct Answer: B**

**Section:**



**Explanation:**

Real-time Workflows roll back all changes if it fails. As the Workflow is going through the process itself, if it fails, it will roll back all of the prior steps taken.

Incorrect Answers:

A: With Background Workflows, actions will not roll back if it fails. All changes are up-to-date until the failure occurs. The workflow will stop at this point due to the failure.

Reference:

<https://ledgeviewpartners.com/blog/what-are-the-differences-between-real-time-and-background-workflows-in-microsoft-dynamics-365-crm/>

**QUESTION 11**

HOTSPOT

You work for a not-for-profit agency that manages business processes by using Power Platform custom entities.

Volunteer registration and onboarding are manual processes that include multiple related entities.

You need to implement a portal solution that replaces the manual processes.

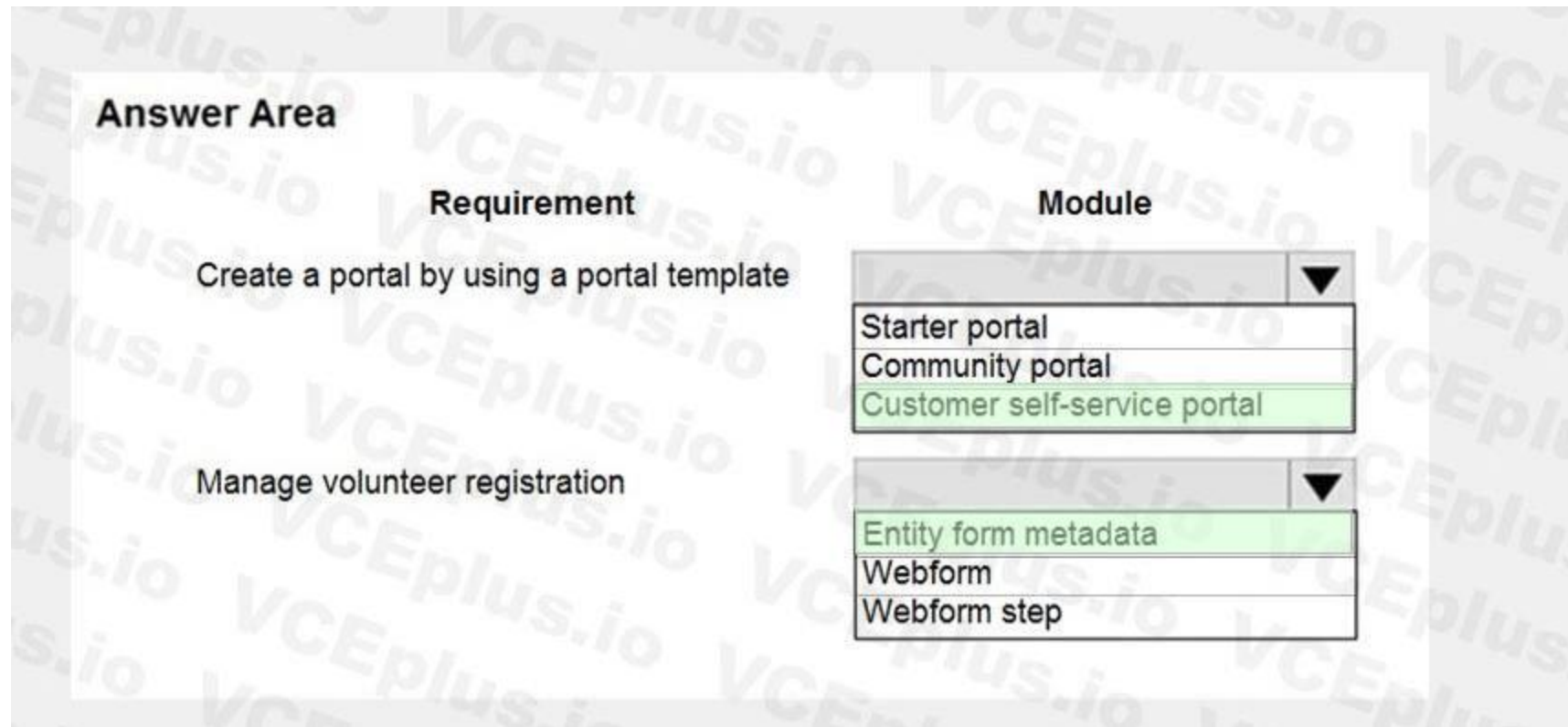
Which modules should you use? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

Requirement	Module
Create a portal by using a portal template	Starter portal
Manage volunteer registration	Webform

Answer Area:



**Section:**

**Explanation:**

Box 1: Customer self-service portal Customer self-service portal: A customer self-service portal enables customers to access self-service knowledge, support resources, view the progress of their cases, and provide feedback.

Incorrect Answers:

Community portal: A community portal leverages peer-to-peer interactions between customers and experts to organically grow the catalog of available knowledge from knowledge base articles, forums, and blogs as well as providing feedback through comments and ratings.

Starter portal: If you select an environment that contains Microsoft Dataverse, you can create a Dataverse starter portal. The Dataverse starter portal comes with the sample data for you to quickly get started. It also has the following built-in sample pages:

Default studio template

Page with title

Page with child links

Box 2: Entity form metadata The Advanced Form Metadata contains additional behavior modification logic to augment or override the functionality of form fields that is otherwise not possible with native basic form editing capabilities.

Reference:

<https://docs.microsoft.com/en-us/powerapps/maker/portals/portal-templates>

<https://docs.microsoft.com/en-us/powerapps/maker/portals/configure/configure-web-form-metadata>

**QUESTION 12**

You are implementing custom business logic in a Power Apps portal.

You need to use Liquid templates to display dynamic content.

To which three entities can you include Liquid code? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

- A. Content snippet
- B. Web page
- C. Web template
- D. Page template
- E. Portal settings

**Correct Answer: B, C, D**

**Section:**

**Explanation:**

Liquid is an open-source template language integrated into portals. It can be used to add dynamic content to pages, and to create a wide variety of custom templates. Using Liquid, you can:

Add dynamic content directly to the Copy field of a webpage or the content of a content snippet.

Store source content by using web templates, entirely through configuration within Power Apps, for use throughout the Power Apps portals content management system.

Render a website header and primary navigation bar, entirely through configuration within Power Apps.

Note: page is one of the available liquid objects.

Reference:

<https://docs.microsoft.com/en-us/powerapps/maker/portals/liquid/liquid-overview>

<https://docs.microsoft.com/en-us/powerapps/maker/portals/liquid/liquid-objects#page>

## **01 - Configure Common Data Service**

Case study

This is a case study. Case studies are not timed separately. You can use as much exam time as you would like to complete each case. However, there may be additional case studies and sections on this exam. You must manage your time to ensure that you are able to complete all questions included on this exam in the time provided.

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Background

Contoso Pharmaceuticals manufactures and sells drugs to retail and wholesale pharmacies, hospitals, and research facilities.

The company plans to implement Dynamics 365 Sales and Dynamics 365 Finance.

Current environment

Contoso maintains a Microsoft Excel workbook that lists all drugs they supply.

Pharmacies submit order requests through email.

All information at customer locations is handwritten by customer representatives.

Contoso uses Cerner, which is a medical industry application that uses a proprietary database.

Some accounts are referrals from other pharmacies.

Every pharmacy has its own Dynamics 365 Sales instance.

Requirements

General

Contoso wants to ensure that there is minimal custom code and custom connectors in the system.

Accounts

Ensure that the names of the pharmacies are synced between the accounting and the customer management systems.

Account numbers should be entered automatically into the pharmaceutical system that is in a Cerner database and kept in sync.

When the account is entered into the system, extra fields must appear if the referral customer box is selected. If the box is not selected, the extra fields must not appear.

A trigger must be created that changes the Priority field to 1 in the Account record 10 days after an Account record is created.

A field named Priority\_Trigger must be created to trigger the Priority field.

A field named Facility type field must be added in order to select whether a customer is a retail pharmacy, wholesale pharmacy, research facility, or hospital.

Users

UserA must be able to create and publish Power Apps apps.

UserB must be the owner of all the systems and be able to provide permissions and create all new environments.

UserC must be able to create apps connected to the systems and update the security roles and entities.

Pharmacy representatives must only be able to run the apps and access their own records.

Access to the accounting Power Apps app must be restricted to accounting team members.

End users must have minimum access to the required systems.  
Only supervisors must be able to view phone numbers in the Accounts form.  
Developers must be able to create new apps for all users.  
Sales users must only have access to their own records.

#### Reporting

Pharmacy orders must be displayed in four graphs as follows:

Annual revenue over \$100,000

Annual revenues under \$100,000

Research facilities

Hospitals

The graphs must be interactive, and users must be able to drill down on any dimension.

#### Customizations

Ensure that notifications are sent to the sales team when a lead is added by using Slack.

Ensure that leads have a review stage added to the sales process.

Doctors must be manually added to a custom entity named Doctor if the doctor is not listed.

Refill dates for customer prescriptions should be automatically determined and a notification should be sent to the customer.

Fields for the doctor's name and phone number must be displayed in the customer record.

The doctor entered on the customer's record must be validated against doctors that exist in the system.

The new solution will be sold to other pharmacies for use. The application must not allow changes to be made.

The solution must be error free so that when it is installed in other environments it does not cause issues.

A custom mobile app must be created to allow salespeople to add or search by pharmacy name.

Pharmacy records must be uniquely identified by pharmacy name, address, contact name, and phone number.

When a pharmacy is added by using the mobile app, the phone number must be validated to be all digits.

#### QUESTION 1

##### HOTSPOT

You need to configure the fields with the appropriate type.

Which type should you use? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

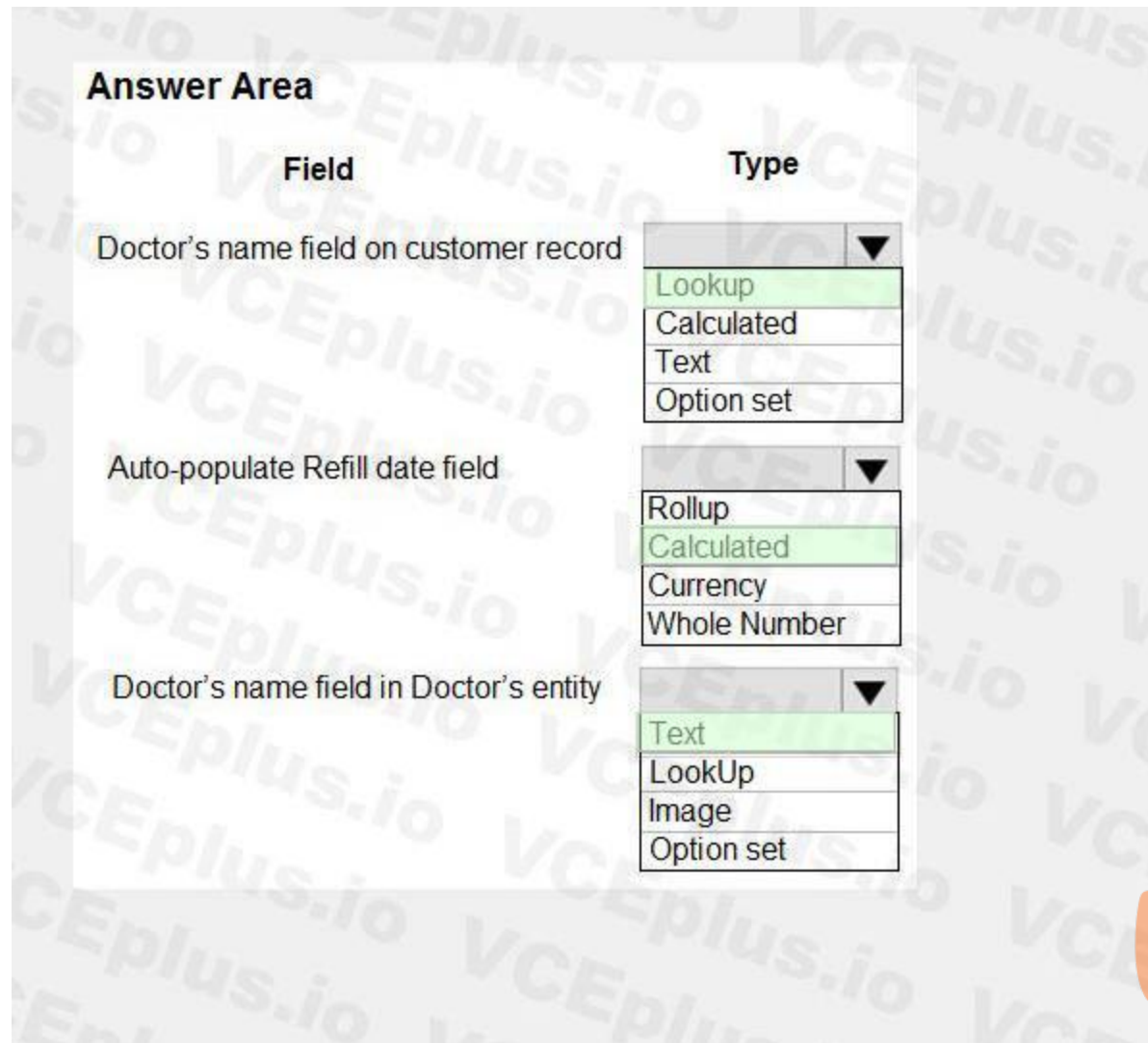
#### Hot Area:



Field	Type
Doctor's name field on customer record	<ul style="list-style-type: none"> <li>Lookup</li> <li>Calculated</li> <li>Text</li> <li>Option set</li> </ul>
Auto-populate Refill date field	<ul style="list-style-type: none"> <li>Rollup</li> <li>Calculated</li> <li>Currency</li> <li>Whole Number</li> </ul>
Doctor's name field in Doctor's entity	<ul style="list-style-type: none"> <li>Text</li> <li>LookUp</li> <li>Image</li> <li>Option set</li> </ul>



Answer Area:



**Section:**

**Explanation:**

Box 1: Lookup

Fields for the doctor's name and phone number must be displayed in the customer record.

Lookup: A field that allows setting a reference to a single record of a specific type of entity.

Box 2: Calculated

Refill dates for customer prescriptions should be automatically determined and a notification should be sent to the customer.

Calculated field: Contains calculations that use fields from the current entity or related parent entities.

Box 3: Text

Field data type: Single Line of Text:

This field can contain up to 4,000 text characters. You can set the maximum length to be less than this. This field has several format options that will change the presentation of the text. These options are Email, Text, Text Area, URL, Ticker

Symbol, and Phone.

Reference:

<https://docs.microsoft.com/en-us/dynamics365/customerengagement/on-premises/customize/types-of-fields>

**QUESTION 2**

You need to create an application to deploy to other pharmacies.

What should you do?

- A. Navigate to Customize the System and export everything to a managed solution.
- B. Recreate customizations in a new environment.

- C. Export the solution as a managed solution.
- D. Write a Web API to move customizations.

**Correct Answer: A**

**Section:**

**Explanation:**

**QUESTION 3**

DRAG DROP

You need to assign the minimum environmental security role to the appropriate users.

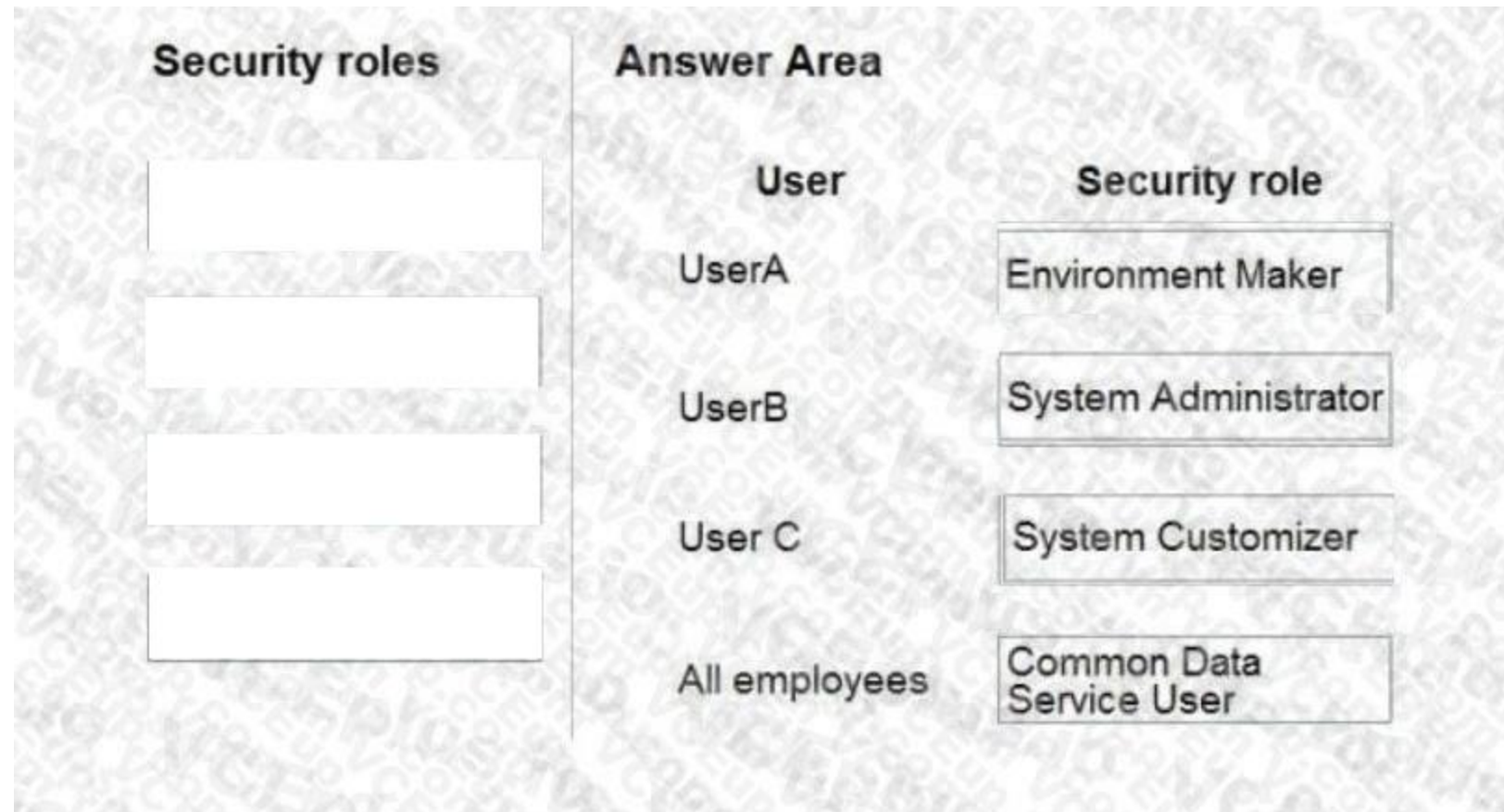
Which security roles should you use? To answer, drag the appropriate security roles to the correct users. Each security role may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

**Select and Place:**

Security roles	Answer Area	
System Administrator	User	Security role
System Customizer	UserA	Security role
Common Data Service User	UserB	Security role
Environment Maker	User C	Security role
	All employees	Security role

**Correct Answer:**



**Section:**

**Explanation:**

Box 1: Environment Maker

UserA must be able to create and publish Power Apps apps.

The Environment Maker role can create resources within an environment including apps, connections, custom connectors, gateways, and flows using Power Automate.

Box 2: System Administrator

UserB must be the owner of all the systems and be able to provide permissions and create all new environments.

The System Administrator has full permission to customize the system. Can view all data in the system.

Box 3: System Customizer

UserC must be able to create apps connected to the systems and update the security roles and entities.

The System Customizer has full permission to customize the system. Can only view rows for system tables that they create.

The difference between the System Administrator and System Customizer security roles is that a system administrator has read privileges on most rows in the system and can see everything. Assign the System Customizer role to someone who needs to perform customization tasks but shouldn't see any data in the system tables.

Box 4: Common Data Service User

To stay consistent with our product rebranding effort, the security role Common Data Service User is being changed to Basic User.

The Basic User security role primarily contains Basic privileges for core entities where the user can write, update, and delete records that they created or owned.

Reference: <https://docs.microsoft.com/en-us/power-platform/admin/environments-overview> <https://docs.microsoft.com/en-us/powerapps/maker/model-driven-apps/privileges-required-customization#system-administrator-and-system-customizersecurity-roles>

<https://docs.microsoft.com/en-us/power-platform-release-plan/2020wave2/data-platform/common-data-serviceuser-security-role-renamed-basic-user>

**QUESTION 4**

**DRAG DROP**

You need to set up security to meet the requirements.

How should you configure security? To answer, drag the appropriate security mechanisms to the correct users. Each security mechanism may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.





Select and Place:

Security mechanisms	Answer Area								
Field level security	<table border="1"><thead><tr><th>User</th><th>Security mechanism</th></tr></thead><tbody><tr><td>supervisors</td><td>Security mechanism</td></tr><tr><td>salespeople</td><td>Security mechanism</td></tr><tr><td>developers</td><td>Security mechanism</td></tr></tbody></table>	User	Security mechanism	supervisors	Security mechanism	salespeople	Security mechanism	developers	Security mechanism
User	Security mechanism								
supervisors	Security mechanism								
salespeople	Security mechanism								
developers	Security mechanism								
Security roles									
Environment security									
Team security									

Correct Answer:

Security mechanisms	Answer Area								
	<table border="1"><thead><tr><th>User</th><th>Security mechanism</th></tr></thead><tbody><tr><td>supervisors</td><td>Field level security</td></tr><tr><td>salespeople</td><td>Team security</td></tr><tr><td>developers</td><td>Environment security</td></tr></tbody></table>	User	Security mechanism	supervisors	Field level security	salespeople	Team security	developers	Environment security
User	Security mechanism								
supervisors	Field level security								
salespeople	Team security								
developers	Environment security								
Security roles									

Section:

Explanation:

Box 1: Field level security

Only supervisors must be able to view phone numbers in the Accounts form.

You use field security tables to apply field-level security, which restricts field access to specified users and teams. The scope of field-level security is global, which means that it applies to all records within the organization, regardless of the business unit hierarchical level to which the record or the user belongs. Field security works in all Microsoft Dataverse clients, including the Web client, Dynamics 365 for Outlook, and Dynamics. It applies to all components, such as the Dataverse web services, reports, search, offline, filtered views, auditing, and duplicate detection.

Box 2: Team Security

Sales users must only have access to their own records.

Owner team: An owner team owns records and has security roles assigned to the team. A user's privileges can come from their individual security roles, those of the teams that they're part of or the ones they inherit. A team has full access rights on the records that the team owns. Team members are added manually to the owner team.

Box 3: Environment security

Developers must be able to create new apps for all users.

Environment maker: Can create new resources associated with an environment, including apps, connections, custom APIs, gateways, and flows using Microsoft Power Automate. However, this role doesn't have any privileges to access data within an environment.

Reference: <https://docs.microsoft.com/en-us/powerapps/developer/data-platform/field-security-entities>

<https://docs.microsoft.com/en-us/power-platform/admin/database-security> <https://docs.microsoft.com/en-us/powerplatform/admin/manage-teams#types-of-teams>

## 02 - Configure Common Data Service

### Case study

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### Background

Bellows Sports is the region's newest, largest, and most complete sports complex. The company features baseball and soccer fields and two full-size hockey rinks. The complex provides coaching, recreational leagues, a pro shop, and state-of-the-art customer and player amenities.

The company is organized into the following divisions:

Baseball

Hockey

Soccer

Bellow Sports runs tournaments several times per year. Each tournament runs six weeks.

### Current environment

#### Requirements

Bellow Sports tracks players and events in Microsoft Excel workbooks and uses email to communicate with players, partners, and prospective customers. The company uses a proprietary cloud-based accounting system. The company relies on referrals from athletes for new business. Bellows uses a third-party marketing company to gather feedback and referrals from athletes. The third-party marketing company uploads a Microsoft Excel file containing lists of potential customers and players to the FTP site that Bellows Sports maintains.

#### Tournaments

Customer information is stored in the Accounts entity. Each tournament record must list the associated sales representative as the tournament owner. When team members create tournament records they must enter the start date for a tournament. The end date of the tournament must be automatically calculated.

#### Registration form

You must create a form to allow players to register for tournaments. The registration form must meet the following requirements:

Division	Requirement
Baseball	Capture the age and weight of the player. The height field must not display.
Hockey	Capture the age, height, and weight of the player.
Soccer	Capture the age of the player. The height and weight fields must not display.

Each division has tournaments that take place in specific locations. Users must be able to select the division for a tournament location.

Information about upcoming tournaments must be pre-located into the registration form when the registration form loads.

The form must include a custom button that sends an email confirmation to the player after the player registers.

The button must not be visible until after the form is saved.

#### Security

The company identifies the following job roles:

Role	Tasks
Sales representative	These users will enter data into Dynamics 365 Customer Service.
Intern	These users will create Power Apps apps, and connectors, and create Power Automate flows.
Manager	These users will add users, assign security roles, and manage data storage.

You must grant users the minimum permissions required to perform their job tasks.

#### Data automation

Customer name must be added to Dynamics 365 Finance automatically after it is entered.

You must produce a report that details the number of registrations for a day and send the report as a PDF to the management team.

You must implement mechanisms to handle all code-related errors.

When a customer record is updated, the system must look up the account number for the customer in the accounting system.

Referrals must be imported into the system as soon as they are available.

Issues

Apps

The captions for the New and Save buttons do not render properly on the form.

Interns can create apps but cannot interact with their own data.

Portal

The query for all registered users must return the data categorized by division. Queries must return only the Name and Sport fields. Queries return all fields. The query is as follows:

```
GET [Organization URI]/api/data/v9.1/accounts?
&$orderby=Name, sport
&$filter=sport ne null
```

Solution checker issues

You run solution checker and observe Plug-in or workflow activity errors in the following code sets:

Set	Code	Error message
Code set 1	CS101 var columns = new ColumnSet(); CS102 columns.AllColumns = true; CS103 var query = new QueryExpression("account"); CS104 query.ColumnSet = columns; CS105 var results = service.RetrieveMultiple(query);	il-specify- column
Code Set 2	CS201 WebRequest request = WebRequest.Create ("https://www.bellows.com/api/stuff"); CS202 HttpResponseMessage response = new HttpResponseMessage(); CS203 CS204 response = request.GetResponse(); CS205 response.Close();	il-turn-off- keepalive

Code

The following code runs when the registration form loads. You must implement a mechanism to handle errors that occur in the code:

UpdateRecord.js (Line numbers are included for reference only.)

```
UR01  
UR02 var data =  
UR03 {  
UR04   "name" : "Updated Account"  
      "credithold" : true,  
      "description" : "This is an account update",  
      "revenue" : 10,000,  
      "Division" : 2  
UR05 }  
UR06
```

### QUESTION 1

You need to determine the primary cause of the issue reported by interns when they use the app.

What is the primary cause?

- A. Interns have the System Customizer security role but need the Environment Maker security role.
- B. Interns have the Common Data Service User security role but need the Environment Maker security role.
- C. Interns have the Environment Maker security role but need the Common Data Service User security role.
- D. Interns have the Environment Maker security role but need the System Customizer security role.
- E. Interns have the Environment Maker security role but need the Delegate security role.

**Correct Answer: D**

**Section:**

**Explanation:**

Scenario: Interns can create apps but cannot interact with their own data.

Environment Maker role: Can create new resources associated with an environment, including apps, connections, custom APIs, gateways, and flows using Microsoft Power Automate. However, this role doesn't have any privileges to access data within an environment.

System Customizer role: full permission to customize the environment. However, users with this role can only view records for environment entities that they create.

Reference:

<https://docs.microsoft.com/en-us/power-platform/admin/database-security>

**QUESTION 2**

DRAG DROP

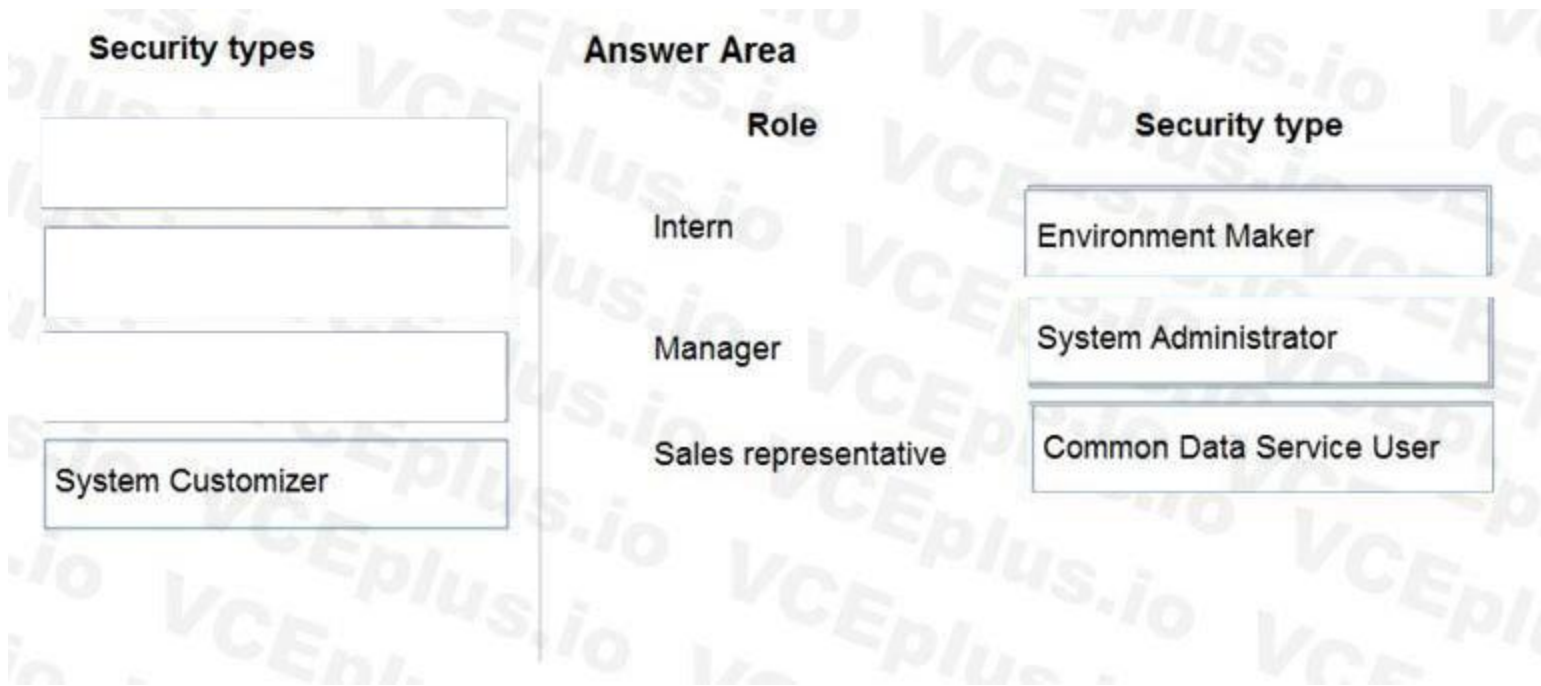
You need to assign security roles to groups of users.

Which security roles should you use? To answer, drag the appropriate security types to the correct roles. Each security type may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

**Select and Place:**

**Correct Answer:**



**Section:**

**Explanation:**

Scenario: The company identifies the following job roles:

Role	Tasks
Sales representative	These users will enter data into Dynamics 365 Customer Service.
Intern	These users will create Power Apps apps, and connectors, and create Power Automate flows.
Manager	These users will add users, assign security roles, and manage data storage.

You must grant users the minimum permissions required to perform their job tasks.

Intern: Environment Maker

Environment Maker: Can create new resources associated with an environment, including apps, connections, custom APIs, gateways, and flows using Microsoft Power Automate. However, this role doesn't have any privileges to access data within an environment.

Manager: System Administrator:

System Administrator: Has full permission to customize or administer the environment, including creating, modifying, and assigning security roles. Can view all data in the environment.

Sales representative: Common Data Service User

Basic User/ Common Data Service User: Read (self), Create (self), Write (self), Delete (self)

Can run an app within the environment and perform common tasks for the records that they own.

**QUESTION 3**

**HOTSPOT**

You need to select data types for required fields.

Which data types should you use? To answer, select the appropriate options in the answer area.

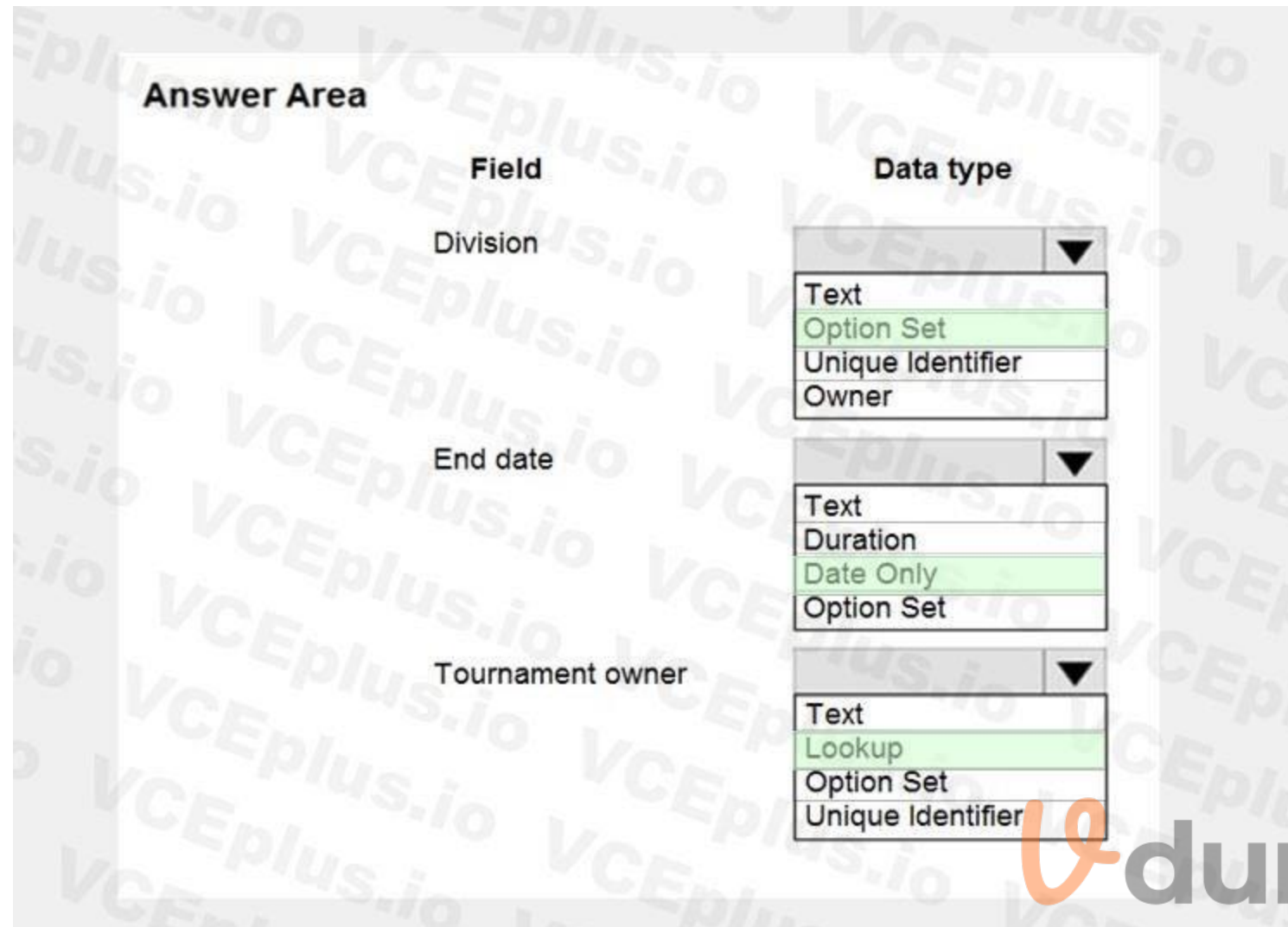
NOTE: Each correct selection is worth one point.

**Hot Area:**

Answer Area	
Field	Data type
Division	<ul style="list-style-type: none"> <li>Text</li> <li>Option Set</li> <li>Unique Identifier</li> <li>Owner</li> </ul>
End date	<ul style="list-style-type: none"> <li>Text</li> <li>Duration</li> <li>Date Only</li> <li>Option Set</li> </ul>
Tournament owner	<ul style="list-style-type: none"> <li>Text</li> <li>Lookup</li> <li>Option Set</li> <li>Unique Identifier</li> </ul>

 **vdumps**

Answer Area:



**Section:**

**Explanation:**

Box 1: Option Set

Box 2: Date only

When team members create tournament records they must enter the start date for a tournament. The end date of the tournament must be automatically calculated.

Box 3: Lookup

Customer information is stored in the Accounts entity. Each tournament record must list the associated sales representative as the tournament owner.

Note: When you create a new lookup column you are creating a new Many-to-One (N:1) table relationship between the table you're working with and the Target Row Type defined for the lookup. There are additional configuration options for this relationship that are described in Create and edit relationships between tables. But all custom lookups can only allow for a reference to a single row for a single target row type.

Reference:

<https://docs.microsoft.com/en-us/powerapps/maker/data-platform/types-of-fields>

**01 - Create and configure Power Apps**

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#### Background

Contoso Pharmaceuticals manufactures and sells drugs to retail and wholesale pharmacies, hospitals, and research facilities. The company plans to implement Dynamics 365 Sales and Dynamics 365 Finance.

#### Current environment

Contoso maintains a Microsoft Excel workbook that lists all drugs they supply. Pharmacies submit order requests through email. All information at customer locations is handwritten by customer representatives. Contoso uses Cerner, which is a medical industry application that uses a proprietary database. Some accounts are referrals from other pharmacies. Every pharmacy has its own Dynamics 365 Sales instance.

#### Requirements

##### General

Contoso wants to ensure that there is minimal custom code and custom connectors in the system.

##### Accounts

Ensure that the names of the pharmacies are synced between the accounting and the customer management systems. Account numbers should be entered automatically into the pharmaceutical system that is in a Cerner database and kept in sync. When the account is entered into the system, extra fields must appear if the referral customer box is selected. If the box is not selected, the extra fields must not appear. A trigger must be created that changes the Priority field to 1 in the Account record 10 days after an Account record is created. A field named Priority\_Trigger must be created to trigger the Priority field. A field named Facility type field must be added in order to select whether a customer is a retail pharmacy, wholesale pharmacy, research facility, or hospital.

##### Users

UserA must be able to create and publish Power Apps apps. UserB must be the owner of all the systems and be able to provide permissions and create all new environments. UserC must be able to create apps connected to the systems and update the security roles and entities. Pharmacy representatives must only be able to run the apps and access their own records. Access to the accounting Power Apps app must be restricted to accounting team members. End users must have minimum access to the required systems. Only supervisors must be able to view phone numbers in the Accounts form. Developers must be able to create new apps for all users. Sales users must only have access to their own records.

##### Reporting

Pharmacy orders must be displayed in four graphs as follows:

Annual revenue over \$100,000

Annual revenues under \$100,000

Research facilities

Hospitals

The graphs must be interactive, and users must be able to drill down on any dimension.

##### Customizations

Ensure that notifications are sent to the sales team when a lead is added by using Slack. Ensure that leads have a review stage added to the sales process. Doctors must be manually added to a custom entity named Doctor if the doctor is not listed. Refill dates for customer prescriptions should be automatically determined and a notification should be sent to the customer. Fields for the doctor's name and phone number must be displayed in the customer record. The doctor entered on the customer's record must be validated against doctors that exist in the system. The new solution will be sold to other pharmacies for use. The application must not allow changes to be made. The solution must be error free so that when it is installed in other environments it does not cause issues. A custom mobile app must be created to allow salespeople to add or search by pharmacy name. Pharmacy records must be uniquely identified by pharmacy name, address, contact name, and phone number.



When a pharmacy is added by using the mobile app, the phone number must be validated to be all digits.

#### QUESTION 1

You need to ensure that users can create the required charts.

Which two actions should you perform? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. Create a quick view form to show the Accounts entity.
- B. Configure filter fields in the Annual revenue field.
- C. Add the Facility field to the account form.
- D. Delete the Annual revenue field from the account form.
- E. Create a view with annual revenue sorted lowest value to highest value.

**Correct Answer: B, C**

**Section:**

**Explanation:**

Pharmacy orders must be displayed in four graphs as follows:

Annual revenue over \$100,000

Annual revenues under \$100,000

Research facilities

Hospitals

The graphs must be interactive, and users must be able to drill down on any dimension.



#### QUESTION 2

You need to configure the trigger for the priority field in the Account entity.

Which expression should you use?

- A. DIFFINWEEKS(now,1)
- B. SUBTRACTDAYS(10, Now())
- C. ADDWEEKS(1, CreatedOn)
- D. DIFFINDAYS(Createdon, now())
- E. ADDDAYS(10, CreatedOn)

**Correct Answer: C**

**Section:**

**Explanation:**

A trigger must be created that changes the Priority field to 1 in the Account record 10 days after an Account record is created.

Note:

Date.AddWeeks returns the date, datetime, or datetimezone result from adding numberOfWeeks weeks to the datetime value dateTime.

CreatedOn gets the value to store in the history table indicating when this entry was created.

Reference: <https://docs.microsoft.com/en-us/powerquery-m/date-addweeks> <https://docs.microsoft.com/en-us/dotnet/api/system.data.entity.migrations.model.inserthistoryoperation.createdon?view=entity-framework-4.3.1>

#### 02 - Create and configure Power Apps

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When you are ready to answer a question, click the Question button to return to the question.

Background

Current environment

Adventure Works Cycles wants to replace their paper-based bicycle manufacturing business with an efficient paperless solution. The company has one manufacturing plant in Seattle that produces bicycle parts, assembles bicycles, and distributes finished bicycles to the Pacific Northwest.

Adventure Works Cycles has a retail location that performs bicycle repair and warranty repair work. The company has six maintenance vans that repair bicycles at various events and residences.

Adventure Works Cycles recently deployed Dynamics 365 Finance and Dynamics 365 Manufacturing in a Microsoft-hosted environment for financials and manufacturing. The company plans to leverage the Microsoft Power Platform to migrate all of their distribution and retail workloads to Dynamics 365 Unified Operations.

The customer uses Dynamics 365 Sales, Dynamics 365 Customer Service and Dynamics 365 Field Service.

Retail store information

Adventure Works Cycle has one legal entity, four warehouses, and six field service technicians.

Warehouse counting is performed manually by using a counting journal. All warehouse boxes and items are barcoded.

The Adventure Works Cycles retail location performs bicycle inspections and performance tune-ups.

Technicians use paper forms to document the bicycle inspection performed before a tune-up and any additional work performed on the bicycle.

Adventure Works Cycles uses a Power Apps app for local bike fairs to attract new customers.

A canvas app is being developed to capture customer information when customers check in at the retail location. The app has the following features:

- Customer selects yes or no if they are on the mailing list.
- Customer selects the amount of times they have visited the store.
- Customer selects the type of service needed.
- The search result returns all last name records that match the search term.

Technology

Requirements

A plug-in for Dynamics 365 Sales automatically calculated the total billed time from all activities on a particular customer account, including sales representative visits, phone calls, email correspondence, and repair time compared with hours spent.

A shipping API displays shipping rates and tracking information on sales orders. The contract allows for 3,000 calls per month.

Ecommerce orders are processed in batch daily by using a manual import of sales orders in Dynamics 365 Finance.

Microsoft Teams is used for all collaboration.

All testing and problem diagnostics are performed in a copy of the production environment.

Customer satisfaction surveys are recorded with Microsoft Forms Pro. Survey replies from customers are sent to a generic mailbox.

Automation

A text message must be automatically sent to a customer to confirm an appointment and to notify when a technician is on route that includes their location.

Ecommerce sales orders must be integrated into Dynamics 365 Finance and then exported to Azure every night.

A text alert must be sent to employees scheduled to assist in the repair area of the retail store if the number of repair check-ins exceeds eight.

Submitted customer surveys must generate an email to the correct department. Approval and follow-up must occur within a week.

Reporting

The warehouse manager's dashboard must contain warehouse counting variance information.

A warehouse manager needs to quickly view warehouse KPIs by using a mobile device.

Power BI must be used for reporting across the organization.

User experience

Warehouse counting must be performed by using a mobile app that scans barcodes on boxes.

All customer repairs must be tracked in the system no matter where they occur.

Qualified leads must be collected from local bike fairs.

Issues

Warehouse counting must be performed by using a mobile app that scans barcodes on boxes.

All customer repairs must be tracked in the system no matter where they occur.



Qualified leads must be collected from local bike fairs.

Internal

User1 reports receives an intermittent plug-in error when viewing the total bill customer time.

User2 reports that Azure consumption for API calls has increased significantly to 100 calls per minute in the last month.

User2 reports that sales orders have increased.

User5 receives the error message: 'Endpoint unavailable' during a test of the technician dispatch ISV solution.

The parts department manager who is the approver for the department is currently on sabbatical.

External

CustomerB reports that the check-in app returned only one search result for their last name, which is not the correct name.

Nine customers arrive in the repair area of the retail store, but no texts were sent to scheduled employees.

Customers report that the response time from the information email listed on the Adventure Works Cycles website is greater than five days.

CustomerC requested additional information from the parts department through the customer survey and has not received a response one week later.

### QUESTION 1

You need to resolve CustomerB's issues with the check-in application.

Which two options can you use? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

- A. Change LookUp to Filter
- B. Change Filter to LookUp
- C. Change Search to LookUp
- D. Change LookUp to Search

**Correct Answer: A, D**

**Section:**

**Explanation:**

CustomerB reports that the check-in app returned only one search result for their last name, which is not the correct name.

The Filter function finds records in a table that satisfy a formula. Use Filter to find a set of records that match one or more criteria and to discard those that don't.

The LookUp function finds the first record in a table that satisfies a formula. Use LookUp to find a single record that matches one or more criteria.

The Search function finds records in a table that contain a string in one of their columns.

Reference:

<https://docs.microsoft.com/en-us/powerapps/maker/canvas-apps/functions/function-filter-lookup>

### 03 - Create and configure Power Apps

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- Customer selects yes or no if they are on the mailing list.
- Customer selects the amount of times they have visited the store.
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- The search result returns all last name records that match the search term.

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The warehouse manager's dashboard must contain warehouse counting variance information.

A warehouse manager needs to quickly view warehouse KPIs by using a mobile device.

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Warehouse counting must be performed by using a mobile app that scans barcodes on boxes.

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Customers report that the response time from the information email listed on the Adventure Works Cycles website is greater than five days. CustomerC requested additional information from the parts department through the customer survey and has not received a response one week later.

#### QUESTION 1

You need to resolve CustomerB's issues with the check-in application. Which two options can you use? Each correct answer presents a complete solution. NOTE: Each correct selection is worth one point.

- A. LookUp to Filter
- B. Filter to LookUp
- C. Search to LookUp
- D. LookUp to Search

**Correct Answer: A, D**

**Section:**

**Explanation:**

CustomerB reports that the check-in app returned only one search result for their last name, which is not the correct name. The Filter function finds records in a table that satisfy a formula. Use Filter to find a set of records that match one or more criteria and to discard those that don't. The LookUp function finds the first record in a table that satisfies a formula. Use LookUp to find a single record that matches one or more criteria. The Search function finds records in a table that contain a string in one of their columns.

Reference:

<https://docs.microsoft.com/en-us/powerapps/maker/canvas-apps/functions/function-filter-lookup>

#### QUESTION 2

You need to improve the efficiency of counting warehouse inventory. What should you create?

- A. a model-driven app that allows the user to key in inventory counts
- B. a Power BI dashboard that shows the inventory counting variances
- C. a flow that updates the warehouse counts as the worker performs the count
- D. a canvas app that scans barcodes to allow a warehouse worker to select inventory counts

**Correct Answer: D**

**Section:**

**Explanation:**

Scenario: Warehouse counting is performed manually by using a counting journal. All warehouse boxes and items are barcoded.

Barcode scanner control for canvas apps: Scans barcodes, QR codes, and data-matrix codes on an Android or iOS device.

Description

The control opens a native scanner on an Android or iOS device. The scanner automatically detects a barcode, a QR code, or a data-matrix code when in view.

Reference: <https://docs.microsoft.com/en-us/powerapps/maker/canvas-apps/controls/control-new-barcode-scanner>

#### QUESTION 3

DRAG DROP

You need to identify why employees are not receiving notification that nine customers are checked in and waiting in the repair area.

Which components should you test for each step? To answer, drag the appropriate components to the correct steps. Each component may be used once, more than once, or not at all.

You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.



Select and Place:

**Answer Area**

Components	Step	Component
<input type="text" value="action"/>	outbound text	<input type="text"/>
<input type="text" value="condition"/>	nine customers in the store	<input type="text"/>
<input type="text" value="expression"/>	number of customers in the store	<input type="text"/>
<input type="text" value="data operation"/>		

Correct Answer:

**Answer Area**

Components	Step	Component
<input type="text"/>	outbound text	<input type="text" value="action"/>
<input type="text"/>	nine customers in the store	<input type="text" value="condition"/>
<input type="text" value="expression"/>	number of customers in the store	<input type="text" value="data operation"/>
<input type="text"/>		



**Section:**

**Explanation:**

Scenario: A text alert must be sent to employees scheduled to assist in the repair area of the retail store if the number of repair check-ins exceeds eight.

Box 1: action

Box 2: condition

Box 3: data operation

**QUESTION 4**

HOTSPOT

You need to select visualization components.

What should you use? To answer, select the appropriate options from the answer area.

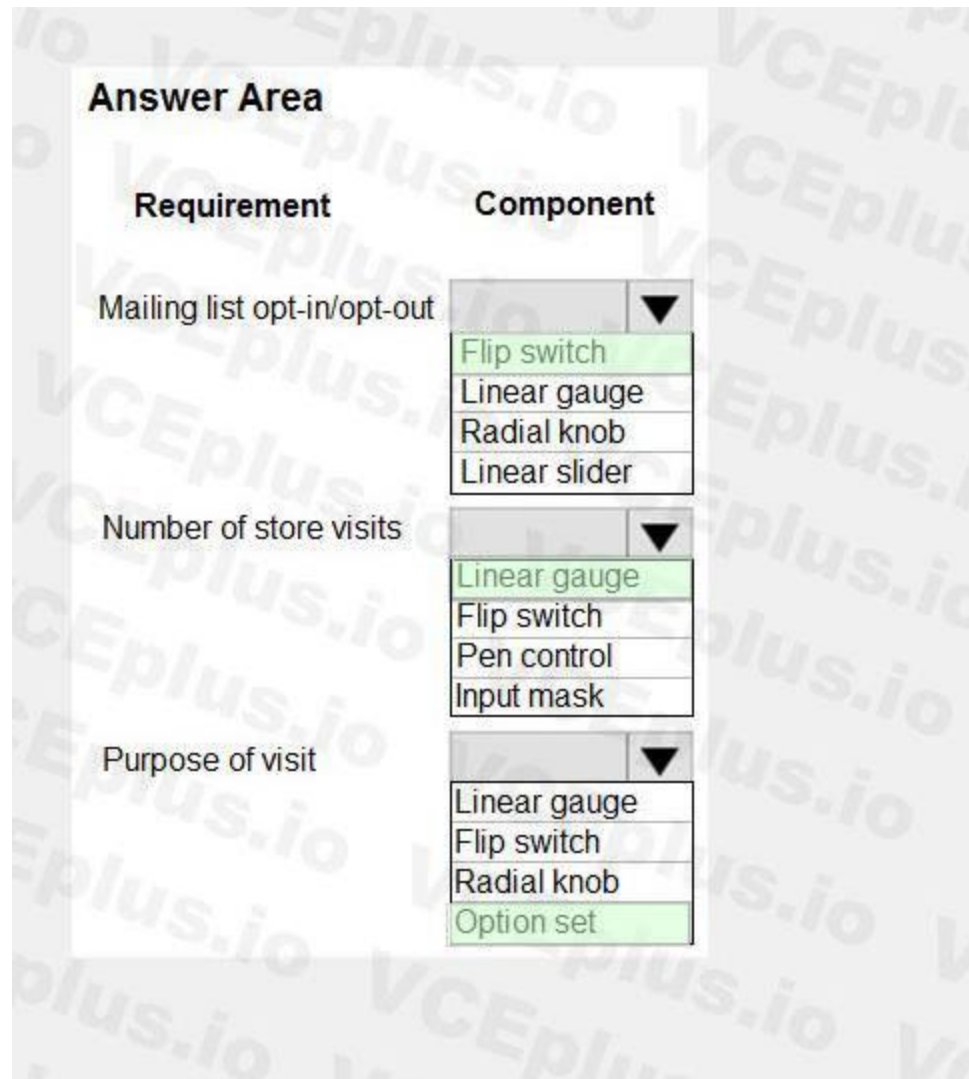
NOTE: Each correct selection is worth one point.

**Hot Area:**

Answer Area	
Requirement	Component
Mailing list opt-in/opt-out	<ul style="list-style-type: none"> <li>▼</li> <li>Flip switch</li> <li>Linear gauge</li> <li>Radial knob</li> <li>Linear slider</li> </ul>
Number of store visits	<ul style="list-style-type: none"> <li>▼</li> <li>Linear gauge</li> <li>Flip switch</li> <li>Pen control</li> <li>Input mask</li> </ul>
Purpose of visit	<ul style="list-style-type: none"> <li>▼</li> <li>Linear gauge</li> <li>Flip switch</li> <li>Radial knob</li> <li>Option set</li> </ul>

Answer Area:





**Section:**

**Explanation:**

Scenario: Customer satisfaction surveys are recorded with Microsoft Forms Pro.

Box 1: Flip switch

The flip switch is like an on/off switch, providing a choice between two values.

Box 2: Linear gauge The linear gauge lets your users input numerical values by dragging a slider instead of typing in the exact quantity. The slider provides whole number input and display only. Use this control for any numerical and money columns.

Box 3: Option set

The choice control presents a set of options for your users to choose from when entering data.

You can customize forms (main, quick create, and quick view) and email templates by adding multi-select columns that are called Choices. When you add a choices column, you can specify multiple values that will be available for users to select. When users fill out the form they can select one, multiple, or all the values displayed in a drop-down list.

Reference:

<https://docs.microsoft.com/en-us/powerapps/maker/model-driven-apps/additional-controls-for-dynamics-365-for-phones-and-tablets>

**01 - Extend the platform**

Case study

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#### Background

Bellows Sports is the region's newest, largest, and most complete sports complex. The company features baseball and soccer fields and two full-size hockey rinks. The complex provides coaching, recreational leagues, a pro shop, and state-of-the-art customer and player amenities.

The company is organized into the following divisions:

Baseball

Hockey

Soccer

Bellow Sports runs tournaments several times per year. Each tournament runs six weeks.

#### Current environment

##### Requirements

Bellow Sports tracks players and events in Microsoft Excel workbooks and uses email to communicate with players, partners, and prospective customers. The company uses a proprietary cloud-based accounting system.

The company relies on referrals from athletes for new business. Bellows uses a third-party marketing company to gather feedback and referrals from athletes. The third-party marketing company uploads a Microsoft Excel file containing lists of potential customers and players to the FTP site that Bellows Sports maintains.

##### Tournaments

Customer information is stored in the Accounts entity. Each tournament record must list the associated sales representative as the tournament owner. When team members create tournament records they must enter the start date for a tournament. The end date of the tournament must be automatically calculated.

##### Registration form

You must create a form to allow players to register for tournaments. The registration form must meet the following requirements:

Division	Requirement
Baseball	Capture the age and weight of the player. The height field must not display.
Hockey	Capture the age, height, and weight of the player.
Soccer	Capture the age of the player. The height and weight fields must not display.

Each division has tournaments that take place in specific locations. Users must be able to select the division for a tournament location.

Information about upcoming tournaments must be pre-located into the registration form when the registration form loads.

The form must include a custom button that sends an email confirmation to the player after the player registers.

The button must not be visible until after the form is saved.

##### Security

The company identifies the following job roles:

Role	Tasks
Sales representative	These users will enter data into Dynamics 365 Customer Service.
Intern	These users will create Power Apps apps, and connectors, and create Power Automate flows.
Manager	These users will add users, assign security roles, and manage data storage.

You must grant users the minimum permissions required to perform their job tasks.

##### Data automation

Customer name must be added to Dynamics 365 Finance automatically after it is entered.

You must produce a report that details the number of registrations for a day and send the report as a PDF to the management team.

You must implement mechanisms to handle all code-related errors.

When a customer record is updated, the system must look up the account number for the customer in the accounting system.

Referrals must be imported into the system as soon as they are available.

##### Issues

##### Apps

The captions for the New and Save buttons do not render properly on the form.

Interns can create apps but cannot interact with their own data.

##### Portal

The query for all registered users must return the data categorized by division. Queries must return only the Name and Sport fields. Queries return all fields. The query is as follows:

```
GET [Organization URI]/api/data/v9.1/accounts?
&$orderby=Name, sport
&$filter=sport ne null
```

Solution checker issues

You run solution checker and observe Plug-in or workflow activity errors in the following code sets:

Set	Code	Error message
Code set 1	<pre>CS101 var columns = new ColumnSet(); CS102 columns.AllColumns = true; CS103 var query = new QueryExpression("account"); CS104 query.ColumnSet = columns; CS105 var results = service.RetrieveMultiple(query);</pre>	il-specify-column
Code Set 2	<pre>CS201 WebRequest request = WebRequest.Create ("https://www.bellows.com/api/stuff"); CS202 HttpWebResponse response = new HttpWebResponse(); CS203 CS204 response = request.GetResponse(); CS205 response.Close();</pre>	il-turn-off-keepalive

Code

The following code runs when the registration form loads. You must implement a mechanism to handle errors that occur in the code:

UpdateRecord.js (Line numbers are included for reference only.)

```
UR01
UR02 var data =
UR03 {
UR04   "name" : "Updated Account"
UR05   "credithold" : true,
UR06   "description" : "This is an account update",
UR07   "revenue" : 10,000,
UR08   "Division" : 2
UR09 }
UR10
UR11
```

**QUESTION 1**

HOTSPOT

You need to correct the portal query issues.

Which code should you use? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:



**Answer Area**

Portal issue	Code change
New registrations	GET [Organization URI]/api/data/v9.1/accounts?\$select=name, sport GET [Organization URI]/api/data/v9.1/accounts?\$apply=name, sport GET [Organization URI]/api/data/v9.1/accounts?\$filter=name, sport
All registered users	\$apply=groupby(sport ne null) \$filter = name, sport \$orderby = name, sport

Answer Area:

**Answer Area**

Portal issue	Code change
New registrations	GET [Organization URI]/api/data/v9.1/accounts?\$select=name, sport GET [Organization URI]/api/data/v9.1/accounts?\$apply=name, sport GET [Organization URI]/api/data/v9.1/accounts?\$filter=name, sport
All registered users	\$apply=groupby(sport ne null) \$filter = name, sport \$orderby = name, sport

**Section:**

**Explanation:**

Scenario: The query for all registered users must return the data categorized by division. Queries must return only the Name and Sport fields. Queries return all fields. The query is as follows:

```
GET [Organization URI]/api/data/v9.1/accounts?
&$orderby=Name, sport
&$filter=sport ne null
```

Box 1: GET ..\$select=name, sport

Use select to return only the Name and Sport fields.

Box 2: \$apply(groupby(sport ne null))

Categorize by division, that is to sports.

**02 - Extend the platform**

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Warehouse counting is performed manually by using a counting journal. All warehouse boxes and items are barcoded.

The Adventure Works Cycles retail location performs bicycle inspections and performance tune-ups.

Technicians use paper forms to document the bicycle inspection performed before a tune-up and any additional work performed on the bicycle.

Adventure Works Cycles uses a Power Apps app for local bike fairs to attract new customers.

A canvas app is being developed to capture customer information when customers check in at the retail location. The app has the following features:

- Customer selects yes or no if they are on the mailing list.
- Customer selects the amount of times they have visited the store.
- Customer selects the type of service needed.
- The search result returns all last name records that match the search term.

Technology

Requirements

A plug-in for Dynamics 365 Sales automatically calculated the total billed time from all activities on a particular customer account, including sales representative visits, phone calls, email correspondence, and repair time compared with hours spent.

A shipping API displays shipping rates and tracking information on sales orders. The contract allows for 3,000 calls per month.

Ecommerce orders are processed in batch daily by using a manual import of sales orders in Dynamics 365 Finance.

Microsoft Teams is used for all collaboration.

All testing and problem diagnostics are performed in a copy of the production environment.

Customer satisfaction surveys are recorded with Microsoft Forms Pro. Survey replies from customers are sent to a generic mailbox.

Automation

A text message must be automatically sent to a customer to confirm an appointment and to notify when a technician is on route that includes their location.

Ecommerce sales orders must be integrated into Dynamics 365 Finance and then exported to Azure every night.

A text alert must be sent to employees scheduled to assist in the repair area of the retail store if the number of repair check-ins exceeds eight.

Submitted customer surveys must generate an email to the correct department. Approval and follow-up must occur within a week.

Reporting

The warehouse manager's dashboard must contain warehouse counting variance information.

A warehouse manager needs to quickly view warehouse KPIs by using a mobile device.

Power BI must be used for reporting across the organization.

User experience

Warehouse counting must be performed by using a mobile app that scans barcodes on boxes.

All customer repairs must be tracked in the system no matter where they occur.

Qualified leads must be collected from local bike fairs.

Issues

Warehouse counting must be performed by using a mobile app that scans barcodes on boxes.

All customer repairs must be tracked in the system no matter where they occur.

Qualified leads must be collected from local bike fairs.

Internal

User1 reports receives an intermittent plug-in error when viewing the total bill customer time.

User2 reports that Azure consumption for API calls has increased significantly to 100 calls per minute in the last month.

User2 reports that sales orders have increased.

User5 receives the error message: 'Endpoint unavailable' during a test of the technician dispatch ISV solution.

The parts department manager who is the approver for the department is currently on sabbatical.

External

CustomerB reports that the check-in app returned only one search result for their last name, which is not the correct name.

Nine customers arrive in the repair area of the retail store, but no texts were sent to scheduled employees.

Customers report that the response time from the information email listed on the Adventure Works Cycles website is greater than five days.

CustomerC requested additional information from the parts department through the customer survey and has not received a response one week later.

#### QUESTION 1

You need to ensure that Adventure Works Cycles can track information from visitors to bike fairs.

What should you create?

- A. a Power Automate flow that connects with the bike fair Power Apps app to create a lead in Dynamics 365 Sales
- B. a Power Automate flow that generates a new customer record in SharePoint.
- C. a Power Automate flow to capture customer data from the bike fair Power Apps app in SharePoint and create a lead in Microsoft Teams.
- D. a business process flow in Dynamics 365 Sales for capturing leads.

**Correct Answer: A**

**Section:**

**Explanation:**

Scenario:

Qualified leads must be collected from local bike fairs.

Adventure Works Cycles uses a Power Apps app for local bike fairs to attract new customers.

By using a Dynamics 365 connector, you can create flows that initiate when an event occurs in Dynamics 365, or some other service, which then performs an action in Dynamics 365, or some other service.

In Power Automate, you can set up automated workflows between your favorite apps and services to synchronize files, get notifications, collect data, and more.

Reference: <https://docs.microsoft.com/en-us/power-automate/connection-dynamics365>

#### QUESTION 2

You need to reduce the number of Azure consumption API calls for User2.

Which markup segment should you use?

A.

```
<policies>
  <inbound>
    <base />
    <rate-limit-by-key calls="100"
      renewal-period= "30"
      increment-condition= "@(context.Response.StatusCode == 200)"
      counter-key= "@(context.Request.IpAddress)"/>
    </inbound>
  <outbound>
    <base />
  </outbound>
</policies>
```

B.

```
<policies>
  <inbound>
    <base />
    <rate-limit calls="1000" renewal-period= "90" />
  </inbound>
  <outbound>
    <base />
  </outbound>
</policies>
```

C.

```
<policies>
  <inbound>
    <base />
    <rate-limit-by-key calls="1"
      renewal-period= "60"
      increment-condition= "@(context.Response.StatusCode == 200)"
      counter-key="@ (context.Request.IpAddress)"/>
    </inbound>
  <outbound>
    <base />
  </outbound>
</policies>
```

D.

```
<policies>
  <inbound>
    <base />
    <quota calls="100" bandwidth="400" renewal-period="30" />
  </inbound>
  <outbound>
    <base />
  </outbound>
</policies>
```

Correct Answer: C

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**Section:****Explanation:**

Scenario: User2 reports that Azure consumption for API calls has increased significantly to 100 calls per minute in the last month.

Example:

In the following example, the rate limit of 10 calls per 60 seconds is keyed by the caller IP address. After each policy execution, the remaining calls allowed in the time period are stored in the variable remainingCallsPerIP.

```
<policies>
<inbound>
<base />
<rate-limit-by-key calls="10" renewal-period="60"
increment-condition="@context.Response.StatusCode == 200" counter-key="@context.Request.IpAddress"
remaining-calls-variable-name="remainingCallsPerIP"/>
</inbound>
<outbound>
<base />
</outbound>
</policies>
```

Note: The rate-limit-by-key policy prevents API usage spikes on a per key basis by limiting the call rate to a specified number per a specified time period. The key can have an arbitrary string value and is typically provided using a policy expression. Optional increment condition can be added to specify which requests should be counted towards the limit. When this call rate is exceeded, the caller receives a 429 Too Many Requests response status code.

Incorrect Answers:

A: With renewal-period="30" 200 calls/minute would be allowed. B: This would increase the calls/minute limit to 1000.

Reference: <https://docs.microsoft.com/en-us/azure/api-management/api-management-access-restriction-policies>

**03 - Extend the platform****QUESTION 1**

A company uses a third-party shipping company to deliver products to customers.

You need to design a custom connector that retrieves the shipping fees from the shipping company API.

Which three elements should you define for the custom connector? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. Authentication model
- B. Address parameter
- C. OpenAPI definition
- D. Fee parameter
- E. Fee reference

**Correct Answer: A, B, C**

**Section:****Explanation:**

C: You can create a custom connector using a OpenAPI definition file or a URL to OpenAPI definition.

B: On the Security page you get to choose how to authenticate to the API.



Connector Name Trefle

1. General > 2. Security > 3. Definition > 4. Test ✓ Create connector ✕ Cancel

### Security

Choose the authentication type and fill in the required fields to set the security for your custom connector. [Learn more](#)

**Authentication type**

Choose what authentication is implemented by your API \*

API Key

Edit

**API Key**

Users will be required to provide the API Key when creating a connection

Parameter label \*

API Key

Parameter name \*

API-nyckel

Parameter location \*

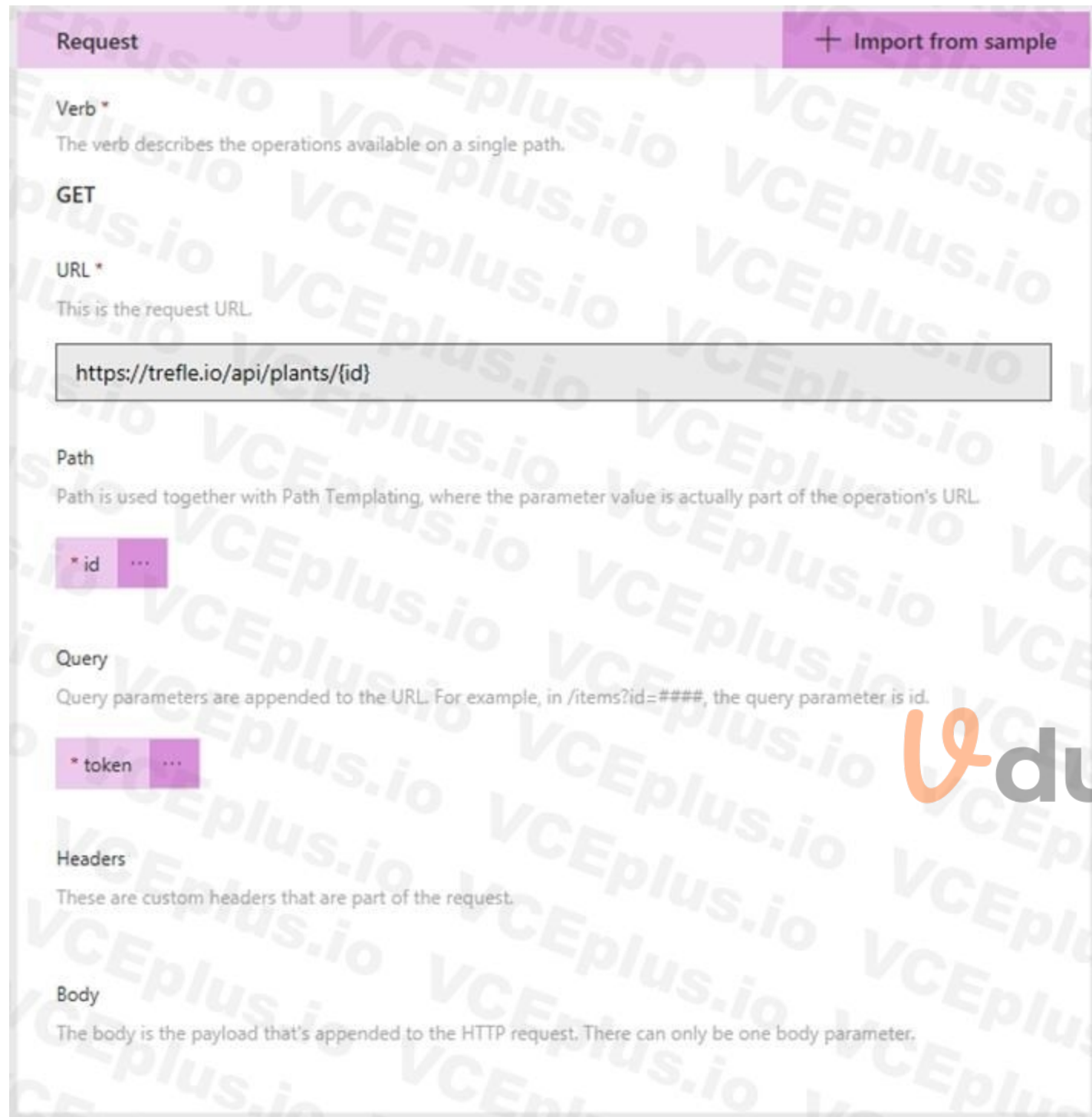
Header

Edit

← General Definition →

A: If you were to create a Custom Connector from scratch, then you would have to study the API you have chosen and type in the URL manually here.





 **Vdumps**

Reference:

<https://carinaclaesson.com/2019/09/06/setting-up-a-custom-connector-from-an-openapi-file-and-utilizing-it-in-powerapps-and-flow/>

## QUESTION 2

You are creating a Power Apps app that retrieves customer information from Azure Active Directory when you use the app to look up a customer record.

You create an Azure Function by using JSON code to retrieve the customer information.

You need to make the application work.

Which two actions should you perform? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. Create a Power Automate flow to import data.
- B. Create a custom connector that uses the Azure Function API.

- C. Copy your JSON code to the app.
- D. Create a custom connector that uses the JSON code.
- E. Create an API definition for the Azure Function.

**Correct Answer: B, E**

**Section:**

**Explanation:**

Section: [none]

E: Before exporting an API, you must describe the API using an OpenAPI definition.

B: This OpenAPI definition contains information about what operations are available in an API and how the request and response data for the API should be structured. PowerApps and Microsoft Flow can create custom connectors for any OpenAPI 2.0 definition.

Reference: <https://github.com/MicrosoftDocs/azure-docs/blob/master/articles/azure-functions/app-service-export-api-to-powerapps-and-flow.md>

### QUESTION 3

You are creating an integration that uses an Azure function to create records in the Common Data Service when leads are submitted from your company website.

You create and configure a Common Data Service application user.

You do not have administrator access to the Common Data Service environment you are using for access to Azure Active Directory. Company policy dictates that service accounts must be used for integrations, and integrations must not be granted privileges beyond what is needed.

You need to recommend actions that an administrator should perform to configure access for the Azure Function.

Which three actions should you perform? Each correct selection presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. Create an application registration in Azure Active Directory.
- B. Assign the system administrator security role to the application user.
- C. Assign the Power Platform administrator role to the application user in Azure Active Directory.
- D. Create a new security role with the minimum required permissions and assign to the application user.
- E. Grant the application delegated permissions to the Dynamics CRM API in Azure Active Directory.
- F. Deploy Azure B2B guest permissions to the application user.



**Correct Answer: A, D, E**

**Section:**

**Explanation:**

Reference: <https://docs.microsoft.com/en-us/powerapps/developer/common-data-service/walkthrough-register-app-azure-active-directory>

### QUESTION 4

A company needs to illustrate the relationships of the entities in Dynamics 365 Sales.

You need to select the appropriate tool to show this graphic.

Which tool should you select?

- A. Metadata diagram
- B. Sales Insights
- C. Power Automate
- D. Security model

**Correct Answer: A**

**Section:**

**Explanation:**

Visual representation of metadata can be useful, especially when you are trying to describe the relationship between entities in the system. You can use the Metadata Diagram sample code provided for Dynamics 365 Customer Engagement (on-premises) to generate the entity relationship diagrams.

You can create a diagram that shows a relationship for just one entity, or a complex diagram that includes dozens of related entities, including custom and system entities.

Reference: <https://docs.microsoft.com/en-us/dynamics365/customerengagement/on-premises/developer/use-metadata-generate-entity-diagrams>

#### QUESTION 5

##### HOTSPOT

A manufacturing company takes online orders.

The company requires automatic validation of order changes. Requirements are as follows:

If validation is successful, the order is submitted.

If exceptions are encountered, a message must be shown to the customer and the order changes must not be submitted.

You need to set up and deploy a plug-in that encapsulates the rules.

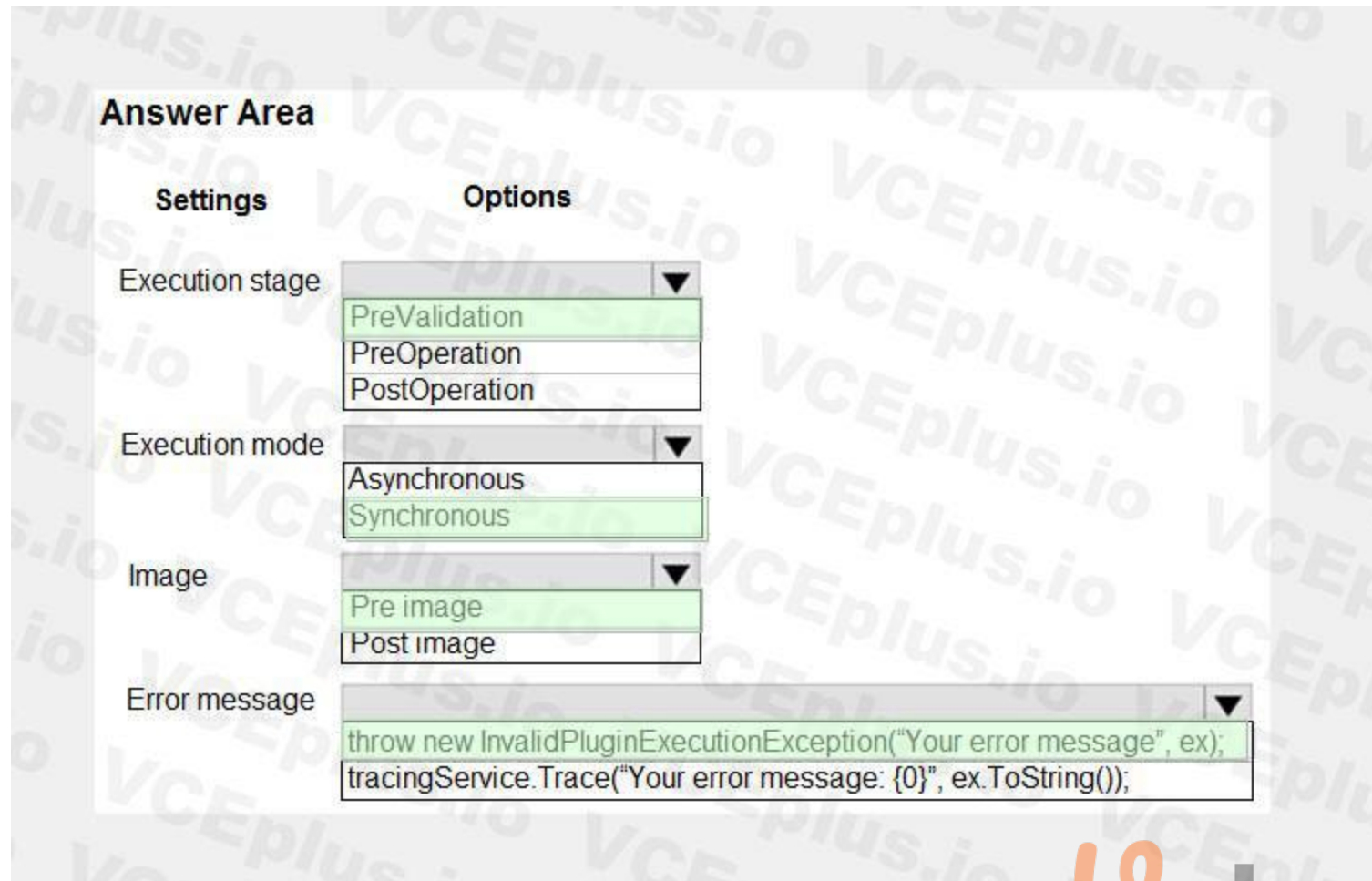
Which options should you use? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

##### Hot Area:

Settings	Options
Execution stage	PreValidation PreOperation PostOperation
Execution mode	Asynchronous Synchronous
Image	Pre image Post image
Error message	throw new InvalidPluginExecutionException("Your error message", ex); tracingService.Trace("Your error message: {0}", ex.ToString());

##### Answer Area:



**Section:**

**Explanation:**

Box 1: PreValidation

PreValidation: For the initial operation, this stage will occur before the main system operation. This provides an opportunity to include logic to cancel the operation before the database transaction.

Box 2: Synchronous

Ideally, you should only cancel operations using synchronous plug-ins registered in the PreValidation stage.

Box 3: Pre Image

Box 4: throw ..

When you throw an InvalidPluginExecutionException exception within a synchronous plug-in an error dialog with your message will be displayed to the user.

Reference:

<https://docs.microsoft.com/en-us/powerapps/developer/common-data-service/event-framework>

<https://docs.microsoft.com/en-us/powerapps/developer/common-data-service/handle-exceptions>

**QUESTION 6**

**HOTSPOT**

You work for a multinational company that has Azure and Common Data Service environment in the United States (UTC-7) and Japan (UTC+9).

You create Azure Functions for each location to update key data.

You need to configure the functions to run at 4:00 AM on weekdays at each location.

Which schedule formats should you use? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

**Hot Area:**

**Answer Area**

Location	Timer schedule
United States	<input type="text" value="0 0 4 * * 1-5"/> <input type="text" value="0 0 7 * * 0-4"/> <input type="text" value="0 0 11 * * 1-5"/> <input type="text" value="0 0 19 * * 0-4"/>
Japan	<input type="text" value="0 0 19 * * 0-4"/> <input type="text" value="0 0 4 * * 1-5"/> <input type="text" value="0 0 7 * * 1-5"/> <input type="text" value="0 0 11 * * 0-4"/>

Answer Area:

**Answer Area**

Location	Timer schedule
United States	<input type="text" value="0 0 4 * * 1-5"/> <input type="text" value="0 0 7 * * 0-4"/> <input type="text" value="0 0 11 * * 1-5"/> <input type="text" value="0 0 19 * * 0-4"/>
Japan	<input type="text" value="0 0 19 * * 0-4"/> <input type="text" value="0 0 4 * * 1-5"/> <input type="text" value="0 0 7 * * 1-5"/> <input type="text" value="0 0 11 * * 0-4"/>

**Section:**

**Explanation:**

Box 1: 0 0 4 \* \* 1-5

Azure Functions uses the NCronTab library to interpret NCRONTAB expressions.

An NCRONTAB expression is similar to a CRON expression except that it includes an additional sixth field at the beginning to use for time precision in seconds:

{second} {minute} {hour} {day} {month} {day-of-week}



NCRONTAB time zones

The numbers in a CRON expression refer to a time and date, not a time span. For example, a 5 in the hour field refers to 5:00 AM, not every 5 hours.

The default time zone used with the CRON expressions is Coordinated Universal Time (UTC).

To have your CRON expression based on another time zone, create an app setting for your function app named WEBSITE\_TIME\_ZONE.

1-5 is weekdays

Box 2: 0 0 4 \* \* 1-5

Reference:

<https://docs.microsoft.com/en-us/azure/azure-functions/functions-bindings-timer?>

### QUESTION 7

DRAG DROP

You are creating a PowerApps connector between Dynamics 365 Sales and Slack.

You must generate a Slack notification whenever a new product is added to Dynamics 365 Sales. You must not be required to sign in directly into Dynamics 365 Sales to generate notifications. You created a Power Apps connector between

Dynamics 365 Sales in Slack to enable this to happen.

You need to configure the appropriate security for each scenario?

Which security components should you configure?

NOTE: Each correct selection is worth one point.

Select and Place:

### Answer Area

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Components	Requirement	Component
OAuth	Ensure Dynamics 365 security is in place.	<input type="text"/>
Security roles	Capture application usage from public site.	<input type="text"/>
API key	Configure a website login that does not need encryption.	<input type="text"/>
Basic authentication		

Correct Answer:

Answer Area		
Components	Requirement	Component
<input type="text"/>	Ensure Dynamics 365 security is in place.	API key
Security roles	Capture application usage from public site.	OAuth
<input type="text"/>	Configure a website login that does not need encryption.	Basic authentication
<input type="text"/>		

**Section:**

**Explanation:**

Box 1: API key

Api Key based authentication: The user will need to provide the API key while creating the connection.

Box 2: OAuth

OAuth 2.0 is the most frequently used type, which uses the OAuth 2 authentication framework to authenticate with the service. Before using this authentication type, you'll need to register your application with the service so that it can receive access tokens for the users.

Box 3: Basic Authentication

Basic Authentication is the simplest type of authentication, where the user just has to provide the username and password to create the connection.

Reference:

<https://docs.microsoft.com/en-us/connectors/custom-connectors/connection-parameters>

**QUESTION 8**

**DRAG DROP**

A developer must register a step using the Plug-in registration tool.

You need to associate the correct Event Pipeline Stage of Execution with its purpose.

Which stage should you associate with each description? To answer, drag the appropriate stages to the correct descriptions. Each stage may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

**Select and Place:**

## Answer Area

Stages	Description	Stage
PreValidation	Cancel the operation before the database transaction.	<input type="text"/>
PreOperation	Change any values for any entity within the database transaction.	<input type="text"/>
MainOperation	Modify any properties of the message before it returns to the caller.	<input type="text"/>
PostOperation		

Correct Answer:

## Answer Area

Stages	Description	Stage
<input type="text"/>	Cancel the operation before the database transaction.	PreValidation
<input type="text"/>	Change any values for any entity within the database transaction.	PreOperation
MainOperation	Modify any properties of the message before it returns to the caller.	PostOperation
<input type="text"/>		

Section:

Explanation:

Box 1: PreValidation

For the initial operation, this stage will occur before the main system operation.

This provides an opportunity to include logic to cancel the operation before the database transaction.

Box 2: PreOperation

PreOperation occurs before the main system operation and within the database transaction.

If you want to change any values for an entity included in the message, you should do it here.

Box 3: PostOperation

Occurs after the main system operation and within the database transaction.

Use this stage to modify any properties of the message before it is returned to the caller.

Incorrect Answers:

MainOperation: For internal use only except for Custom API and Custom virtual table data providers.

Reference:

<https://docs.microsoft.com/en-us/powerapps/developer/data-platform/event-framework>



## QUESTION 9

### HOTSPOT

An organization has a custom Assignments entity that guides agent actions. Team leaders for each assignment group must be able to review any changes made to assignment data by their agents. You have the following JSON segment:

```
{
  "@odata.context": "https://orgxyz.api.crm3.dynamics.com/api/data/v9.1/$metadata#xyz_assignments(xy_assignmentname,xyz_secretcode)",
  "@odata.deltaLink": "https://orgxyz.api.crm3.dynamics.com/api/data/v9.1/xyz_assignments?$select=xyz_assignmentname,xyz_secretcode&deltatoken=652832%2107%2f20%2f2020%2017%3a21%3o13",
  "value": [
    {
      "@odata.etag": "W/\"652815\"",
      "xyz_assignmentname": "spy007",
      "xyz_secretcode": "abc",
      "xyz_assignmentid": "a278f39e-a7ca-ea11-a812-000d3af45c52"
    },
    {
      "@odata.etag": "W/\"652816\"",
      "xyz_assignmentname": "agent007",
      "xyz_secretcode": "123",
      "xyz_assignmentid": "1e110eac-a7ca-ea11-a812-000d3af45c52"
    }
  ]
}
```

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

**Hot Area:**

**Answer Area**

	Yes	No
You can use the JSON segment to retrieve a list of changes to the assignment records referenced in the segment.	<input type="radio"/>	<input type="radio"/>
You can use the data link to query the assignment changes from the last 30 days.	<input type="radio"/>	<input type="radio"/>
You can use the data link with a \$filter option to retrieve assignment changes from the last 30 days.	<input type="radio"/>	<input type="radio"/>
Is the delta link token valid?	<input type="radio"/>	<input type="radio"/>

Answer Area:

**Answer Area**

	Yes	No
You can use the JSON segment to retrieve a list of changes to the assignment records referenced in the segment.	<input checked="" type="radio"/>	<input type="radio"/>
You can use the data link to query the assignment changes from the last 30 days.	<input type="radio"/>	<input checked="" type="radio"/>
You can use the data link with a \$filter option to retrieve assignment changes from the last 30 days.	<input type="radio"/>	<input checked="" type="radio"/>
Is the delta link token valid?	<input checked="" type="radio"/>	<input type="radio"/>



**Section:**

**Explanation:**

Box 1: Yes Delta query lets you query for additions, deletions, or updates to users, by way of a series of delta function calls. Delta query enables you discover changes to users without having to fetch the entire set of users from Microsoft Graph and compare changes.

Box 2: No

Tracking user changes Tracking user changes is a round of one or more GET requests with the delta function. You make a GET request much like the way you list users, except that you include the following:

The delta function.

A state token (deltaToken or skipToken) from the previous GET delta function call.

Delta tokens are only valid for a specific period before the client application needs to run a full synchronization again. For directory objects (application, administrativeUnit, directoryObject, directoryRole, group, orgContact, oauth2permissiongrant, servicePrincipal, and user), the limit is 7 days.

Box 3: No

There is limited support for \$filter:

The only supported \$filter expression is for tracking changes on a specific object: \$filter=id+eq+{value}.

Box 4: Yes

Reference:

<https://docs.microsoft.com/en-us/graph/api/user-delta>

#### QUESTION 10

HOTSPOT

A training company implements a Common Data Service (CDS) environment. The company has created and stores information about courses in a custom entity.

A Power Automate flow must be created whether a course has been created that starts within the next seven days and must be accurate to the minute.

You need to define an expression that meets the requirements.

Which functions should you use for the expression? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:



**Answer Area**

(
 

less
ticks
triggerBody
getFutureTime

(`formatDateTime` (
 

less
ticks
triggerBody
getFutureTime

 (`()?['new coursedate'],`

less
ticks
triggerBody
getFutureTime

`'yyyy-MM-ddTHH:MM:ssZ'))`,


(

less
ticks
triggerBody
getFutureTime

 (`(7, 'Day')`

less
ticks
triggerBody
getFutureTime

)



Answer Area:

**Answer Area**

(
 

less
ticks
triggerBody
getFutureTime

(formatDateTime (
 

less
ticks
triggerBody
getFutureTime

 ()?['new coursedate'],
 

less
ticks
triggerBody
getFutureTime


 'yyyy-MM-ddTHH:MM:ssZ'))),

(
 

less
ticks
triggerBody
getFutureTime

 (7, 'Day'))

)



**Section:**

**Explanation:**

Box 1: less

less checks whether the first value is less than the second value. Return true when the first value is less, or return false when the first value is more.

Box 2 : ticks

ticks(timestamp: string) - Returns the number of ticks (100 nanoseconds interval) since 1 Jan 1601 00:00:00 UT

Syntax: ticks('<timestamp>')

Box 3: triggerBody

triggerBody returns a trigger's body output at runtime.

Box 4: ticks

Box 5: getFutureTime getFutureTime return the current timestamp plus the specified time units.

Syntax: getFutureTime(<interval>, <timeUnit>, <format?>)

Reference:

<https://docs.microsoft.com/en-us/azure/logic-apps/workflow-definition-language-functions-reference>

**QUESTION 11**

DRAG DROP

A company uses Dynamics 365 Sales.

Sales commission must be calculated when an order is placed. You create an Azure Function to perform the calculation. The Azure Function has an HTTP trigger.

You need to configure the Plug-in Registration tool to send data to the Azure Function when an order is placed. You open the Plug-in Registration tool and connect to Dynamics 365 Sales.

Which three actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Select and Place:

Actions	Answer Area
Select <b>Register New Web Hook</b> .	
Select <b>Register New Service Endpoint</b> .	
Set authentication to <b>HttpHeader</b> .	
Register a New Step for Create of SalesOrder.	
Enter a connection string.	
Enter the endpoint URL.	

Correct Answer:

Actions	Answer Area
	Select <b>Register New Web Hook</b> .
Select <b>Register New Service Endpoint</b> .	Enter the endpoint URL.
Set authentication to <b>HttpHeader</b> .	Register a New Step for Create of SalesOrder.
Enter a connection string.	

**Section:**

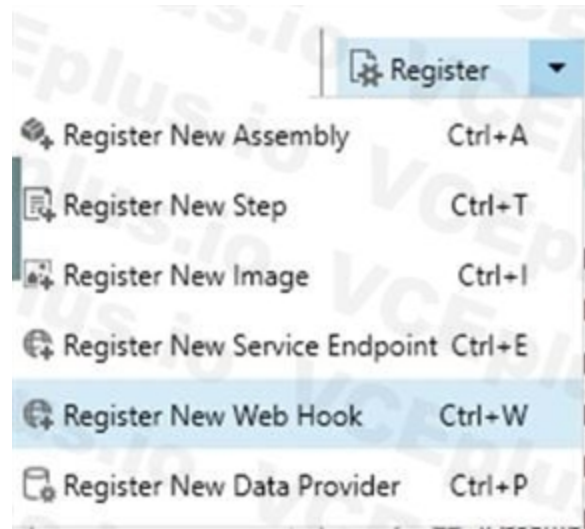
**Explanation:**

Step 1:SelectRegister New Web Hook.

Configure Dynamics 365 Sales to Call Your Webhook in Azure Functions

1. Open the Plug-in Registration Tool and connect to your organization.

2. Select Register->Register New Web Hook



Step 2: Enter the endpoint URL

Name	Webhook Sample Azure Function
Endpoint URL	mples.azurewebsites.net/api/WebhookSample
Authentication	WebhookKey
Value	N607PVgldtaDTgTOMiXMqcUMVgldmFvWspg



Step 3: Register a New Step for Create of SalesOrder.

Register a new webhook, and then tie that webhook to an event in Dynamics 365 Sales. Select your newly registered webhook, right-click it, and then choose "Register New Step."

Note that the webhook here is set to execute whenever a change to an account record is detected within Dynamics 365 Sales.

Reference:

<https://docs.microsoft.com/en-us/powerapps/developer/common-data-service/tutorial-write-plug-in>

## QUESTION 12

### HOTSPOT

A travel agency uses Dynamics 365 Sales.

Customers are allowed to add up to three regions to their travel preferences from the website. Customer preferences must be stored in the Contact entity. An error message must display if customers enter data incorrectly.

You create a plug-in.

You need to register the plug-in to meet the requirements.

Which value should you apply for each parameter? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

**Answer Area**

Parameter	Value
message	<input type="text"/> create associate update
primary entity	<input type="text"/> none region contact
secondary entity	<input type="text"/> none region contact
execution mode	<input type="text"/> synchronous asynchronous

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Answer Area:



**Answer Area**

Parameter	Value
message	<div style="border: 1px solid black; padding: 2px;"> <div style="background-color: #ccc; padding: 2px;">▼</div> <div style="padding: 2px;">create</div> <div style="background-color: #d9ead3; padding: 2px;">associate</div> <div style="padding: 2px;">update</div> </div>
primary entity	<div style="border: 1px solid black; padding: 2px;"> <div style="background-color: #ccc; padding: 2px;">▼</div> <div style="padding: 2px;">none</div> <div style="padding: 2px;">region</div> <div style="background-color: #d9ead3; padding: 2px;">contact</div> </div>
secondary entity	<div style="border: 1px solid black; padding: 2px;"> <div style="background-color: #ccc; padding: 2px;">▼</div> <div style="padding: 2px;">none</div> <div style="background-color: #d9ead3; padding: 2px;">region</div> <div style="padding: 2px;">contact</div> </div>
execution mode	<div style="border: 1px solid black; padding: 2px;"> <div style="background-color: #ccc; padding: 2px;">▼</div> <div style="background-color: #d9ead3; padding: 2px;">synchronous</div> <div style="padding: 2px;">asynchronous</div> </div>

**Section:**

**Explanation:**

Box 1: associate

Box 2: contact

Customers are allowed to add up to three countries/regions to their travel preferences from the website. Their preferences must be stored in the Contact entity.

Box 3: region

Box 4: synchronous

Reference:

<https://docs.microsoft.com/en-us/powerapps/developer/common-data-service/tutorial-write-plugin-in>

**QUESTION 13**

The communication department for a company plans to add a publicly accessible survey page to the company's public website.

You must add the new survey page to the company's public website and capture data from the page to a Common Data Service environment.

Explicit user credentials must not be required to write survey data to Common Data Service.

You need to implement authentication.

Which authentication mechanism should you implement?

A. Microsoft 365

- B. X.509 certificate
- C. Azure AD Conditional Access
- D. Claims-based

**Correct Answer: C**

**Section:**

**Explanation:**

With Azure AD Conditional Access the users are authenticated by Azure Active Directory (Azure AD). Incorrect Answers: A: Using Microsoft 365 authentication does not require that you register your applications as OAuth does. You must simply provide a User Principal Name (UPN) and password for a valid user.

Reference: <https://docs.microsoft.com/en-us/power-platform/admin/wp-security>

#### QUESTION 14

You are deploying a Power Apps app that uses the custom connector for ServiceNow.

The app loads very slowly for some users. You determine that all records from ServiceNow are being retrieved for every user.

The app must load only incidents that are assigned to each user.

You need to limit the number of records that the connector returns.

What should you do?

- A. Apply a Lifecycle Services asset scope
- B. Apply a business process flow
- C. Apply the Azure APIM parameter
- D. Apply a connector policy template

**Correct Answer: D**

**Section:**

**Explanation:**

You can configure policy templates for custom connectors. Policies allow you to modify the behavior of a custom connector at runtime. You can use policies to perform data conversion, route requests, set parameter values, and more. You can configure policies directly in the custom connector API properties file before import, or you can do it from the maker portal in the custom connector designer by applying policy templates.

Note: ServiceNow Action: GetRecords

Summary: List Records

Description: Gets records of a certain ServiceNow object type like 'Incidents'

Syntax: ServiceNow.GetRecords (string tableType, [advanced][Optional]boolean sysparm\_display\_value, [advanced][Optional]boolean sysparm\_exclude\_reference\_link, [advanced][Optional]string sysparm\_query,

[advanced][Optional]integer sysparm\_limit, [advanced][Optional]integer sysparm\_offset)

Reference:

<https://docs.microsoft.com/en-us/learn/modules/policy-templates-custom-connectors/>

<https://www.carlosag.net/PowerApps/Connectors/ServiceNow>

#### QUESTION 15

A company is developing multiple plug-ins.

One of the plug-ins keeps failing.

You need to debug the plug-in.

Which three actions should you perform? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. Highlight the plug-in step and select Debug in the Plug-in Registration tool
- B. Copy the .pdb file into the server/bin/assembly folder
- C. Select Start Profiling in the Plug-in Registration tool



- D. Attach the debugger to the w3wp.exe process
- E. Install the plug-in profiler

**Correct Answer: A, C, E**

**Section:**

**Explanation:**

Step 1: Install plug-in profiler

Because the plug-in executes on a remote server, you cannot attach a debugger to the process. The plug-in profiler captures a profile of an executing plug-in and allows you to re-play the execution of the plug-in using Visual Studio on your local computer.

Step 2: Start profiling

1. In the Plug-in Registration tool, select the (Step) BasicPlugin.FollowupPlugin: Create of account step, and click Start Profiling.
2. In the Profiler Settings dialog accept the default settings and click OK to close the dialog.

Step 3: Debug your plug-in

Reference:

<https://docs.microsoft.com/en-us/powerapps/developer/data-platform/tutorial-debug-plug-in>

## 01 - Develop integrations

Case study

This is a case study. Case studies are not timed separately. You can use as much exam time as you would like to complete each case. However, there may be additional case studies and sections on this exam. You must manage your time to ensure that you are able to complete all questions included on this exam in the time provided.

To answer the questions included in a case study, you will need to reference information that is provided in the case study. Case studies might contain exhibits and other resources that provide more information about the scenario that is described in the case study. Each question is independent of the other questions in this case study.

At the end of this case study, a review screen will appear. This screen allows you to review your answers and to make changes before you move to the next section of the exam. After you begin a new section, you cannot return to this section.

To start the case study

To display the first question in this case study, click the Next button. Use the buttons in the left pane to explore the content of the case study before you answer the questions. Clicking these buttons displays information such as business requirements, existing environment, and problem statements. If the case study has an All Information tab, note that the information displayed is identical to the information displayed on the subsequent tabs.

When you are ready to answer a question, click the Question button to return to the question.

Background

Current environment

Adventure Works Cycles wants to replace their paper-based bicycle manufacturing business with an efficient paperless solution. The company has one manufacturing plant in Seattle that produces bicycle parts, assembles bicycles, and distributes finished bicycles to the Pacific Northwest.

Adventure Works Cycles has a retail location that performs bicycle repair and warranty repair work. The company has six maintenance vans that repair bicycles at various events and residences.

Adventure Works Cycles recently deployed Dynamics 365 Finance and Dynamics 365 Manufacturing in a Microsoft-hosted environment for financials and manufacturing. The company plans to leverage the Microsoft Power Platform to migrate all of their distribution and retail workloads to Dynamics 365 Unified Operations.

The customer uses Dynamics 365 Sales, Dynamics 365 Customer Service and Dynamics 365 Field Service.

Retail store information

Adventure Works Cycle has one legal entity, four warehouses, and six field service technicians.

Warehouse counting is performed manually by using a counting journal. All warehouse boxes and items are barcoded.

The Adventure Works Cycles retail location performs bicycle inspections and performance tune-ups.

Technicians use paper forms to document the bicycle inspection performed before a tune-up and any additional work performed on the bicycle.

Adventure Works Cycles uses a Power Apps app for local bike fairs to attract new customers.

A canvas app is being developed to capture customer information when customers check in at the retail location. The app has the following features:

- Customer selects yes or no if they are on the mailing list.
- Customer selects the amount of times they have visited the store.
- Customer selects the type of service needed.
- The search result returns all last name records that match the search term.

Technology

Requirements

A plug-in for Dynamics 365 Sales automatically calculated the total billed time from all activities on a particular customer account, including sales representative visits, phone calls, email correspondence, and repair time

compared with hours spent.

A shipping API displays shipping rates and tracking information on sales orders. The contract allows for 3,000 calls per month.

Ecommerce orders are processed in batch daily by using a manual import of sales orders in Dynamics 365 Finance.

Microsoft Teams is used for all collaboration.

All testing and problem diagnostics are performed in a copy of the production environment.

Customer satisfaction surveys are recorded with Microsoft Forms Pro. Survey replies from customers are sent to a generic mailbox.

Automation

A text message must be automatically sent to a customer to confirm an appointment and to notify when a technician is on route that includes their location.

Ecommerce sales orders must be integrated into Dynamics 365 Finance and then exported to Azure every night.

A text alert must be sent to employees scheduled to assist in the repair area of the retail store if the number of repair check-ins exceeds eight.

Submitted customer surveys must generate an email to the correct department. Approval and follow-up must occur within a week.

Reporting

The warehouse manager's dashboard must contain warehouse counting variance information.

A warehouse manager needs to quickly view warehouse KPIs by using a mobile device.

Power BI must be used for reporting across the organization.

User experience

Warehouse counting must be performed by using a mobile app that scans barcodes on boxes.

All customer repairs must be tracked in the system no matter where they occur.

Qualified leads must be collected from local bike fairs.

Issues

Warehouse counting must be performed by using a mobile app that scans barcodes on boxes.

All customer repairs must be tracked in the system no matter where they occur.

Qualified leads must be collected from local bike fairs.

Internal

User1 reports receives an intermittent plug-in error when viewing the total bill customer time.

User2 reports that Azure consumption for API calls has increased significantly to 100 calls per minute in the last month.

User2 reports that sales orders have increased.

User5 receives the error message: 'Endpoint unavailable' during a test of the technician dispatch ISV solution.

The parts department manager who is the approver for the department is currently on sabbatical.

External

CustomerB reports that the check-in app returned only one search result for their last name, which is not the correct name.

Nine customers arrive in the repair area of the retail store, but no texts were sent to scheduled employees.

Customers report that the response time from the information email listed on the Adventure Works Cycles website is greater than five days.

CustomerC requested additional information from the parts department through the customer survey and has not received a response one week later.

#### QUESTION 1

You need to identify the execution mode that is being used for the ISV solution reported by User5.

Which type of execution mode is in use?

- A. asynchronous
- B. atomicity
- C. transfer
- D. synchronous

**Correct Answer: A**

**Section:**

**Explanation:**

**02 - Develop integrations**

### QUESTION 1

Note: This question-is part of a series of questions that present the same scenario. Each question-in the series contains a unique solution that might meet the stated goals. Some question-sets might have more than once correct solution, while others might not have a correct solution.

After you answer a question-in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You are designing a one-way integration from the Common Data Service to another system.

You must use an Azure Function to update the other system. The integration must send only newly created records to the other system. The solution must support scenarios where a component of the integration is unavailable for more than a few seconds to avoid data loss.

You need to design the integration solution.

Solution: Register a webhook in the Common Data Service that connects to the Azure Function. Register a step on the webhook which runs synchronously on the record's Create message and in the post-operation stage. Does the solution meet the goal?

A. Yes

B. No

**Correct Answer: B**

**Section:**

**Explanation:**

Instead use asynchronous communication.

### QUESTION 2

Note: This question-is part of a series of questions that present the same scenario. Each question-in the series contains a unique solution that might meet the stated goals. Some question-sets might have more than once correct solution, while others might not have a correct solution.

After you answer a question-in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You are designing a one-way integration from the Common Data Service to another system.

You must use an Azure Function to update the other system. The integration must send only newly created records to the other system. The solution must support scenarios where a component of the integration is unavailable for more than a few seconds to avoid data loss.

You need to design the integration solution.

Solution: Register a service endpoint in the Common Data Service that connects to an Azure Service Bus queue.

Register a step at the endpoint which runs asynchronously on the record's Create message and in the port-operation stage.

Configure the Azure Function to process records as they are added to the queue.

Does the solution meet the goal?

A. Yes

B. No

**Correct Answer: A**

**Section:**

**Explanation:**

Section: [none]

Microsoft Dataverse supports integration with Azure.

For the Dataverse and Azure connection to work, there must be at least one solution in an Azure Service Bus solution account, where the solution contains one or more service endpoints. For a queue endpoint contract, a listener doesn't have to be actively listening.

Reference: <https://docs.microsoft.com/en-us/powerapps/developer/common-data-service/azure-integration>

### QUESTION 3

Note: This question-is part of a series of questions that present the same scenario. Each question-in the series contains a unique solution that might meet the stated goals. Some question-sets might have more than once correct solution, while others might not have a correct solution.

After you answer a question-in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You are designing a one-way integration from the Common Data Service to another system.

You must use an Azure Function to update the other system. The integration must send only newly created records to the other system. The solution must support scenarios where a component of the integration is unavailable for more than a few seconds to avoid data loss.

You need to design the integration solution.

Solution: Configure the Azure Function with a timer trigger that runs every five minutes. The function will query the Common Data Service and process records created in the last five minutes.

Does the solution meet the goal?

A. Yes

B. No

**Correct Answer: B**

**Section:**

**Explanation:**

Instead use Azure Service Bus queue solution with asynchronous communication.

Reference: <https://docs.microsoft.com/en-us/powerapps/developer/common-data-service/azure-integration>

#### **QUESTION 4**

HOTSPOT

A company must copy customer account data changes from a Common Data Service (CDS) instance into an external system.

Azure Storage Queues are used to pass the changes from CDS to the external system.

You have the following code. (Line numbers are included for reference only.)



```

01 string token = null;
02 token = ProcessAccountChanges(_service, token, changeQueue, deleteQueue);
03 ...
04 token = ProcessAccountChanges(_service, token, changeQueue, deleteQueue);
05 ...
06 private static string ProcessAccountChanges(IOrganizationService orgservice,
string token, Cloud Queue changeQueue, CloudQueue deleteQueue)
07 {
08     var request = new RetrieveEntityChangeRequest();
09     request.EntityName = "account";
10     request.Columns = new ColumnSet("name", "accountnumber", "creditlimit",
"ownerid");
11     request.DataVersion = token;
12     RetrieveEntityChangeResponse response = (RetrieveEntityChangeResponse)
orgservice.Execute(request);
13     token = response.EntityChanges.DataToken;
14     foreach (var change in response.EntityChanges.Changes)
15     {
16         if (change.Type == ChangeType.NewOrUpdated)
17         {
18             var changedItem = (NewOrUpdatedItem) change;
19             Entity newOrChangedEntity = (Entity) changedItem.NewOrUpdatedEntity;
20             CloudQueueMessage changemessage = new CloudQueueMessage
(newOrChangedEntity.Id.ToString());
21             changeQueue.AddMessage(changemessage);
22         }
23         else if (change.Type == ChangeType.RemoveOrDeleted)
24         {
25             var deleteditem = (RemoveOrDeletedItem) change;
26             EntityReference deletedEntityReference = deleteditem.RemovedItem;
27             CloudQueueMessage deletemessage = new CloudQueueMessage
(deletedEntityReference.Id.ToString());
28             deleteQueue.AddMesaage(deletemessage);
29         }
30     }
31     return token;
32 }

```



For each of the following statements, select Yes if the statement is true. Otherwise, select No.  
NOTE: Each correct selection is worth one point.


**Hot Area:**

**Answer Area**

Statement	Yes	No
The first call to ProcessAccountChanges at line 2 adds changes made to account records to the storage queues.	<input type="radio"/>	<input type="radio"/>
The second call to ProcessAccountChanges at line 4 adds changes made to account records to the storage queues.	<input type="radio"/>	<input type="radio"/>
The messages in changeQueue specify whether the accounts are new or updated.	<input type="radio"/>	<input type="radio"/>
A message is added to deleteQueue if an account is created and subsequently deleted at line 3.	<input type="radio"/>	<input type="radio"/>

Answer Area:

**Answer Area**



Statement	Yes	No
The first call to ProcessAccountChanges at line 2 adds changes made to account records to the storage queues.	<input checked="" type="radio"/>	<input type="radio"/>
The second call to ProcessAccountChanges at line 4 adds changes made to account records to the storage queues.	<input checked="" type="radio"/>	<input type="radio"/>
The messages in changeQueue specify whether the accounts are new or updated.	<input type="radio"/>	<input checked="" type="radio"/>
A message is added to deleteQueue if an account is created and subsequently deleted at line 3.	<input checked="" type="radio"/>	<input type="radio"/>

Section:

Explanation:

Box 1: Yes

Box 2: Yes



Box 3: No

Either new/updated or removed/deleted.

Box 4: Yes

### QUESTION 5

#### HOTSPOT

A company updates their client contact information periodically. The contact entity has alternate keys defined.

You have the following code. (Line numbers are included for reference only.)

```
1. Entity contact = new Entity()  
2. {  
3.   LogicalName = "contact",  
4.   KeyAttributes =  
5.   {  
6.     {"lastname", "Smith"},  
7.     {"clientnumber", "abc123"}  
8.   }  
9. },  
10 contact["lastname"] = "Doe";  
11. UpsertRequest updcontact = new UpsertRequest ();  
12. {  
13.   Target = contact;  
14. }  
15. UpsertResponse response = ( UpsertResponse )service.Execute(updcontact);
```

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

Hot Area:

### Answer Area

Statement	Yes	No
If the last name is an alternate key and there are no contacts with the last name Smith, the stored value of the last name is Smith.	<input type="radio"/>	<input type="radio"/>
If the client number is an alternate key and the client number exists, the stored value of the last name is Smith.	<input type="radio"/>	<input type="radio"/>
If the last name is an alternate key and there are people who have the last name Smith, the stored value of the last name is Smith.	<input type="radio"/>	<input type="radio"/>
If the client number is an alternate key and the client number does not exist, the stored value of the last name is Smith.	<input type="radio"/>	<input type="radio"/>

Answer Area:



### Answer Area

Statement	Yes	No
If the last name is an alternate key and there are no contacts with the last name Smith, the stored value of the last name is Smith.	<input type="radio"/>	<input checked="" type="radio"/>
If the client number is an alternate key and the client number exists, the stored value of the last name is Smith.	<input checked="" type="radio"/>	<input type="radio"/>
If the last name is an alternate key and there are people who have the last name Smith, the stored value of the last name is Smith.	<input type="radio"/>	<input checked="" type="radio"/>
If the client number is an alternate key and the client number does not exist, the stored value of the last name is Smith.	<input type="radio"/>	<input checked="" type="radio"/>

Section:

Explanation:

Reference:

<https://docs.microsoft.com/en-us/powerapps/developer/common-data-service/use-alternate-key-create-record>

### QUESTION 6

#### HOTSPOT

A company is building a new model-driven app.

The app must integrate with a number of on-premises and cloud solutions. No VPNs are in place.

You need to determine the method for each integration.

Which methods should you use? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

#### Hot Area:

Integration	Method
Outbound synchronous calls to a third-party Web API service	<input type="checkbox"/> Webhook <input type="checkbox"/> Microsoft Flow <input type="checkbox"/> Azure Event Hub <input type="checkbox"/> Azure Service Bus
Calls to and from a website hosted in Azure with high peak loads	<input type="checkbox"/> Plug-in <input type="checkbox"/> Webhook <input type="checkbox"/> Azure Event Hub <input type="checkbox"/> Azure Service Bus
Outbound calls to multiple on-premises and cloud systems to notify of customer address changes	<input type="checkbox"/> Plug-in <input type="checkbox"/> Azure Event Hub <input type="checkbox"/> Webhook

#### Answer Area:

Integration	Method
Outbound synchronous calls to a third-party Web API service	<ul style="list-style-type: none"> <li>Webhook</li> <li>Microsoft Flow</li> <li>Azure Event Hub</li> <li>Azure Service Bus</li> </ul>
Calls to and from a website hosted in Azure with high peak loads	<ul style="list-style-type: none"> <li>Plug-in</li> <li>Webhook</li> <li>Azure Event Hub</li> <li>Azure Service Bus</li> </ul>
Outbound calls to multiple on-premises and cloud systems to notify of customer address changes	<ul style="list-style-type: none"> <li>Plug-in</li> <li>Azure Event Hub</li> <li>Webhook</li> </ul>



**Section:**

**Explanation:**

Box 1: Webhook

With Dataverse, you can send data about events that occur on the service to a web app by using webhooks. A webhook is a lightweight HTTP pattern for connecting web APIs and services with a publish-and-subscribe model. Webhook senders notify receivers about events by making requests to receiver endpoints with some information about the events.

Webhooks enable developers and ISVs to integrate Dataverse data with their own custom code hosted on external services.

Box 2: Azure Service Bus

Service Bus provides a secure and reliable communication channel between Dataverse runtime data and external, cloud-based line-of-business apps. This capability is especially useful in keeping disparate Dataverse systems or other

Dataverse servers synchronized with business data changes.

Box 3: Azure Event hub

Azure Event Hubs is a big data streaming platform and event ingestion service. It can receive and process millions of events per second. Data sent to an event hub can be transformed and stored by using any real-time analytics provider or batching/storage adapters.

Note: The most popular approaches in Dataverse involve webhooks, Azure messaging (Service Bus, Event Hubs), Azure Logic Apps, or Power Automate.

Reference:

<https://docs.microsoft.com/en-us/powerapps/maker/common-data-service/why-cds-any-type-app>

**QUESTION 7**

DRAG DROP

An organization uses plug-in to retrieve specific information from legacy data stores each time a new order is submitted.

You review the Common Data Service analytics page. The average plug-in execution time is increasing.

You need to replace the plug-in with another component, reusing as much of the current plug-in code as possible.

Which five actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Select and Place:

**Actions**

Refactor the plug-in logic in the app.

Create an Azure Function app.

Register a service endpoint for the app in the Plug-in Registration tool.

Create an Azure Logic app.

Register a step in the webhook.

Register a webhook for the app in the Plug-in Registration tool.

Publish the app.

Register a step in the service endpoint.

**Answer Area**



Correct Answer:



Actions	Answer Area
	Create an Azure Function app.
	Refactor the plug-in logic in the app.
Register a service endpoint for the app in the Plug-in Registration tool.	Publish the app.
Create an Azure Logic app.	Register a webhook for the app in the Plug-in Registration tool.
	Register a step in the webhook.
Register a step in the service endpoint.	

**Section:**

**Explanation:**

Step 1: Create an Azure Function app

Azure Functions provide an excellent way to deliver a solution using WebHooks.

Step 2: Refactor the plug-in logic in the app.

Step 3: Publish the app

You can publish your function app to Azure directly from Visual Studio.

Step 4: Register a webhook for the app in the Plug-in Registration tool

Use the Plug-in Registration tool to register a WebHook.

Step 5: Register a step in the webhook.

Registering a step for a WebHook is like registering a step for a plug-in.

Reference:

<https://docs.microsoft.com/en-us/powerapps/developer/data-platform/use-webhooks>

<https://docs.microsoft.com/en-us/powerapps/developer/data-platform/register-web-hook>

**QUESTION 8**

**DRAG DROP**

You need to select the appropriate methods using Azure Event Grid.

Which method should you use for each requirement? To answer, drag the appropriate methods to the correct requirements. Each method may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

**Select and Place:**



**Answer Area**

Sources	Requirement	Method
Event handler	Notify the infrastructure team when a new virtual machine is created.	
Event subscription		
Event sources	Route orders over \$5,000 to the credit department.	
Events		

Correct Answer:

**Answer Area**

Sources	Requirement	Method
	Notify the infrastructure team when a new virtual machine is created.	Event handler
Event sources	Route orders over \$5,000 to the credit department.	Event subscription
Events		

**Section:**

**Explanation:**

Box 1: Event handler

An event handler is the place where the event is sent. The handler takes some further action to process the event.

Box 2: Event subscription

Event subscriptions - The endpoint or built-in mechanism to route events, sometimes to more than one handler. Subscriptions are also used by handlers to intelligently filter incoming events.

Incorrect Answers:

Events - What happened.

Event sources - Where the event took place.

Reference:

<https://docs.microsoft.com/en-us/azure/event-grid/event-handlers>

<https://docs.microsoft.com/en-us/azure/event-grid/overview>

**QUESTION 9**

HOTSPOT

You create a Power Platform solution to track purchasing requirements for bills of material (BOMs) and their subcomponents.

The solution must meet the following requirements:

Ensure that the BOMs are enabled to include the necessary subcomponents.

Report changes to the BOMs or their sub-components that are made by engineers.

You need to configure the solution.

What should you do to meet each requirement? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.


Hot Area:

Requirement	Action
Ensure the BOMs can include necessary subcomponents.	<input type="checkbox"/> Configure entity relationships. <input type="checkbox"/> Configure Quick View. <input type="checkbox"/> Configure environment variables.
Report who changed the BOM records and when the changes were made.	<input type="checkbox"/> Configure entity change tracking. <input type="checkbox"/> Configure entity auditing. <input type="checkbox"/> Configure environment variables.

Answer Area:



Requirement	Action
Ensure the BOMs can include necessary subcomponents.	<ul style="list-style-type: none"> <li>Configure entity relationships.</li> <li>Configure Quick View.</li> <li>Configure environment variables.</li> </ul>
Report who changed the BOM records and when the changes were made.	<ul style="list-style-type: none"> <li>Configure entity change tracking.</li> <li>Configure entity auditing.</li> <li>Configure environment variables.</li> </ul>



**Section:**

**Explanation:**

Box 1: Configure entity relationship

Box 2: Configure entity change tracking

The change tracking feature in Microsoft Dataverse provides a way to keep the data synchronized in an efficient manner by detecting what data has changed since the data was initially extracted or last synchronized. Previously, without this new feature, it was difficult to build a reliable and efficient mechanism to determine what records had changed in Dataverse.

Reference:

<https://docs.microsoft.com/en-us/powerapps/developer/data-platform/use-change-tracking-synchronize-data-external-systems>

#### QUESTION 10

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You are designing a one-way integration from the Common Data Service to another system.

You must use an Azure Function to update the other system. The integration must send only newly created records to the other system. The solution must support scenarios where a component of the integration is unavailable for more than a few seconds to avoid data loss.

You need to design the integration solution.

Solution: Register a service endpoint in the Common Data Service that connects to an Azure Service Bus queue.

Create and register an Azure-aware plug-in that uses the service endpoint.

Register a step on the plug-in that runs asynchronously on the record's Create message and in the post-operation stage.

Configure the Azure Function to process records as they are added to the queue.

Does the solution meet the goal?

- A. Yes
- B. No

**Correct Answer: A**

**Section:**

**Explanation:**

Plug-ins are one of two methods used to initiate posting the message containing the data context to the Azure Service Bus, the other method being a custom workflow activity.

Note: Microsoft Dataverse supports integration with Azure.

For the Dataverse and Azure connection to work, there must be at least one solution in an Azure Service Bus solution account, where the solution contains one or more service endpoints.

For a queue endpoint contract, a listener doesn't have to be actively listening.

Reference:

<https://docs.microsoft.com/en-us/powerapps/developer/common-data-service/azure-integration>

**QUESTION 11**

HOTSPOT

You create an alternate key named AlternateKey1 on the Account entity. The definition for AlternateKey1 is shown in the following exhibit:

The screenshot shows the 'Keys' page for the 'Account' entity in Microsoft Dataverse. The navigation bar includes 'Entities > Account' and tabs for 'Fields', 'Relationships', 'Business rules', 'Views', 'Forms', 'Dashboards', 'Charts', and 'Keys'. Below the navigation, there are three drop-down menus: 'Display name' (set to 'AlternateKey1'), 'Name' (set to 'cr27f\_AlternateKey1'), and 'Fields' (set to 'Account Number, Account Name').

Display name	Name	Fields
AlternateKey1	cr27f_AlternateKey1	Account Number, Account Name

Use the drop-down menus to select the answer choice that answers each question based on the information presented in the graphic.

NOTE: Each correct selection is worth one point.

**Hot Area:**

### Answer Area

How is uniqueness enforced based on the definition of AlternateKey1?

	▼
The combination of Account Number and Account Name must be unique	
Either Account Number or Account Name must be unique	
Account Number and Account Name must both be unique	

You must add a third field to AlternateKey1. What should you do?

	▼
Update AlternateKey1 and add the missing field	
Delete AlternateKey1 and re-create it with all three fields	
Create a new alternate key named AlternateKey2 with only the missing field	

Answer Area:



### Answer Area

How is uniqueness enforced based on the definition of AlternateKey1?

	▼
The combination of Account Number and Account Name must be unique	
Either Account Number or Account Name must be unique	
Account Number and Account Name must both be unique	

You must add a third field to AlternateKey1. What should you do?

	▼
Update AlternateKey1 and add the missing field	
Delete AlternateKey1 and re-create it with all three fields	
Create a new alternate key named AlternateKey2 with only the missing field	

Section:

Explanation:

Box 1: The combination of Account Number and Account Name must be unique

With alternate keys you can now define a column in a Dataverse table to correspond to a unique identifier or unique combination of columns.

Box 2: Delete AlternateKey1 and re-create it with all three fields

Reference:

<https://docs.microsoft.com/en-us/powerapps/developer/data-platform/define-alternate-keys-entity>

## QUESTION 12

HOTSPOT

A delivery service uses a canvas app to track and deliver packages. The app uses SQL Server as a data store. The database includes the following tables:

Table	Comments
Receivers	Stores information about customers who receive delivered goods. The table uses an identity column named SBsqlid to uniquely identify each record.
Packages	Stores information about package details. Employees update package details during delivery to reference the person who received the package.

The app includes the following code to save all required information. (Line numbers are included for reference only.)

```
ClearCollect(
    Result,
    Patch(
        Receivers,
        Defaults(Receivers),
        {
            SignedByFN: txtInFirstName.Text,
            SignedByID: txtInID.Text
        }
    )
);
Patch(
    Packages,
    Defaults(Packages),
    {
        SBsqlid: First(Result).SBsqlid,
        TrackingNo: lblPackage.Text
    }
);
```

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

NOTE: Each correct selection is worth one point.

**Hot Area:**



**Answer Area**

	Yes	No
The Patch statement populates the identity column when a record is created.	<input type="radio"/>	<input type="radio"/>
The Patch statement at line 03 creates a reference to the customer who received a specific package.	<input type="radio"/>	<input type="radio"/>
You must add a lookup function to ensure that the code correctly creates a reference to the customer who receives a package.	<input type="radio"/>	<input type="radio"/>
The Patch statement at line 12 merges records.	<input type="radio"/>	<input type="radio"/>

**Answer Area:**

**Answer Area**

	Yes	No
The Patch statement populates the identity column when a record is created.	<input checked="" type="radio"/>	<input type="radio"/>
The Patch statement at line 03 creates a reference to the customer who received a specific package.	<input type="radio"/>	<input checked="" type="radio"/>
You must add a lookup function to ensure that the code correctly creates a reference to the customer who receives a package.	<input checked="" type="radio"/>	<input type="radio"/>
The Patch statement at line 12 merges records.	<input checked="" type="radio"/>	<input type="radio"/>

**Section:**

**Explanation:**

The ClearCollect function deletes all the records from a collection.

Syntax: ClearCollect( Collection, Item, ... )

Collection  $\sqcup$  Required. The collection that you want to clear and then add data to.

Item(s) - Required. One or more records or tables to add to the data source.

Box 1: Yes

The Patch function in Power Apps modifies or creates one or more records in a data source, or merges records outside of a data source.

Use Patch with the Defaults function to create records.

Box 2: No

The return value of Patch is the record that you modified or created. If you created a record, the return value may include properties that the data source generated automatically. However, the return value doesn't provide a value for fields of a related table.

For example, you use Set(MyAccount, Patch(Accounts, First(Account), 'Account Name': "Example name")); and then MyAccount.'Primary Contact'.Full Name'. You can't yield a full name in this case. Instead, to access the fields of a related table, use a separate lookup such as:

LookUp(Accounts, Account = MyAccount.Account).'Primary Contact'.Full Name

Box 3: Yes

Box 4: Yes

Merge records outside of a data source.

Specify two or more records that you want to merge. Records are processed in the order from the beginning of the argument list to the end, with later property values overriding earlier ones.

Patch returns the merged record and doesn't modify its arguments or records in any data sources.

Reference:

<https://docs.microsoft.com/en-us/powerapps/maker/canvas-apps/functions/function-clear-collect-clearcollect>

## Exam N

### QUESTION 1

DRAG DROP

You are creating a model-driven app.

Users need to see only the entities in the app navigation that are relevant to their role and their method of accessing the app.

You need to restrict entities on the sub-areas in the SiteMap.

Which properties should you use? To answer, drag the appropriate properties to the correct requirements. Each property may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:

#### Answer Area

##### Properties

Client

Offline Availability

Privileges

SKUs

##### Requirement

Ensure that the entity is visible only if the user can create records.

Ensure that the entity is not visible if the user is using an on-premises deployment.

Ensure that the entity is visible only if the user is accessing the app with a web browser.

##### Property

Correct Answer:

#### Answer Area

##### Properties

Offline Availability

##### Requirement

Ensure that the entity is visible only if the user can create records.

Ensure that the entity is not visible if the user is using an on-premises deployment.

Ensure that the entity is visible only if the user is accessing the app with a web browser.

##### Property

Privileges

SKUs

Client

Section:

Explanation:

Privileges: This defines whether a subarea is displayed based on privileges available in any security roles that are assigned to the user.

Box 2: SKU

SKUs: Select the versions of Dynamics 365 that display this subarea.

Incorrect Answers:

Offline Availability: Select this check box to make this subarea available to users when they are offline in Dynamics 365 for Outlook.

Reference: <https://docs.microsoft.com/en-us/powerapps/maker/model-driven-apps/create-site-map-app>

## QUESTION 2

### HOTSPOT

You are training a group of makers to use Power Automate.

You have the following expressions:

Name	Expression
1	<code>outputs('Get_Item').statusCode</code>
2	<code>"from": "@result('MyScope)'"</code>

You need to identify what each expression is doing.


What does each expression do? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

**Answer Area**

Expression	Action
1	<ul style="list-style-type: none"><li>Return the statuscode at runtime.</li><li>Return the output to the statuscode at runtime.</li><li>Return the Get_Item at runtime.</li></ul>
2	<ul style="list-style-type: none"><li>Return MyScope as all the action items.</li><li>Return all the variables from all actions from MyScope.</li><li>Return all the results from all actions from MyScope.</li></ul>



Answer Area:

Answer Area	
Expression	Action
1	<ul style="list-style-type: none"> <li>Return the statuscode at runtime.</li> <li>Return the output to the statuscode at runtime.</li> <li>Return the Get_Item at runtime.</li> </ul>
2	<ul style="list-style-type: none"> <li>Return MyScope as all the action items.</li> <li>Return all the variables from all actions from MyScope.</li> <li>Return all the results from all actions from MyScope.</li> </ul>

**Section:**

**Explanation:**

Box 1: Return the statuscode at runtime.

You could try the following method to get the status code.

Configure Compose action under the specified action to get the status code. `outputs('ActionName')['statusCode']`

Box 2: Return all the results from all actions from MyScope

The `@result()` expression accepts the name of a Scope as a parameter and returns a JSON array of objects that represent the results of the execution of each action within the Scope.

Reference:

<https://powerusers.microsoft.com/t5/Building-Flows/How-to-determine-status-code-for-a-condition/td-p/355653>

<https://blogs.msmvps.com/windsor/2019/04/25/microsoft-flow-error-handling/>

**QUESTION 3**

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You are developing a model-driven app for a company.

When you create a new Account record, you must automatically display a form to collect data that is needed to create a

Contact record. The form must switch to the appropriate form layout based on the contact type.

You open the Contact form by using JavaScript. You pass the contact type information to the form by using the

`Xrm.Navigation.openForm` function. An `OnLoad` event handler in the Contact form processes the data and shows only the appropriate sections of the form for the given contact type.

You need to configure the receiving form to accept the data parameter.

Solution: In the form editor, add an event handler for the data parameter.

Does the solution meet the goal?

A. Yes

B. No

**Correct Answer: B**

**Section:**

**Explanation:**

By default, model-driven apps allows a specified set of query string parameters to be passed to a form. You use these parameters to set default values when you create a new record in the application. Each parameter must



use a standard naming convention that includes a reference to the column logical name.

There are two ways to specify which query string parameters will be accepted by the form: Edit form properties Edit form

XML

Reference:

<https://docs.microsoft.com/en-us/powerapps/developer/model-driven-apps/configure-form-accept-custom-querystring-parameters>

#### QUESTION 4

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than once correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You are developing a model-driven app for a company.

When you create a new Account record, you must automatically display a form to collect data that is needed to create a Contact record. The form must switch to the appropriate form layout based on the contact type.

You open the Contact form by using JavaScript. You pass the contact type information to the form by using the

Xrm.Navigation.openForm function. An OnLoad event handler in the Contact form processes the data and shows only the appropriate sections of the form for the given contact type.

You need to configure the receiving form to accept the data parameter.

Solution: In the form editor, add a query string parameter for the data parameter.

Does the solution meet the goal?

A. Yes

B. No

**Correct Answer: A**

**Section:**

**Explanation:**

By default, model-driven apps allows a specified set of query string parameters to be passed to a form. You use these parameters to set default values when you create a new record in the application. Each parameter must use a standard naming convention that includes a reference to the column logical name.

There are two ways to specify which query string parameters will be accepted by the form: Edit form properties Edit form

XML

When you edit a form, on the Home tab in the Form group, select Form Properties. In the Form Properties dialog box, select the Parameters tab.

Use this tab to modify the names and data types that the form allows.

Reference:

<https://docs.microsoft.com/en-us/powerapps/developer/model-driven-apps/configure-form-accept-custom-querystring-parameters>

#### QUESTION 5

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than once correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You are developing a model-driven app for a company.

When you create a new Account record, you must automatically display a form to collect data that is needed to create a Contact record. The form must switch to the appropriate form layout based on the contact type.

You open the Contact form by using JavaScript. You pass the contact type information to the form by using the

Xrm.Navigation.openForm function. An OnLoad event handler in the Contact form processes the data and shows only the appropriate sections of the form for the given contact type.

You need to configure the receiving form to accept the data parameter.

Solution: Export the solution, edit the customizations.xml, and add a querystringparameter element to the XML.

Does the solution meet the goal?

A. Yes

B. No

**Correct Answer: A**

**Section:**

**Explanation:**

Within the exported solution customizations.xml file, immediately following the footer element, you can add a element. In the element, add elements to specify which parameters will be allowed.

Note: By default, model-driven apps allows a specified set of query string parameters to be passed to a form. You use these parameters to set default values when you create a new record in the application. Each parameter must use a standard naming convention that includes a reference to the column logical name.

There are two ways to specify which query string parameters will be accepted by the form: Edit form properties Edit form

XML

Reference:

<https://docs.microsoft.com/en-us/powerapps/developer/model-driven-apps/configure-form-accept-custom-querystring-parameters>

**QUESTION 6**

DRAG DROP

You are developing a new Power Apps Component Framework (PCF) control.

The control must be deployed to a development environment by using the Power Apps CLI and a new solution.

You need to deploy the PCF control.

Which four actions should you perform in sequence? To answer, move all actions from the list of actions to the answer area and arrange them in the correct order.

**Select and Place:**

The screenshot shows a 'Select and Place' interface. On the left, under the heading 'Actions', there are four items in a list box: 'Add a solution reference to the project.', 'Build the project and solution.', 'Create a solution.', and 'Deploy the solution.'. On the right, under the heading 'Answer area', there is a large watermark for 'Vdumps' and four circular arrow icons (left, right, up, down) for reordering the items. The background of the interface is a repeating pattern of 'CEplus' and 'Vdumps'.

**Correct Answer:**

Actions	Answer area
<input type="text"/>	Create a solution.
<input type="text"/>	Add a solution reference to the project.
<input type="text"/>	Build the project and solution.
<input type="text"/>	Deploy the solution.

**Section:**

**Explanation:**

Step 1: Create a solution

Create a new solutions project using the following command. The solution project is used for bundling the code component into a solution zip file that is used for importing into Dataverse. `pac solution init --publisher-name developer --publisher-prefix dev`

Step 2: Add a solution reference to the project

Once the new solution project is created, refer the Solutions folder to the location where the created sample component is located. You can add the reference using the command shown below. This reference informs the solution project about which code components should be added during the build. You can add references to multiple components in a single solution project. `pac solution add-reference --path c:\downloads\mysamplecomponent`

Step 3: Build the project and solution

To generate a zip file from the solution project, go into your solution project directory and build the project using the following command. `msbuild /t:build /restore` Step 4: Deploy the solution

Reference:

<https://docs.microsoft.com/en-us/powerapps/developer/component-framework/import-custom-controls>

**QUESTION 7**

**DRAG DROP**

You create solutions in a development environment and export the solution for testing by various departments in your organization. Power users in each department control the testing environments.

You must display department-specific wording at the beginning of any custom notifications that are displayed in testing environments.

You need to package solutions to ensure that the power users can customize the notification content.

Which three actions should you perform in sequence inside a solution? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

**Select and Place:**

Actions	Answer area
Create an empty environment variable named <b>Custom Text Placeholder</b> .	
Create a configuration page in the classic solution by using a text field named <b>Custom Text Placeholder</b> that uses the HTML file format.	
Set the default value of the text field Custom Text Placeholder to <b>Enter custom text</b> .	
Create a function to retrieve the value from the custom text placeholder and display the notification.	
Export the solution.	
Create a solution component configuration named <b>Custom Text Placeholder</b> that uses the JSON file format.	

Correct Answer:

Actions	Answer area
	Create an empty environment variable named <b>Custom Text Placeholder</b> .
Create a configuration page in the classic solution by using a text field named <b>Custom Text Placeholder</b> that uses the HTML file format.	Create a function to retrieve the value from the custom text placeholder and display the notification.
Set the default value of the text field Custom Text Placeholder to <b>Enter custom text</b> .	Export the solution.
Create a solution component configuration named <b>Custom Text Placeholder</b> that uses the JSON file format.	

**Section:****Explanation:**

Step 1: Create an empty environment variable named Custom Text Placeholder.

Applications often require different configuration settings or input parameters when deployed to different environments.

Environment variables store the parameter keys and values, which then serve as input to various other application objects.

Separating the parameters from the consuming objects allows you to change the values within the same environment or when you migrate solutions to other environments.

Step 2: Create a function to retrieve the value from the custom text placeholder and display the notification.

Step 3: Export the solution

You can manually export solutions. Microsoft recommends that you create an unmanaged solution to use for exporting your customizations, and then export your customizations periodically so that you have a backup in case anything happens.

Reference: <https://docs.microsoft.com/en-us/powerapps/maker/data-platform/environmentvariables>

<https://docs.microsoft.com/en-us/powerapps/maker/data-platform/export-solutions>

**QUESTION 8**

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

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You are developing a model-driven app for a company.

When you create a new Account record, you must automatically display a form to collect data that is needed to create a Contact record. The form must switch to the appropriate form layout based on the contact type.

You open the Contact form by using JavaScript. You pass the contact type information to the form by using the

`Xrm.Navigation.openForm` function. An `OnLoad` event handler in the Contact form processes the data and shows only the appropriate sections of the form for the given contact type.

You need to configure the receiving form to accept the data parameter.

Solution: In the form editor, add a web resource that sets `formContext.data.attributes`.

Does the solution meet the goal?

A. Yes

B. No

**Correct Answer: B**

**Section:****Explanation:**

By default, model-driven apps allows a specified set of query string parameters to be passed to a form. You use these parameters to set default values when you create a new record in the application. Each parameter must use a standard naming convention that includes a reference to the column logical name.

There are two ways to specify which query string parameters will be accepted by the form: Edit form properties Edit form

XML

Reference:

<https://docs.microsoft.com/en-us/powerapps/developer/model-driven-apps/configure-form-accept-custom-querystring-parameters>

**QUESTION 9**

The communication department for a company plans to add a publicly accessible survey page to the company's public website.

You must add the new survey page to the company's public website and capture data from the page to a Common Data Service environment.

Explicit user credentials must not be required to write survey data to Common Data Service.

You need to implement authentication.

Which authentication mechanism should you implement?

A. Microsoft 365

B. X.509 certificate



- C. OAuth 2.0
- D. Claims-based

**Correct Answer: C**

**Section:**

**Explanation:**

OAuth is the preferred means to authenticate because it provides access to both the OData RESTful web services (Web API and OData global Discovery service) as well as to the SOAP web services (Organization service and Discovery service).

OAuth is also required to support:

Azure Active Directory configurations for conditional access, such as Two-factor Authentication (2FA) Use of client secrets to enable server-to-server authentication scenarios.

Cross-Origin Resource Sharing (CORS) to connect a Single-page Application (SPA)

Incorrect Answers:

A: Using Microsoft 365 authentication does not require that you register your applications as OAuth does. You must simply provide a User Principal Name (UPN) and password for a valid user.

Reference: <https://docs.microsoft.com/en-us/powerapps/developer/data-platform/authentication>

**QUESTION 10**

DRAG DROP

You are developing a Power Platform app for a school. The school plans to use the app to gather information about classes and students.

You must design a plug-in for the app. You must store data about students in the Contacts table and store data about classes in a custom table.

You need to select the stage in the event pipeline for each function.

Which stages should you use? To answer, drag the appropriate plug-in stages to the correct functions. Each plug-in stage may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Select and Place:



Plug-in stages	Answer Area	Function	Plug-in stage
PreValidation		Cancel a class if the student is over 15 years old.	<input type="text"/>
PreOperation		Update the record being processed by the plug-in step and rollback if an error occurs.	<input type="text"/>
PostOperation		Add a student to the appropriate class.	<input type="text"/>

**Correct Answer:**

Plug-in stages	Answer Area	Function	Plug-in stage
<input type="text"/>		Cancel a class if the student is over 15 years old.	PreValidation
<input type="text"/>		Update the record being processed by the plug-in step and rollback if an error occurs.	PreOperation
<input type="text"/>		Add a student to the appropriate class.	PostOperation

**Section:**

**Explanation:**

Box 1: PreValidation

For the initial operation, this stage will occur before the main system operation.

This provides an opportunity to include logic to cancel the operation before the database transaction.

Box 2: PreOperation

Occurs before the main system operation and within the database transaction.

If you want to change any values for an entity included in the message, you should do it here.

Avoid cancelling an operation here. Canceling will trigger a rollback of the transaction and have significant performance impact.

Box 3: PostOperation

Occurs after the main system operation and within the database transaction.

Use this stage to modify any properties of the message before it is returned to the caller.

Reference: <https://docs.microsoft.com/en-us/powerapps/developer/data-platform/event-framework>

**QUESTION 11**

DRAG DROP

A company uses Dynamics 365 Sales.

Sales commission must be calculated when an order is placed. You create an Azure Function to perform the calculation. The

Azure Function has an HTTP trigger.

You need to configure the Plug-in Registration tool to send data to the Azure Function when an order is placed. You open the Plug-in Registration tool and connect to Dynamics 365 Sales.

Which three actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

**Select and Place:**

Actions	Answer Area
Select <b>Register New Web Hook.</b>	
Select <b>Register New Service Endpoint.</b>	
Register a New Step for Create of SalesOrder.	
Enter a service endpoint.	
Enter the endpoint URL.	

Correct Answer:

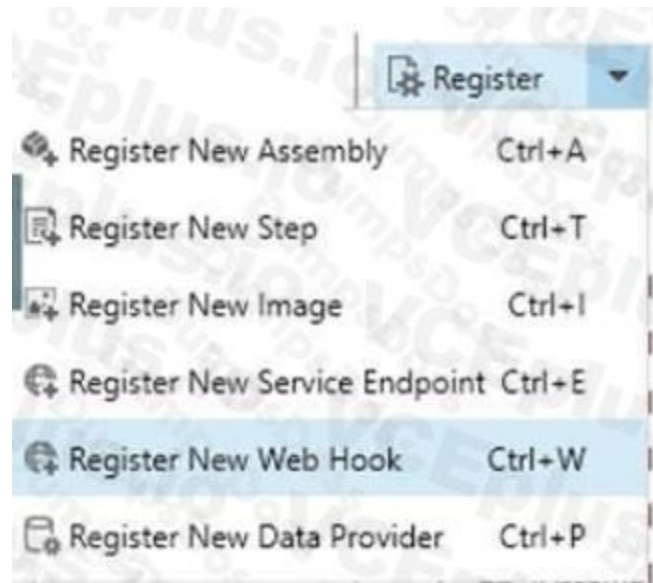
Actions	Answer Area
Select <b>Register New Web Hook.</b>	Select <b>Register New Service Endpoint.</b>
	Enter the endpoint URL.
	Register a New Step for Create of SalesOrder.
Enter a service endpoint.	

Section:

Explanation:

Step 1:SelectRegister New Web Hook.





Configure Dynamics 365 Sales to Call Your Webhook in Azure Functions 1. Open the Plug-in Registration Tool and connect to your organization. 2. Select Register->Register New Web Hook  
Step 2: Enter the endpoint URL



Step 3: Register a New Step for Create of SalesOrder.

Register a new webhook, and then tie that webhook to an event in Dynamics 365 Sales. Select your newly registered webhook, right-click it, and then choose "Register New Step." Note that the webhook here is set to execute whenever a change to an account record is detected within Dynamics 365 Sales.

Reference: <https://docs.microsoft.com/en-us/powerapps/developer/common-data-service/tutorial-write-plugin-in>

#### QUESTION 12

A company plans to replicate a Dynamics 365 Sales database into an Azure SQL Database instance for reporting purposes.

The Data Export Service solution has been installed.

You need to configure the Data Export service.

Which three actions should you perform? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

- A. Enable auditing for all entities that must be replicated to Azure SQL Database.
- B. Create an export profile that specifies all the entities that must be replicated.
- C. Set up server-based integration.

- D. Enable change tracking for all entities that must be replicated to Azure SQL Database.
- E. Create an Azure SQL Database service in the same tenant as the Dynamics 365 Sales environment.

**Correct Answer: B, D, E**

**Section:**

**Explanation:**

Reference: <https://docs.microsoft.com/en-us/power-platform/admin/replicate-data-microsoft-azure-sql-database>

#### QUESTION 13

A company is migrating from an on-premises Dynamics 365 installation to a Power Platform solution. You are creating plugins for the new solution. You need to register the plug-ins. Which isolation mode should you use?

- A. None
- B. Global Assembly Cache (GAC)
- C. Sandbox
- D. Disk

**Correct Answer: C**

**Section:**

**Explanation:**

You will find options related to the isolation mode and location for the assembly. These refer to options that apply to on-premise deployments. Dataverse is not available for on-premises deployments, so you will always accept the default options of SandBox and Database for these options.

Reference:

<https://docs.microsoft.com/en-us/powerapps/developer/data-platform/register-plugin-in>



#### QUESTION 14

An organization uses a public-facing Power Apps portal. You need to change the layout of a specific web page. What are two possible ways to achieve the goal? Each correct answer presents a complete solution. NOTE: Each correct selection is worth one point.

- A. Select the Portal Management app and then select Edit.
- B. Select the Portal Management app and then select Play.
- C. Select the portal app and then select Manage.
- D. Select the portal app and then select Edit.

**Correct Answer: A, D**

**Section:**

**Explanation:**

A: The Portal Management app lets you do advanced configuration actions on your portal.

1. Open the Portal Management app.
2. Go to Portals > Web Pages.
3. To edit an existing web page, select the web page name.
4. Enter appropriate values in the fields.
5. Select Save & Close.

D: To use the WYSIWYG editor:

1. Edit the portal to open it in Power Apps portals Studio.

2. Select the page on which you want to add the component.

3. Select an editable element on the canvas.

Reference: <https://docs.microsoft.com/en-us/powerapps/maker/portals/configure/web-page> <https://docs.microsoft.com/en-us/powerapps/maker/portals/compose-page>

#### QUESTION 15

You are developing a model-driven app. The app uses data from two custom tables. The tables have a parent-child relationship. The parent record form contains a subgrid that displays the child records.

When creating a new child record from the parent form, data must automatically populate in the child record form to reduce data input errors.

You need to implement the solution.

What should you do?

- A. Use a Power Automate flow to read data from the parent record and update the child record upon creation.
- B. Map table columns from the parent record to the child record.
- C. Create a business rule that sets the default values on the child record fields to values from the parent record.
- D. Include a quick view form on the child record showing the data from the parent record.

**Correct Answer: B**

**Section:**

**Explanation:**

A subgrid exists within a main form and let app users view data within a Dataverse table, typically related to the record currently being reviewed.

Reference:

<https://docs.microsoft.com/en-us/powerapps/maker/model-driven-apps/sub-grid-properties-legacy>

#### QUESTION 16

DRAG DROP

You are creating an app that connects to Microsoft Dataverse on a nightly basis. You plan to integrate the app with an external system.

The application must not authenticate by using a Microsoft Azure Active Directory (Azure AD) user account.

You need to enable the application to authenticate to Dataverse.

Which four actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

**Select and Place:**

**Actions**

- Use the Azure AD application id and secret as credentials in the application.
- Grant the Dataverse application user the Access Dynamics 365 as organization users permission in Azure AD.
- Register the application in Azure AD with appropriate permissions.
- Use the Dataverse application user username and password as credentials in the application.
- Create the application user in Dataverse using the Application User form.
- Assign a security role to the application user in Dataverse.

**Correct Answer:**

**Actions**

	Register the application in Azure AD with appropriate permissions.
Grant the Dataverse application user the Access Dynamics 365 as organization users permission in Azure AD.	Use the Azure AD application id and secret as credentials in the application.
	Create the application user in Dataverse using the Application User form.
Use the Dataverse application user username and password as credentials in the application.	Assign a security role to the application user in Dataverse.

Section:

Explanation:

**QUESTION 17**

HOTSPOT

The following code updates the customer size code choice column on the Account table if the number of employees column value is greater than 100. Line numbering is provided for information only.

```

01 static void UpdateAccount(CrmServiceClient svc, string accountId)
02 {
03     using (svc)
04     {
05         var account = svc.Retrieve("account", accountId, new ColumnSet(true));
06
07         var numberofemployees = account.GetAttributeValue<int>("numberofemployees");
08         if (numberofemployees > 100)
09         {
10             account["customersizecode"] = new OptionSetValue(2);
11             svc.Update(account);
12         }
13     }
14 }

```

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

Hot Area:

**Answer Area**

Statement	Yes	No
Does the Retrieve method use the correct parameters?	<input type="radio"/>	<input type="radio"/>
Will a plug-in triggered on the update of the numberofemployees column execute after the Update method is executed?	<input type="radio"/>	<input type="radio"/>
Will an exception be thrown if the value for numberofemployees is null?	<input type="radio"/>	<input type="radio"/>

Answer Area:

**Answer Area**

**Statement**

Does the Retrieve method use the correct parameters? Yes  No

Will a plug-in triggered on the update of the numberofemployees column execute after the Update method is executed? Yes  No

Will an exception be thrown if the value for numberofemployees is null? Yes  No

Section:

Explanation:

**QUESTION 18**

DRAG DROP

A company is configuring Microsoft Power Virtual Agents and Power Automate flows that use modeldriven apps. The company has a website that uses Power Pages. You create Power Virtual Agents bot topics. You must configure the following:

X Use a bot on the website.

X Create Bot Framework skills.

X Create a support request from the bot without human interaction.

You need to configure the website.

Which applications should you configure?

To answer, drag the appropriate applications to the correct requirements. Each application may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.



Select and Place:

**Applications**

- Power Virtual Agents
- Power Pages
- Power Automate
- Power App

**Answer Area**

**Requirement**

- Use a bot on the website.
- Create Bot Framework skills.
- Create support request from the bot.

**Application**

- 
- 
- 

Correct Answer:

**Applications**

- 
- 
- Power Automate
- 

**Answer Area**

**Requirement**

- Use a bot on the website.
- Create Bot Framework skills.
- Create support request from the bot.

**Application**

- Power Pages
- Power App
- Power Virtual Agents

Section:

Explanation:

**QUESTION 19**

You are configuring a Microsoft Power Virtual Agents chatbot to use the authenticate option for Microsoft Teams only.

You need to select the variables that will return information about the logged in user.

Which two variables should you use?

Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

- A. AuthToken
- B. UserDisplayName
- C. UserID
- D. IsLoggedIn

**Correct Answer: A, D**

**Section:**

**QUESTION 20**

You develop and deploy a Power Apps solution.

The following changes must be made to the solution:

X Delete a column of data.

X Modify several views.

X Add several charts to dashboards.

You need to re-deploy the app. What should you do?

- A. Update the solution.
- B. Upgrade the solution.
- C. Create a new solution.
- D. Patch the solution.

**Correct Answer: A**

**Section:**

**QUESTION 21**

DRAG DROP

You are creating a model-driven app for users to submit and manage budgets for projects.

You must create a business process flow to ensure any lead with a budget over \$10,000 requires approval by a manager. You must add a custom control that allows users to select the estimated budget cost for a project.

You need to add the control to the business process flow.

in which order should you perform the actions? To answer, move all actions from the list of actions to the answer area and arrange them in the correct order.

**Select and Place:**



Actions	Answer area
Paste control description FormXML into the correct stage of the business process flow in the exported solution.	
Export the business process flow and the Lead form as two separate solutions.	
Copy all control description FormXML from the Lead form of the exported solution.	
Add a control to the Lead form by using the form designer.	
Import the solution into the system and publish.	

Correct Answer:

Actions	Answer area
Paste control description FormXML into the correct stage of the business process flow in the exported solution.	Export the business process flow and the Lead form as two separate solutions.
	Copy all control description FormXML from the Lead form of the exported solution.
	Add a control to the Lead form by using the form designer.
	Import the solution into the system and publish.



Section:

Explanation:

#### QUESTION 22

You are developing a Power Apps app to manage records in the Account table in Microsoft Dataverse.

You must configure a Web API request to retrieve changes from the table. You need to configure the preference header for the API request. What should you include in the request header?

- A. odata.nextLink
- B. odata-context
- C. odata.deltaLink
- D. odata.track-changes

Correct Answer: B

Section:

#### QUESTION 23

You are troubleshooting a new canvas app.

Users report the app loads slowly. You use the Monitor tool to view various events being performed in the app. Events performed in the app do not have formula details.

You need to enable formulas to be included with the Monitor tool events.

What should you do?

- A. Turn on the Debug published app setting in the canvas app.

- B. After each event, implement the trace function within the canvas app.
- C. Add the Microsoft Azure Application Insights data source to the canvas app.
- D. Validate the Application Insights instrumentation key has been populated in the app object's properties within the canvas app.

**Correct Answer: A**

**Section:**

**QUESTION 24**

DRAG DROP

The engineering team in a company uses a SharePoint list to manage critical technical issues that are raised by clients. Other departments do not have access to this list. Departments use their own apps for their own processes.

All departments must be able to see the total number of client issues at any point in time.

You need to design a component that can be used in all the departmental apps to display the total number of client issues in bold colors.

Which four actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

**Select and Place:**

**Correct Answer:**

**Section:**



**Explanation:**

**QUESTION 25**

You are designing a one-way integration from Microsoft Dataverse to another system.

You must use an Azure Function to update the other system. The integration must send only newly created records to the other system. The solution must support scenarios where a component of the integration is unavailable for more than a few seconds to avoid data loss.

You need to design the integration solution.

Solution: Register a service endpoint in the Dataverse instance that connects to an Azure Service Bus queue.

Register a step at the endpoint which runs asynchronously on the record's Create message and in the post-operation stage.

Configure the Azure Function to process records as they are added to the queue.

Does the solution meet the goal?

- A. Yes
- B. No

**Correct Answer: B**

**Section:**

**QUESTION 26**

A company uses Common Data Service rollup fields to calculate insurance exposure and risk profiles for customers.

Users report that the system does not update values for the rollup fields when new insurance policies are written.

You need to recalculate the value of the rollup fields immediately after a policy is created.

What should you do?

- A. Create new fields on the customer entity for insurance exposure and risk. Write a workflow process that is triggered when a new policy record is created to calculate the sum of values from policy records.
- B. Update the Mass Calculate Rollup Field job to trigger when a new policy record is created.
- C. Create a business rule that forces the refresh of the rollup field when the customer record is updated.
- D. Create new fields on the customer entity for insurance exposure and risk. Write a plug-in that is triggered whenever a new policy record is created

**Correct Answer: D**

**Section:**

**QUESTION 27**

You are implementing business logic for a model-driven app form by using multiple JavaScript web resources.

The business logic number of JavaScript files, and the columns that the business logic requires are expected to change frequently. Some form fields will not be visible. Occasionally non-developers will also make changes to the form.

You need to prevent columns referenced by the JavaScript from accidentally being removed from the form based.

What should you do?

- A. Add columns in each JavaScript file as a dependency.
- B. Set all columns as business required.
- C. Hide columns that should not be displayed.
- D. Add all columns as non-event dependencies to the form.

**Correct Answer: A**

**Section:**

**QUESTION 28**

**DRAG DROP**

You are creating a model-driven app for a company Sales team members will use the app to manage leads. The app will interact with the Microsoft Dataverse Leads table. You must configure the app to meet the following requirements:

X If the estimated value for a lead is greater than \$10,000 the app must

X Send an email to a manager.

Display a field named Sponsor on the lead form.

X If the estimated value for a lead is greater than \$100,000 the app must:

X Send an email to the company's vice president.

X Display the following message as a notification while the lead record is open: High value customer, handle with care.

You need to configure the app. The solution must minimize the use of code.

Which options should you use? To answer, drag the appropriate options to the correct requirements.

Each option may be used once, more than once or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

**Select and Place:**

Options	Requirement	Option
Business rule	Send required emails.	
Power Automate flow	Display the Sponsor field.	
Onload script	Display the notification.	

**Correct Answer:**

Options	Requirement	Option
	Send required emails.	Power Automate flow
	Display the Sponsor field.	Business rule
	Display the notification.	Onload script

**Section:**

**Explanation:**

**QUESTION 29**

**HOTSPOT**

You need to package and deploy a Power Apps code component to an environment.

Which commands should you use? To answer select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

**Hot Area:**

Action	Command
Package	pac solution init --publisher-name Contoso --publisher-prefix cto
	pac solution init --publisher-name Contoso --publisher-prefix cto
	pac auth create -url https://contoso.crm.dynamics.com
	pac pcf push --publisher-prefix
Connect	pac solution add-reference --path c:\downloads\mysamplecomponent
	pac auth create -url https://contoso.crm.dynamics.com
	pac solution init --publisher-name Contoso --publisher-prefix cto
	pac auth create -url https://contoso.crm.dynamics.com
Deploy	pac pcf push --publisher-prefix
	pac solution init --publisher-name Contoso --publisher-prefix cto
	pac auth create -url https://contoso.crm.dynamics.com
	pac pcf push --publisher-prefix
	pac solution add-reference --path c:\downloads\mysamplecomponent

Answer Area:

Action	Command
Package	pac solution init --publisher-name Contoso --publisher-prefix cto
	pac solution init --publisher-name Contoso --publisher-prefix cto
	pac auth create -url https://contoso.crm.dynamics.com
	pac pcf push --publisher-prefix
Connect	pac solution add-reference --path c:\downloads\mysamplecomponent
	pac auth create -url https://contoso.crm.dynamics.com
	pac solution init --publisher-name Contoso --publisher-prefix cto
	pac auth create -url https://contoso.crm.dynamics.com
Deploy	pac pcf push --publisher-prefix
	pac solution init --publisher-name Contoso --publisher-prefix cto
	pac auth create -url https://contoso.crm.dynamics.com
	pac pcf push --publisher-prefix
	pac solution add-reference --path c:\downloads\mysamplecomponent

Section:

Explanation:

### QUESTION 30

You are developing a model-driven app for a company.

The app must map child records to a parent record.

You need to use the column mapping feature to configure the app.

Which two actions can you perform? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

- A. Map the value of columns on both the child table quick-create and main forms to the value for the same columns on the parent table.
- B. Map the value of a column on the parent table that uses column values from the child table.
- C. Map the value of a Choices column on the child table to the value of a Choices column on the parent table.
- D. Map the value of a single line of text column on the child table to the value of a currency column on the parent record.

**Correct Answer: A, C**

**Section:**

#### QUESTION 31

You develop a model-driven app. You add the following users as members to the Sales Microsoft Azure Active Directory (Azure AD) security group: User1, User2 and User3.

The Sales Azure AD security group is linked to a pre-existing Microsoft Dataverse Azure AD security group team that is associated with the Sales security role. You assign each of the appropriate licenses to each user User1 is not listed in the

Team Members subgrid for the app. user2 and User3 are listed in the subgrid.

You need to ensure that User1 can use the model-driven app

What should you do?

- A. Change the membership of the Sales Azure AD Security group to Dynamic User
- B. Change the membership type for User1 to Owner in the Azure AD security group.
- C. Create an Owner team for the members of the Sales Azure AD group.
- D. Ask User1 to sign into the model-driven app.

**Correct Answer: A**

**Section:**

#### QUESTION 32

DRAG DROP

You are designing a model-driven app for a company s support desk team.

You must add a button to the app that creates a reminder task. The button must only display to users if a service case is open for at least seven days.

You need to define the steps to create the button when App Designer is open.

In which order should you perform the actions? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

NOTE: More than one order of answer choices is correct. You will receive credit for any of the correct orders you select.

**Select and Place:**

The screenshot shows the 'Select and Place' interface in App Designer. On the left, under the heading 'Actions', there is a list of five actions: 'Edit the command bar.', 'Add a command button.', 'Add a data source to the component library.', 'Configure a visibility expression.', and 'Create a task by using an OnSelect expression.'. On the right, under the heading 'Answer area', there are two empty slots. Navigation arrows are visible between the two areas.

**Correct Answer:**

Actions	Answer area
<input type="text"/>	Edit the command bar.
<input type="text"/>	Add a command button.
<input type="text"/>	Add a data source to the component library.
<input type="text"/>	Configure a visibility expression.
<input type="text"/>	Create a task by using an OnSelect expression.

Section:

Explanation:

**QUESTION 33**

DRAG DROP

You are creating a Power Apps connector between Dynamics 365 Sales and Slack

You must generate a Slack notification whenever a new product is added to Dynamics 365 Sales. You must not be required to sign in directly into Dynamics 365 Sales to generate notifications. You created a Power Apps connector between

Dynamics 365 Sales in Slack to enable this to happen.

You need to configure the appropriate security for each scenario?

Which security components should you configure?

NOTE: Each correct selection is worth one point.

Select and Place:



Components	Requirement	Component
OAuth	Ensure Dynamics 365 security is in place.	<input type="text"/>
Security roles	Capture application usage from public site.	<input type="text"/>
API key	Configure a website login that does not need encryption.	<input type="text"/>
Basic authentication		

Correct Answer:

Components	Requirement	Component
<input type="text"/>	Ensure Dynamics 365 security is in place.	Security roles
<input type="text"/>	Capture application usage from public site.	OAuth
API key	Configure a website login that does not need encryption.	Basic authentication
<input type="text"/>		

Section:

Explanation:

**QUESTION 34**

You create and deploy a Power Platform solution that includes synchronous plug-ins. Users report performance issues with the solution.

You need to determine whether a plug-in is the cause of the performance issues. Which two tools can you use? Each correct answer presents part of the solution. NOTE: Each correct selection is worth one point.

- A. Microsoft Dataverse Analytics
- B. Solution checker
- C. Tracing
- D. iSV Studio
- E. Data policies

**Correct Answer: B, C**

**Section:**

**Explanation:**

**QUESTION 35**

You need to ensure data returned from the Web API corresponds to the correct environment. What should you use?

- A. system settings
- B. plug-in secure configurations
- C. records in a new configuration table
- D. environment variables

**Correct Answer: D**

**Section:**

**QUESTION 36**

DRAG DROP

You need to configure a Power Automate flow to update account records by using the response from the Web API.

Which three actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Add an initialize variable step and set the value to the DataId..

Add an initialize variable step and set the value to the response..

Add a condition step to check if the variable value equals 200.

**Select and Place:**



**Actions**

- Add a condition step to check if the variable value equals 404.
- Add a terminate step and set the status to failed.
- Add a Dataverse update record step to update the Dataverse account record.
- Add an initialize variable step and set the value to the DataId from the Dataverse account record.
- Add an initialize variable step and set the value to the response code from the custom connector.
- Add a condition step to check if the variable value equals 200.



**Answer Area**



Correct Answer:

**Actions**

- Add a condition step to check if the variable value equals 404.
- Add a terminate step and set the status to failed.
- Add a Dataverse update record step to update the Dataverse account record.
- 
- 
- 



**Answer Area**

- Add an initialize variable step and set the value to the DataId from the Dataverse account record.
- Add an initialize variable step and set the value to the response code from the custom connector.
- Add a condition step to check if the variable value equals 200.



Section:  
Explanation:

**QUESTION 37**  
HOTSPOT

You have a plug-in that performs business logic on contact records. The plug-in is registered in the post-operation stage and is executed when a field named custom\_field3 is updated. The plug-in contains the following code:

```

var cols = new ColumnSet("lastname", "custom_field1");
var contact = service.Retrieve("contact", ctx.PrimaryEntityId, cols);
var updatedValue = contact.GetAttributeValue<string>("lastname");
updatedValue += contact.GetAttributeValue<string>("custom_field1");
contact["custom_field2"] = updatedValue;
service.Update(contact);

```

For each of the following statements, select Yes if the statement is true. Otherwise, select No.  
 NOTE: Each correct selection is worth one point.

Hot Area:

**Answer Area**

Statements	Yes	No
You can improve code performance by using the following code instead of retrieving individual fields: <code>new ColumnSet(true)</code>	<input type="radio"/>	<input type="radio"/>
You can avoid retrieving the changed entity by using plug-in images.	<input type="radio"/>	<input type="radio"/>
You can avoid updating the changed entity by registering the plug-in in the pre-operation stage.	<input type="radio"/>	<input type="radio"/>

Answer Area:

**Answer Area**

Statements	Yes	No
You can improve code performance by using the following code instead of retrieving individual fields: <code>new ColumnSet(true)</code>	<input type="radio"/>	<input checked="" type="radio"/>
You can avoid retrieving the changed entity by using plug-in images.	<input checked="" type="radio"/>	<input type="radio"/>
You can avoid updating the changed entity by registering the plug-in in the pre-operation stage.	<input checked="" type="radio"/>	<input type="radio"/>



**Section:**

**Explanation:**

**QUESTION 38**

A company develops a new Microsoft Dataverse plug-in that manages the Update message of an entity.

The plug-in logic requires access to the record columns before the operation starts and must compare the columns to post-update values.

You need to modify the design of the solution to access the information.

What should you do?

- A. Add the code to the plug-in to read the record from the InputParameters collection.
- B. Register a pre-image by using the Plug-in Registration Tool. Add the code to the plug-in to read the image from the PreEntityImages collection.
- C. Register a post-image by using the Plug-in Registration Tool. Add the code to the plug-in to read the image from the PostEntityImages collection.
- D. Add the code to the plug-in to query the data from Dataverse by using the API call based on the record ID.

**Correct Answer: B**

**Section:**

**QUESTION 39**

DRAG DROP

You are creating a plug-in for a Power Apps app for the human resources department at the company. The app will be used to process new employees and help employees apply for an identification card.

You have the following requirements:

- \* Applications must not be marked as complete if the employee has not completed mandatory drug screening.
- \* Add logic that stores the name of the human resources team member that approves an application. This step must be completed before an ID card is created for the applicant.
- \* Successful validation and ID card printing.

You need to configure the event pipeline. In which stage should you register each step?

To answer, drag the appropriate stages to the correct steps. Each stage may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

**Select and Place:**

Stages	Answer Area								
PreValidation	<table border="1"><thead><tr><th>Step</th><th>Stage</th></tr></thead><tbody><tr><td>Mandatory drug screening is completed.</td><td><input type="text"/></td></tr><tr><td>The application is reviewed and approved.</td><td><input type="text"/></td></tr><tr><td>The ID card is printed.</td><td><input type="text"/></td></tr></tbody></table>	Step	Stage	Mandatory drug screening is completed.	<input type="text"/>	The application is reviewed and approved.	<input type="text"/>	The ID card is printed.	<input type="text"/>
Step	Stage								
Mandatory drug screening is completed.	<input type="text"/>								
The application is reviewed and approved.	<input type="text"/>								
The ID card is printed.	<input type="text"/>								
PreOperation									
PostOperation									

**Correct Answer:**

Stages	Answer Area								
<input type="text"/>	<table border="1"> <thead> <tr> <th>Step</th> <th>Stage</th> </tr> </thead> <tbody> <tr> <td>Mandatory drug screening is completed.</td> <td>PreValidation</td> </tr> <tr> <td>The application is reviewed and approved.</td> <td>PreOperation</td> </tr> <tr> <td>The ID card is printed.</td> <td>PostOperation</td> </tr> </tbody> </table>	Step	Stage	Mandatory drug screening is completed.	PreValidation	The application is reviewed and approved.	PreOperation	The ID card is printed.	PostOperation
Step	Stage								
Mandatory drug screening is completed.	PreValidation								
The application is reviewed and approved.	PreOperation								
The ID card is printed.	PostOperation								

Section:

Explanation:

**QUESTION 40**

HOTSPOT

You need to implement ribbon display rules to control availability for the scoring command button. Which rule types should you use? To answer, select the appropriate options in the answer area. NOTE: Each correct selection is worth one point.

Hot Area:

**Answer Area**

Condition	Rule type
Configure button visibility for recruiters.	<ul style="list-style-type: none"> <li>CustomRule</li> <li>CustomRule</li> <li>EntityPrivilegeRule</li> <li>EntityPropertyRule</li> </ul>
Configure visibility for the button based on the mode for the form.	<ul style="list-style-type: none"> <li>FormStateRule</li> <li>FormTypeRule</li> <li>FormStateRule</li> <li>FormEntityContextRule</li> </ul>

Answer Area:

## Answer Area

### Condition

Configure button visibility for recruiters.

Configure visibility for the button based on the mode for the form.

### Rule type

CustomRule	▼
CustomRule	
EntityPrivilegeRule	
EntityPropertyRule	
FormStateRule	▼
FormTypeRule	
FormStateRule	
FormEntityContextRule	

Section:

Explanation:

#### QUESTION 41

You need to resolve the issue with the new command button. What should you do?

- A. Pass the value PrimaryControl to the function in the action definition.
- B. Pass ExecutionContext To The function in the action definition.
- C. Pass the value SclictdControl to the function in the action definition.
- D. Select the Pass execution context as first parameter option on the event registration form.

**Correct Answer: D**

Section:

#### QUESTION 42

HOTSPOT

You create the following Fetch XML query to determine the number of interviews where there are no recommendations for an applicant.



```

<fetch aggregate='true'>
  <entity name='pro_interview'>
    <attribute name='pro_interviewid' alias='recommend_count' aggregate='count' />
    <filter>
      <condition attribute='pro_recommend' operator='eq' value='1' />
    </filter>
    <link-entity name='pro_application' from='pro_applicationid' to='pro_applicationid' link-type='inner' >
      <link-entity name='contact' from='contactid' to='pro_contactid' >
        <filter>
          <condition attribute='contactid' operator='eq' value='1b315d5d-b436-eb11-a813-000d3a8b6647' />
        </filter>
      </link-entity>
    </link-entity>
  </entity>
</fetch>

```

For each of the following statements, select yes if the statements is true, Otherwise select No.  
 NOTE: Each correct selectin is worth one pint.

Hot Area:  
 Answer Area

Statements	Yes	No
The query meets the requirements for retrieving the count of interviews without recommendations.	<input type="radio"/>	<input type="radio"/>
You can modify the query to return counts of interviews with and without recommendations.	<input type="radio"/>	<input type="radio"/>
The query allows scheduled interviews for job applications when there are no recommendations for the job applicant.	<input type="radio"/>	<input type="radio"/>

Answer Area:  
 Answer Area

Statements	Yes	No
The query meets the requirements for retrieving the count of interviews without recommendations.	<input type="radio"/>	<input checked="" type="radio"/>
You can modify the query to return counts of interviews with and without recommendations.	<input type="radio"/>	<input checked="" type="radio"/>
The query allows scheduled interviews for job applications when there are no recommendations for the job applicant.	<input type="radio"/>	<input checked="" type="radio"/>

**Section:**

**Explanation:**

**QUESTION 43**

**HOTSPOT**

You are configuring two command buttons on a form.

The form must display the buttons only if conditions meet a pre-defined criteria.

You need to create rules for the form.

Which rule types should you use?

To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

**Hot Area:**

**Answer Area**

Condition	Rule type
Website link to the current form	PageRule PageRule ValueRule EntityRule
Sum of two form fields	ValueRule ValueRule CustomRule SelectionCountRule

**Answer Area:**

**Answer Area**

Condition	Rule type
Website link to the current form	PageRule PageRule ValueRule EntityRule
Sum of two form fields	ValueRule ValueRule CustomRule SelectionCountRule

**Section:**

**Explanation:**

**QUESTION 44**

You are creating a model-driven app. You create JavaScript code to display a message when a record is saved. You need to configure the associated JavaScript web resource name when adding the event handler to the form. Which field should you use?

- A. Event Type
- B. Function
- C. Component
- D. Library

**Correct Answer: D**

**Section:**

**QUESTION 45**

DRAG DROP

You are designing new functionality for an existing model-driven app.

A field must display multiple selections to the user, enabling the user to select a value.

You need to determine which column type can support the required scenarios.

Which column type should you use? To answer, drag the appropriate column types to the correct scenarios. Each column type may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

**Select and Place:**



**Column types**

- Global choice
- Lookup
- Global choice and Lookup

**Answer Area**

**Scenario**

- Remove a selection from being available without modifying existing records.
- Must be completely deployed by using a solution.
- Same set of selections can be used on multiple tables.

**Column Type**


**Correct Answer:**

**Column types**


**Answer Area**

**Scenario**

- Remove a selection from being available without modifying existing records.
- Must be completely deployed by using a solution.
- Same set of selections can be used on multiple tables.

**Column Type**

Lookup
Global choice and Lookup
Global choice

**Section:**

**Explanation:**

**QUESTION 46**

DRAG DROP

You need to configure the custom connector to incorporate the environment name and DataId in the Web API URL

Which four actions should you perform in sequence? To answer, move the appropriate actions to the answer area and arrange them in the correct order.

NOTE: More than one order of answer choices is correct. You will receive credit for any of the correct orders you select.

Select and Place:

**Actions**

- Set the operation to dataservice.
- Create a policy template that uses the Route request template.
- Create a policy template that uses the Set host URL template.
- Set the operation to enrich.
- Set the subdomain of the URL template to:  
dataservice-@connectionParameters('EnvironmentName')
- Set the path of the URL template path to:  
enrich/@queryParameters('DataId')



**Answer Area**

Answer Area



Correct Answer:

**Actions**

- Set the operation to dataservice.
- Create a policy template that uses the Route request template.
- 
- 
- 
- 



**Answer Area**

- Create a policy template that uses the Set host URL template.
- Set the operation to enrich.
- Set the subdomain of the URL template to:  
dataservice-@connectionParameters('EnvironmentName')
- Set the path of the URL template path to:  
enrich/@queryParameters('DataId')



**Section:**

**Explanation:**

Create a policy template that uses the Set host URL...

Set the operation to enrich.

Set the subdomain of URL template to: dataservice..

Set the path of the URL template path to: enrich..

**QUESTION 47**

**HOTSPOT**

You need to configure the Web API and create the custom connector.

Which action should you perform for each step? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

**Hot Area:**

**Answer Area**

Step	Action
Configure the Web API.	Add an OpenAPI definition.
Create the custom connector.	Import an OpenAPI file.



**Answer Area:**

**Answer Area**

Step	Action
Configure the Web API.	Add an OpenAPI definition.
Create the custom connector.	Import an OpenAPI file.

**Section:**

**Explanation:**

**QUESTION 48**

You need to choose a technology to access the Web API. Which technology should you select?

- A. Canvas app that uses the custom connector
- B. Plug-in that contacts the Web API
- C. Power Automate flow that uses the custom connector
- D. Webhook that contacts the Web API



**Correct Answer: C**

**Section:**

**QUESTION 49**

You are a Power App maker.

You are developing an app in a development environment. You create the following custom forms in the Account entity:

\* FormB contains a message that appears in the Onload function of the form.

\* FormC contains a message that appears in the OnSave function of the form.

You add the forms to a solution and export the solution as managed. Importing the managed solution into the test environment produces an error indicating the solution is missing a component.

You need to identify the issue.

What is the cause of the import error?

- A. The solution must be exported as an unmanaged solution.
- B. A copy of the form must be made before adding to the solution.
- C. The web resources were not added to the solution before exporting.
- D. The web resources were not added to the form before adding the form to the solution.

**Correct Answer: C**

**Section:**

**QUESTION 50**

You are creating an integration between Microsoft Dataverse and an external system.

Messages from Dataverse must be sent to Microsoft Azure Service Bus. An Azure Function will process the messages. Events must be published directly to the ServiceEndpoint for Azure Service Bus.

You need to create code for the messages.

Which class should you use?

- A. IExecutionContext
- B. IPluginExecutionContext
- C. RemoteExecutionContext
- D. WorkflowContext

**Correct Answer: C**

**Section:**

**QUESTION 51**

HOTSPOT

You develop the following code for a console application that performs the data import to Microsoft Dataverse.



```

01  CrmServiceClient service = new CrmServiceClient(connectionString);
02
03  if (!service.IsReady)
04  {
05      Console.WriteLine(service.LastCrmError);
06      Console.ReadLine();
07      return;
08  }
09
10  ExecuteMultipleRequest executeMultipleRequest = new ExecuteMultipleRequest()
11  {
12      Settings = new ExecuteMultipleSettings()
13      {
14          ContinueOnError = false,
15          ReturnResponses = true
16      },
17      Requests = new OrganizationRequestCollection()
18  };
19
20  executeMultipleRequest.Requests.Add(new CreateRequest()
21  {
22      Target = new Entity("account")
23      {
24          ["name"] = "Contoso",
25          ["accountnumber"] = "ACC-0000001"
26      },
27      ["SuppressDuplicateDetection"] = false
28  });
29
30  executeMultipleRequest.Requests.Add(new CreateRequest()
31  {
32      Target = new Entity("contact")
33      {

```



For each of the following statements, select Yes if the statement is true. Otherwise, select No. NOTE: Each correct selection is worth one point.

**Hot Area:**

**Answer Area**

<b>Statement</b>	<b>Yes</b>	<b>No</b>
When the connection string or credentials are invalid, an error message is sent to the application terminal.	<input type="radio"/>	<input type="radio"/>
When a similar account exists, the account will still be created.	<input type="radio"/>	<input type="radio"/>
A contact record will always be created.	<input type="radio"/>	<input type="radio"/>

Answer Area:

**Answer Area**

<b>Statement</b>	<b>Yes</b>	<b>No</b>
When the connection string or credentials are invalid, an error message is sent to the application terminal.	<input checked="" type="radio"/>	<input type="radio"/>
When a similar account exists, the account will still be created.	<input type="radio"/>	<input checked="" type="radio"/>
A contact record will always be created.	<input checked="" type="radio"/>	<input type="radio"/>

**Section:**

**Explanation:**

**QUESTION 52**

A company has a model-driven app that uses Microsoft Dataverse.

The company requires a web application that retrieves information from the model-driven app. The requirements for the web application include:

- \* Must be a single-page web application that uses the Web API.
- \* Must display the correct company information.
- \* Must authenticate using OAuth without additional verification.

You need to configure the web application. Which two methods should you use? Each correct answer presents a complete solution. NOTE: Each correct selection is worth one point.

- A. NTLM authentication
- B. multifactor authentication
- C. Kerberos Authentication
- D. Microsoft Authentication Library (MSAL)
- E. Microsoft Azure Active Directory Authentication Libraries (ADAL)

**Correct Answer: D, E**

**Section:**

**QUESTION 53**

HOTSPOT

You are developing a model-driven app by using Microsoft Power Platform. The app must perform the following functions:

- \* Automatically receive updates from a purchase order system.
- \* Only add new purchase orders.

You need to implement the app.

Which components should you use? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point

Hot Area:

**Answer Area**

**Requirement**

Automatically receive purchase order updates.

Add new purchase orders.

**Component**

Connector with polling trigger	▼
<b>Connector with polling trigger</b>	
Connector with webhook trigger	
Triggers for scheduled flows	
Creation date	▼
Account name	
<b>Creation date</b>	
Account number	
Purchase order amount	

Answer Area:

**Answer Area**

**Requirement**

Automatically receive purchase order updates.

Add new purchase orders.

**Component**

Connector with polling trigger	▼
<b>Connector with polling trigger</b>	
Connector with webhook trigger	
Triggers for scheduled flows	
Creation date	▼
Account name	
<b>Creation date</b>	
Account number	
Purchase order amount	

**Section:**

**Explanation:**

**QUESTION 54**

You need to prevent the field used by the PCF control from updating the record.

What are two possible ways to achieve the goal? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

- A. Disable existing event handlers on the field.
- B. Call the `setSubmitMode('never')` function on the field.
- C. Create a business rule to clear the field value.
- D. Make the field read-only.

**Correct Answer: B, D**

**Section:**

**QUESTION 55**

You need to determine the cause for the issue reported by the interviewers. What is the root cause of the issue?

- A. The plug-in used to synchronize the Person of Interest field from Contact to Interview was not triggered.
- B. There was an error in the event pipeline and the entire transaction was rolled back.
- C. There is no plug-in registered to run when an interview record is created.

**Correct Answer: C**

**Section:**



**QUESTION 56**

You need to configure the PCF control to display team members for interview scheduling. Which two inputs should you use? Each correct answer presents part of the solution. NOTE: Each correct selection is worth one point.

- A. identifier for the job candidate
- B. identifier for the job posting
- C. time-zone offset for the hiring manager
- D. time-zone offset for the job candidate
- E. identifier for the hiring manager

**Correct Answer: A, D**

**Section:**

**QUESTION 57**

**HOTSPOT**

You develop the following code for the plug-in that sends email notifications to recruiters.

```

var target = (Entity)context.InputParameters["Target"];
var contact = service.Retrieve(target.LogicalName, target.Id, new ColumnSet("fullname"));
var fetchXml = @"<fetch>
    <entity name='pro_application'>
        <attribute name='pro_recruiterassignedid' />
        <filter type='and'>
            <condition attribute='statecode' operator='eq' value='0' />
            <condition attribute='pro_contactid' operator='eq' value='" + target.Id + @"' />
        </filter>
    </entity>
</fetch>";
var fetchRecruiters = new FetchExpression(fetchXml);
var recruiters = service.RetrieveMultiple(fetchRecruiters);
foreach (var recruiter in recruiters.Entities)
{
    SendEmail(recruiter.Id, contact.GetAttributeValue<string>("fullname"));
}

```

For each of the following statements, select Yes if the statement is true. Otherwise, select No  
 NOTE: Each correct select is worth one point.

Hot Area:



Answer Area

Statements	Yes	No
You can use data from the contact's name without explicitly retrieving the value from the fullname column.	<input type="radio"/>	<input type="radio"/>
You can use the same plug-in to send notifications to interviewers.	<input type="radio"/>	<input type="radio"/>
Recruiters only receive a single email notification per applicant.	<input type="radio"/>	<input type="radio"/>

Answer Area:

## Answer Area

Statements	Yes	No
You can use data from the contact's name without explicitly retrieving the value from the fullname column.	<input type="radio"/>	<input checked="" type="radio"/>
You can use the same plug-in to send notifications to interviewers.	<input type="radio"/>	<input checked="" type="radio"/>
Recruiters only receive a single email notification per applicant.	<input checked="" type="radio"/>	<input type="radio"/>

### Section:

### Explanation:

### QUESTION 58

You are creating a canvas app that realtors use to identify neighbors for properties that are for sale. The OnStart property includes the following code:

```
ClearCollect(collectNeighborList, Filter(NeighborList, Status = "Active")); ClearCollect(collectRealtorList, CompanyList); ClearCollect(collectRegions, RegionList)
```

The app is running slower than expected.

You need to resolve the issue.

What should you do?

A)

```
Replace the existing code segment with the following code segment: Concurrent (ClearCollect(collectNeighborList, Filter(NeighborList, Status = "Active")), ClearCollect(collectRealtorList, CompanyList), ClearCollect(collectRegions, RegionList))
```

B)

Replace all instances of the ClearCollect method with the Connect method.

C)

```
Replace the existing code segment with the following code segment: ClearCollect(collectNeighborList, Filter(NeighborList, Status = "Active")); Concurrent(ClearCollect(collectRealtorList, CompanyList)); Concurrent(ClearCollect(collectRegions, RegionList))
```

A. Option A

B. Option B

C. Option C

**Correct Answer: A**

### Section:

### QUESTION 59

#### HOTSPOT

You create a Power Automate flow that retrieves data from the Microsoft Dataverse Account table.

The flow uses only a subset of Account table data.

You need to retrieve the required data.

How should you configure the Dataverse List Rows action? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Data point	Method
Full name of the primary contact	<div style="border: 1px solid gray; padding: 2px;"><div style="border-bottom: 1px solid gray; padding: 2px;">Expand Query = primarycontactid(\$select=fullname) </div><div style="background-color: #0070C0; color: white; padding: 2px;">Expand Query = primarycontactid(\$select=fullname)</div><div style="padding: 2px;">Select columns = fullname</div><div style="padding: 2px;">Select columns = primarycontactid, fullname</div><div style="padding: 2px;">Expand Query = /primarycontactid?\$select=fullname</div></div>
Account with the highest credit limit	<div style="border: 1px solid gray; padding: 2px;"><div style="border-bottom: 1px solid gray; padding: 2px;">Row count = 1 and Sort By = creditlimit desc </div><div style="background-color: #0070C0; color: white; padding: 2px;">Row count = 1 and Sort By = creditlimit desc</div><div style="padding: 2px;">Row count = 1 and Sort By = creditlimit asc</div><div style="padding: 2px;">Expand Query = expand=account(\$top=1;\$select=creditlimit)</div></div>

Answer Area:

Answer Area

Data point	Method
Full name of the primary contact	<div style="border: 1px solid gray; padding: 2px;"><div style="border-bottom: 1px solid gray; padding: 2px;">Expand Query = primarycontactid(\$select=fullname) </div><div style="background-color: #00AEEF; color: white; padding: 2px;">Expand Query = primarycontactid(\$select=fullname)</div><div style="padding: 2px;">Select columns = fullname</div><div style="padding: 2px;">Select columns = primarycontactid, fullname</div><div style="padding: 2px;">Expand Query = /primarycontactid?\$select=fullname</div></div>
Account with the highest credit limit	<div style="border: 1px solid gray; padding: 2px;"><div style="border-bottom: 1px solid gray; padding: 2px;">Row count = 1 and Sort By = creditlimit desc </div><div style="background-color: #00AEEF; color: white; padding: 2px;">Row count = 1 and Sort By = creditlimit desc</div><div style="padding: 2px;">Row count = 1 and Sort By = creditlimit asc</div><div style="padding: 2px;">Expand Query = expand=account(\$top=1;\$select=creditlimit)</div></div>

Section:

Explanation:

**QUESTION 60**

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

A company requires custom validation when users save form records that use a synchronous plug-in.

If validation fails, a message that explains how to resolve the issue must be displayed on the form to the user.

You need to implement the custom validation.



Solution: Throw an InvalidPluginExecutionException with the message.

Does the solution meet the goal?

- A. Yes
- B. No

**Correct Answer: B**

**Section:**

#### QUESTION 61

Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

A company requires custom validation when users save form records that use a synchronous plug-in.

If validation fails, a message that explains how to resolve the issue must be displayed on the form to the user.

You need to implement the custom validation.

Solution: Include the message in the output parameters of the plug-in.

Does the solution meet the goal?

- A. Yes
- B. No

**Correct Answer: B**

**Section:**

#### QUESTION 62

You create a custom API. You define the API as a function.

The custom API does not appear in the response received from `https://[yourorg].api.crm.dynamics.com/api/data/v9.2/$metadata` and returns an error when called.

You need to identify why the custom API is not working.

What should you do?

- A. Add a response property to the custom API.
- B. Set the Is Private property of the custom API to False.
- C. Add a request property to the custom API.
- D. Set the Enabled for Workflow option of the customer API to True.

**Correct Answer: B**

**Section:**

