VCEûp

Microsoft.VCEup.com.AI-102.Jun-2022.96q

Number: 000-000
Passing Score: 800
Time Limit: 120 min
File Version: 1.0

VCEûp

VCEUp

Question Set 1

QUESTION 1

DRAG DROP

You have 100 chatbots that each has its own Language Understanding model.

Frequently, you must add the same phrases to each model.

You need to programmatically update the Language Understanding models to include the new phrases.

How should you complete the code? To answer, drag the appropriate values to the correct targets. Each value 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:

Values

- AddPhraseListAsync
- Phraselist
- PhraselistCreateObject
- Phrases
- SavePhraselistAsync
- UploadPhraseListAsync

Answer Area

```
var phraselistId = await client.Features. [          ]
(appId, versionId, new [          ]
{
    EnabledForAllModels = false,
    IsExchangeable = true,
    Name = "PL1",
    Phrases = "item1,item2,item3,item4,item5"

});
```

Correct Answer:

Values

- AddPhraseListAsync
- Phraselist
- PhraselistCreateObject
- Phrases
- SavePhraselistAsync
- UploadPhraseListAsync

Answer Area

```
var phraselistId = await client.Features. AddPhraseListAsync
(appId, versionId, new PhraselistCreateObject
{
    EnabledForAllModels = false,
    IsExchangeable = true,
    Name = "PL1",
    Phrases = "item1,item2,item3,item4,item5"

});
```

Section: [none]
Explanation

Explanation/Reference:
Explanation:

Box 1: AddPhraseListAsync
Example: Add phraselist feature

VCEûp

```
var phraselistId = await client.Features.AddPhraseListAsync(appId, versionId, new PhraselistCreateObject
{
   EnabledForAllModels = false,

   IsExchangeable = true,
   Name = "QuantityPhraselist",
   Phrases = "few,more,extra"
});
```

Box 2: PhraselistCreateObject

Reference:
https://docs.microsoft.com/en-us/azure/cognitive-services/luis/client-libraries-rest-api

QUESTION 2
DRAG DROP

You plan to use a Language Understanding application named app1 that is deployed to a container.

App1 was developed by using a Language Understanding authoring resource named lu1.

App1 has the versions shown in the following table.

Version	Trained date	Published date
V1.2	*None*	*None*
V1.1	2020-10-01	*None*
V1.0	2020-09-01	2020-09-15

You need to create a container that uses the latest deployable version of app1.

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. (Choose three.) **Select and Place:**

VCEûp

Actions	Answer Area
Run a container that has `version` set as an environment variable.	
Export the model by using the Export as JSON option.	
Select v1.1 of app1.	
Run a container and mount the model file.	
Select v1.0 of app1.	
Export the model by using the Export for containers (GZIP) option.	
Select v1.2 of app1.	

VCEûp

Correct Answer:

VCEûp

Actions

- Run a container that has `version` set as an environment variable.
- Export the model by using the Export as JSON option.
- Select v1.1 of app1.
- Run a container and mount the model file.
- Select v1.0 of app1.
- Export the model by using the Export for containers (GZIP) option.
- Select v1.2 of app1.

Answer Area

- Export the model by using the Export for containers (GZIP) option.
- Select v1.1 of app1.
- Run a container and mount the model file.

VCEûp

Section: [none]
Explanation

Explanation/Reference:
Explanation:

Step 1: Export the model using the Export for containers (GZIP) option.
Export versioned app's package from LUIS portal The versioned app's package is available from the Versions list page.
Sign on to the LUIS portal.
Select the app in the list.
Select Manage in the app's navigation bar.
Select Versions in the left navigation bar.
Select the checkbox to the left of the version name in the list.
Select the Export item from the contextual toolbar above the list.
Select Export for container (GZIP).
The package is downloaded from the browser.

VCEUp

Step 2: Select v1.1 of app1.
A trained or published app packaged as a mounted input to the container with its associated App ID.

Step 3: Run a contain and mount the model file.
Run the container, with the required input mount and billing settings.

Reference: https://docs.microsoft.com/en-us/azure/cognitive-services/luis/luis-container-howto

QUESTION 3 You need to build a chatbot that meets the following requirements:

Supports chit-chat, knowledge base, and multilingual models
Performs sentiment analysis on user messages
Selects the best language model automatically

What should you integrate into the chatbot?

A. QnA Maker, Language Understanding, and Dispatch
B. Translator, Speech, and Dispatch
C. Language Understanding, Text Analytics, and QnA Maker
D. Text Analytics, Translator, and Dispatch

Correct Answer: C
Section: [none]
Explanation

Explanation/Reference:
Explanation:
Language Understanding: An AI service that allows users to interact with your applications, bots, and IoT devices by using natural language.

QnA Maker is a cloud-based Natural Language Processing (NLP) service that allows you to create a natural conversational layer over your data. It is used to find the most appropriate answer for any input from your custom knowledge base (KB) of information.

Text Analytics: Mine insights in unstructured text using natural language processing (NLP)—no machine learning expertise required. Gain a deeper understanding of customer opinions with sentiment analysis. The Language Detection feature of the Azure Text Analytics REST API evaluates text input

Incorrect Answers:
A, B, D: Dispatch uses sample utterances for each of your bot's different tasks (LUIS, QnA Maker, or custom), and builds a model that can be used to properly route your user's request to the right task, even across multiple bots.

Reference: https://azure.microsoft.com/en-us/services/cognitive-services/text-analytics/

https://docs.microsoft.com/en-us/azure/cognitive-services/qnamaker/overview/overview

QUESTION 4
Your company wants to reduce how long it takes for employees to log receipts in expense reports. All the receipts are in English.

VCEUp

You need to extract top-level information from the receipts, such as the vendor and the transaction total. The solution must minimize development effort.

Which Azure Cognitive Services service should you use?

A. Custom Vision
B. Personalizer
C. Form Recognizer
D. Computer Vision

Correct Answer: C
Section: [none]
Explanation

Explanation/Reference:
Explanation:
Azure Form Recognizer is a cognitive service that lets you build automated data processing software using machine learning technology. Identify and extract text, key/value pairs, selection marks, tables, and structure from your documents — the service outputs structured data that includes the relationships in the original file, bounding boxes, confidence and more.

Form Recognizer is composed of custom document processing models, prebuilt models for invoices, receipts, IDs and business cards, and the layout model.

Reference: https://docs.microsoft.com/en-us/azure/cognitive-services/form-recognizer

QUESTION 5

HOTSPOT

You need to create a new resource that will be used to perform sentiment analysis and optical character recognition (OCR). The solution must meet the following requirements:

Use a single key and endpoint to access multiple services.
Consolidate billing for future services that you might use. Support the use of Computer Vision in the future.

How should you complete the HTTP request to create the new resource? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

VCEûp

Answer Area

```
[ ▼ ] https://management.azure.com/subscriptions/xxxxxxxx-xxxx-
      PATCH
      POST
      PUT
xxxx-xxxx-
xxxxxxxxxxxx/resourceGroups/RG1/providers/Microsoft.CognitiveServices/
accounts/CS1?api-version=2017-04-18
{
  "location": "West US",
  "kind": " [ ▼ ] ",
            CognitiveServices
            ComputerVision
            TextAnalytics
  "sku": {
    "name": "S0"
  },
  "properties": {},
  "identity": {
    "type": "SystemAssigned"

  }
}
```

Correct Answer:

VCEûp

Answer Area

Section: [none]
Explanation

Explanation/Reference:
Explanation:

Box 1: PUT
Sample Request: PUT https://management.azure.com/subscriptions/00000000-0000-0000-0000-000000000000/resourceGroups/test-rg/providers/Microsoft.DeviceUpdate/accounts/contoso?api-version=2020-03-01-preview

Incorrect Answers:
PATCH is for updates.

Box 2: CognitiveServices
Microsoft Azure Cognitive Services provide us to use its pre-trained models for various Business Problems related to Machine Learning.

List of Different Services are:
Decision
Language (includes sentiment analysis)

VCEUp

Speech

Vision (includes OCR)
Web Search

Reference: https://docs.microsoft.com/en-us/rest/api/deviceupdate/resourcemanager/accounts/create
https://www.analyticsvidhya.com/blog/2020/12/microsoft-azure-cognitive-services-api-for-ai-development/

QUESTION 6 You are developing a new sales system that will process the video and text from a public-facing website.

You plan to monitor the sales system to ensure that it provides equitable results regardless of the user's location or background.

Which two responsible AI principles provide guidance to meet the monitoring requirements? Each correct answer presents part of the solution. (Choose two.) **NOTE:**

Each correct selection is worth one point.

A. transparency
B. fairness
C. inclusiveness
D. reliability and safety
E. privacy and security

Correct Answer: BD
Section: [none]
Explanation

Explanation/Reference:
Explanation:
AI systems should treat all people fairly.
AI systems should perform reliably and safely.

Reference: https://docs.microsoft.com/en-us/azure/cloud-adoption-framework/strategy/responsible-ai

QUESTION 7
DRAG DROP

You plan to use containerized versions of the Anomaly Detector API on local devices for testing and in on-premises datacenters.

You need to ensure that the containerized deployments meet the following requirements:

Prevent billing and API information from being stored in the command-line histories of the devices that run the container. Control access to the container images by using Azure role-based access control (Azure RBAC).

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. (Choose four.) **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:

VCEûp

Actions	Answer Area
Create a custom Dockerfile.	
Pull the Anomaly Detector container image.	
Distribute a `docker run` script.	
Push the image to an Azure container registry.	
Build the image.	
Push the image to Docker Hub.	

Correct Answer:

Actions	Answer Area
Create a custom Dockerfile.	Pull the Anomaly Detector container image.
Pull the Anomaly Detector container image.	Create a custom Dockerfile.
Distribute a `docker run` script.	Push the image to an Azure container registry.
Push the image to an Azure container registry.	Distribute a `docker run` script.
Build the image.	
Push the image to Docker Hub.	

VCEûp

Section: [none]
Explanation

Explanation/Reference:
Explanation:

Step 1: Pull the Anomaly Detector container image.

Step 2: Create a custom Dockerfile

Step 3: Push the image to an Azure container registry.
To push an image to an Azure Container registry, you must first have an image.

Step 4: Distribute the docker run script Use the
docker run command to run the containers.

Reference:
https://docs.microsoft.com/en-us/azure/container-registry/container-registry-intro

QUESTION 8 HOTSPOT

You plan to deploy a containerized version of an Azure Cognitive Services service that will be used for text analysis.

VCEûp

You configure `https://contoso.cognitiveservices.azure.com` as the endpoint URI for the service, and you pull the latest version of the Text Analytics Sentiment Analysis container.

You need to run the container on an Azure virtual machine by using Docker.

How should you complete the command? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

```
docker run --rm -it -p 5000:5000 --memory 8g --cpus 1 \
[                                                    ▼] \
    http://contoso.blob.core.windows.net
    https://contoso.cognitiveservices.azure.com
    mcr.microsoft.com/azure-cognitive-services/textanalytics/keyphrase
    mcr.microsoft.com/azure-cognitive-services/textanalytics/sentiment
Eula=accept \
Billing= [                                           ▼] \
    http://contoso.blob.core.windows.net
    https://contoso.cognitiveservices.azure.com
    mcr.microsoft.com/azure-cognitive-services/textanalytics/keyphrase
    mcr.microsoft.com/azure-cognitive-services/textanalytics/sentiment
ApiKey=xxxxxxxxxxxxxxxxxxx
```

Correct Answer:

VCEûp

Answer Area

```
docker run --rm -it -p 5000:5000 --memory 8g --cpus 1 \
[                                                    ▼] \
    http://contoso.blob.core.windows.net
    https://contoso.cognitiveservices.azure.com
    mcr.microsoft.com/azure-cognitive-services/textanalytics/keyphrase
    mcr.microsoft.com/azure-cognitive-services/textanalytics/sentiment
Eula=accept \
Billing=                                             ▼] \
    http://contoso.blob.core.windows.net
    https://contoso.cognitiveservices.azure.com
    mcr.microsoft.com/azure-cognitive-services/textanalytics/keyphrase
    mcr.microsoft.com/azure-cognitive-services/textanalytics/sentiment
ApiKey=xxxxxxxxxxxxxxxxxxx
```

Section: [none]
Explanation

Explanation/Reference:
Explanation:

Box 1: mcr.microsoft.com/azure-cognitive-services/textanalytics/sentiment
To run the Sentiment Analysis v3 container, execute the following docker run command. docker
run --rm -it -p 5000:5000 --memory 8g --cpus 1 \
mcr.microsoft.com/azure-cognitive-services/textanalytics/sentiment \
Eula=accept \
Billing={ENDPOINT_URI} \
ApiKey={API_KEY} is the endpoint for accessing the Text Analytics API. https://<your-custom-subdomain>.cognitiveservices.azure.com

Box 2: https://contoso.cognitiveservices.azure.com
{ENDPOINT_URI} is the endpoint for accessing the Text Analytics API: https://<your-custom-subdomain>.cognitiveservices.a The endpoint for accessing the Text Analytics API. zure.com

Reference: https://docs.microsoft.com/en-us/azure/cognitive-services/text-analytics/how-tos/text-analytics-how-to-install-containers?tabs=sentiment

QUESTION 9
You have the following C# method for creating Azure Cognitive Services resources programmatically.

VCEûp

```
static void create_resource(CognitiveServicesManagementClient client, string
resource_name, string kind, string account_tier, string location)
{
  CognitiveServicesAccount parameters =
      new CognitiveServicesAccount(null, null, kind, location, resource_name,
new CognitiveServicesAccountProperties(), new Sku(account_tier));
  var result = client.Accounts.Create(resource_group_name, account_tier,
parameters);
}
```

You need to call the method to create a free Azure resource in the West US Azure region. The resource will be used to generate captions of images automatically.

Which code should you use?

A. `create_resource(client, "res1", "ComputerVision", "F0", "westus")`
B. `create_resource(client, "res1", "CustomVision.Prediction", "F0", "westus")` C. `create_resource(client, "res1", "ComputerVision", "S0", "westus")`
D. `create_resource(client, "res1", "CustomVision.Prediction", "S0", "westus")`

Correct Answer: B
Section: [none]
Explanation

Explanation/Reference:
Explanation:
Many of the Cognitive Services have a free tier you can use to try the service. To use the free tier, use F0 as the SKU for your resource.
There are two tiers of keys for the Custom Vision service. You can sign up for a F0 (free) or S0 (standard) subscription through the Azure portal.

Incorrect Answers:
A: There is no free tier (F0) for ComputerVision.

Reference:
https://docs.microsoft.com/en-us/azure/cognitive-services/cognitive-services-apis-create-account-client-library?pivots=programming-language-csharp https://docs.microsoft.com/en-us/azure/cognitive-services/custom-vision-service/limits-and-quotas

QUESTION 10 You successfully run the following
HTTP request.

```
POST https://management.azure.com/subscriptions/18c51a87-3a69-47a8-aedc-
a54745f708a1/resourceGroups/RG1/providers/Microsoft.CognitiveServices/accounts/contosol/regenerateKey?apiversion=2017-04-18
Body{"keyName": "Key2"}
```

What is the result of the request?

A. A key for Azure Cognitive Services was generated in Azure Key Vault.
B. A new query key was generated.
C. The primary subscription key and the secondary subscription key were rotated.
D. The secondary subscription key was reset.

Correct Answer: B
Section: [none]
Explanation

Explanation/Reference:
Explanation:

VCEûp

Accounts - Regenerate Key regenerates the specified account key for the specified Cognitive Services account.

Syntax:
POST https://management.azure.com/subscriptions/{subscriptionId}/resourceGroups/{resourceGroupName}/providers/Microsoft.CognitiveServices/accounts/{accountName}/regenerateKey?api-version=2017-04-18

Reference:
https://docs.microsoft.com/en-us/rest/api/cognitiveservices/accountmanagement/accounts/regeneratekey

QUESTION 11 You build a custom Form
Recognizer model.

You receive sample files to use for training the model as shown in the following table.

Name	Type	Size
File1	PDF	20 MB
File2	MP4	100 MB
File3	JPG	20 MB
File4	PDF	100 MB
File5	GIF	1 MB
File6	JPG	40 MB

Which three files can you use to train the model? Each correct answer presents a complete solution. (Choose three.) **NOTE:**

Each correct selection is worth one point.

A. File1
B. File2C. File3
D. File4
E. File5
F. File6

Correct Answer: ACF
Section: [none]
Explanation

Explanation/Reference:
Explanation:
Input requirements
Form Recognizer works on input documents that meet these requirements:

Format must be JPG, PNG, PDF (text or scanned), or TIFF. Text-embedded PDFs are best because there's no possibility of error in character extraction and location. File size must be less than 50 MB.

Reference:
https://docs.microsoft.com/en-us/azure/cognitive-services/form-recognizer/overview

QUESTION 12 A customer uses Azure
Cognitive Search.

The customer plans to enable a server-side encryption and use customer-managed keys (CMK) stored in Azure.

What are three implications of the planned change? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

A. The index size will increase.

VCEUp

B. Query times will increase.
C. A self-signed X.509 certificate is required.
D. The index size will decrease.
E. Query times will decrease.
F. Azure Key Vault is required.

Correct Answer: ABE
Section: [none]
Explanation

Explanation/Reference:
Reference:
https://docs.microsoft.com/en-us/azure/search/search-security-overview

QUESTION 13
You are developing a new sales system that will process the video and text from a public-facing website.

You plan to notify users that their data has been processed by the sales system.

Which responsible AI principle does this help meet?

A. transparency
B. fairness
C. inclusiveness
D. reliability and safety

Correct Answer: D
Section: [none]
Explanation

Explanation/Reference:
Reference:
https://docs.microsoft.com/en-us/azure/cloud-adoption-framework/strategy/responsible-ai

QUESTION 14
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 create a web app named app1 that runs on an Azure virtual machine named vm1. Vm1 is on an Azure virtual network named vnet1.

You plan to create a new Azure Cognitive Search service named service1.

You need to ensure that app1 can connect directly to service1 without routing traffic over the public internet.

Solution: You deploy service1 and a public endpoint to a new virtual network, and you configure Azure Private Link.

Does this meet the goal?

A. Yes
B. No

Correct Answer: A
Section: [none]
Explanation

Explanation/Reference:
Reference:

VCEUp

https://docs.microsoft.com/en-us/azure/private-link/private-link-overview

QUESTION 15
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 create a web app named app1 that runs on an Azure virtual machine named vm1. Vm1 is on an Azure virtual network named vnet1.

You plan to create a new Azure Cognitive Search service named service1.

You need to ensure that app1 can connect directly to service1 without routing traffic over the public internet.

Solution: You deploy service1 and a public endpoint, and you configure an IP firewall rule.

Does this meet the goal?

A. Yes
B. No

Correct Answer: B
Section: [none]
Explanation

Explanation/Reference:
Reference:
https://docs.microsoft.com/en-us/azure/private-link/private-link-overview

QUESTION 16
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 create a web app named app1 that runs on an Azure virtual machine named vm1. Vm1 is on an Azure virtual network named vnet1.

You plan to create a new Azure Cognitive Search service named service1.

You need to ensure that app1 can connect directly to service1 without routing traffic over the public internet.

Solution: You deploy service1 and a public endpoint, and you configure a network security group (NSG) for vnet1.

Does this meet the goal?

A. Yes
B. No

Correct Answer: B
Section: [none]
Explanation

Explanation/Reference:
Reference:
https://docs.microsoft.com/en-us/azure/private-link/private-link-overview

QUESTION 17 You plan to perform
predictive maintenance.

You collect IoT sensor data from 100 industrial machines for a year. Each machine has 50 different sensors that generate data at one-minute intervals. In total, you have 5,000 time series datasets.

VCEûp

You need to identify unusual values in each time series to help predict machinery failures.

Which Azure Cognitive Services service should you use?

A. Anomaly Detector
B. Cognitive Search
C. Form Recognizer
D. Custom Vision

Correct Answer: A
Section: [none]
Explanation

Explanation/Reference:

QUESTION 18
HOTSPOT

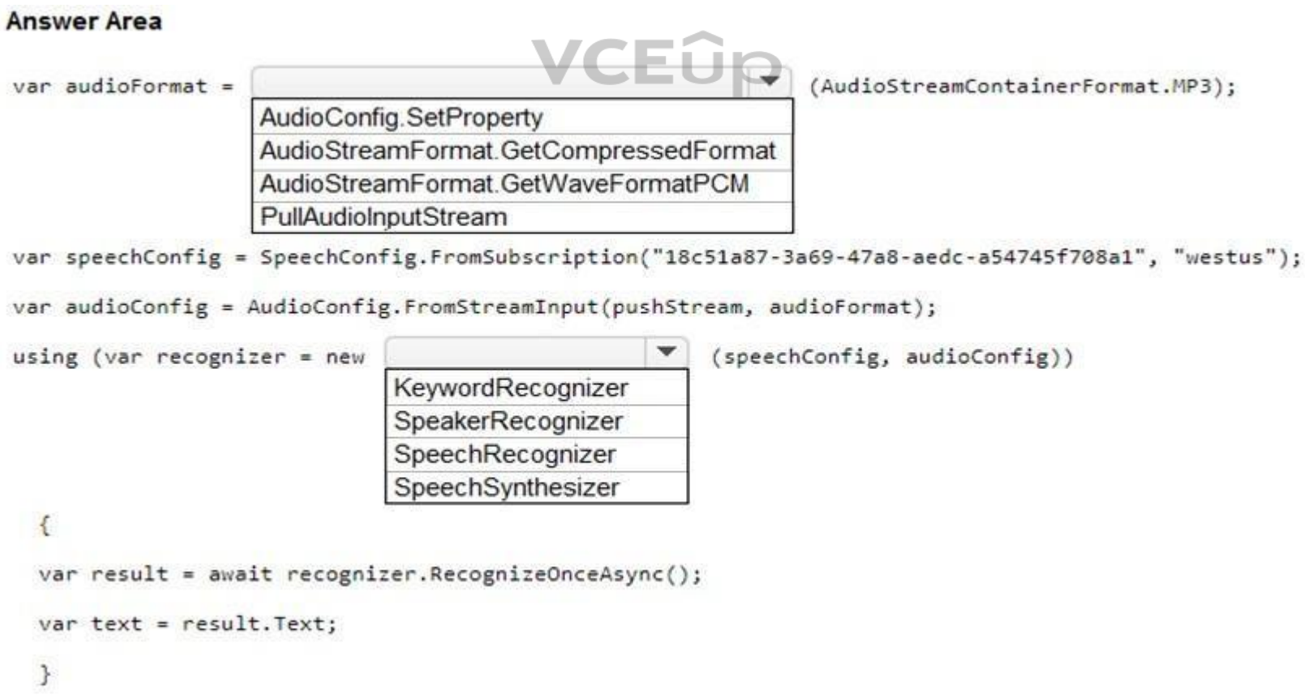
You are developing a streaming Speech to Text solution that will use the Speech SDK and MP3 encoding.

You need to develop a method to convert speech to text for streaming MP3 data.

How should you complete the code? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:



Correct Answer:

VCEûp

Answer Area

```
var audioFormat = [AudioConfig.SetProperty | AudioStreamFormat.GetCompressedFormat | AudioStreamFormat.GetWaveFormatPCM | PullAudioInputStream] (AudioStreamContainerFormat.MP3);

var speechConfig = SpeechConfig.FromSubscription("18c51a87-3a69-47a8-aedc-a54745f708a1", "westus");

var audioConfig = AudioConfig.FromStreamInput(pushStream, audioFormat);

using (var recognizer = new [KeywordRecognizer | SpeakerRecognizer | SpeechRecognizer | SpeechSynthesizer] (speechConfig, audioConfig))

{

var result = await recognizer.RecognizeOnceAsync();

var text = result.Text;

}
```

Section: [none]
Explanation

Explanation/Reference:
Reference: https://docs.microsoft.com/en-us/azure/cognitive-services/speech-service/how-to-use-codec-compressed-audio-input-streams?tabs=debian&pivots=programming-language-csharp

QUESTION 19
HOTSPOT

You are developing an internet-based training solution for remote learners.

Your company identifies that during the training, some learners leave their desk for long periods or become distracted.

You need to use a video and audio feed from each learner's computer to detect whether the learner is present and paying attention. The solution must minimize development effort and identify each learner.

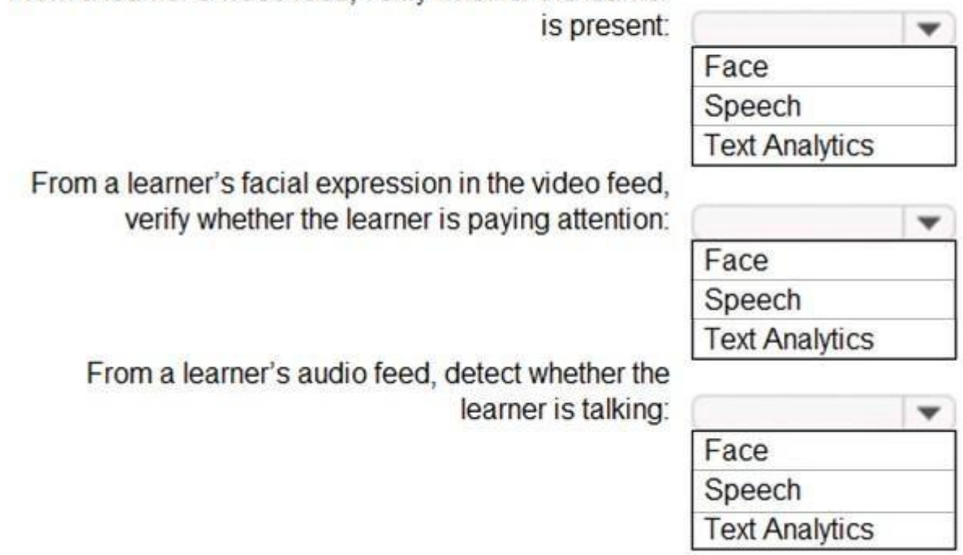
Which Azure Cognitive Services service should you use for each requirement? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

VCEûp

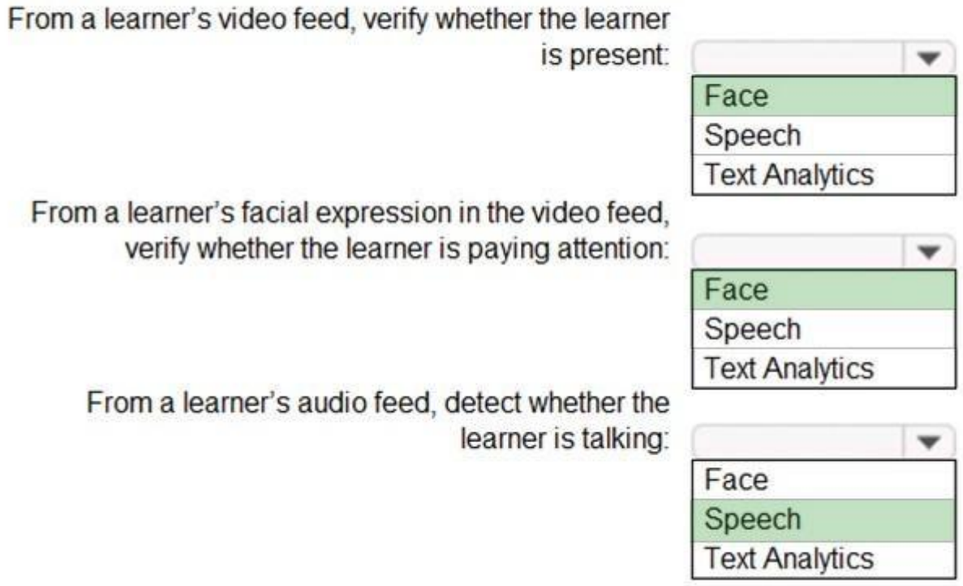
Answer Area



Correct Answer:

VCEûp

Answer Area



VCEUp

Section: [none]
Explanation

Explanation/Reference:
Reference:
https://docs.microsoft.com/en-us/azure/cognitive-services/what-are-cognitive-services

QUESTION 20 You plan to provision a QnA Maker service in a new resource group named RG1.

In RG1, you create an App Service plan named AP1.

Which two Azure resources are automatically created in RG1 when you provision the QnA Maker service? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

A. Language Understanding
B. Azure SQL Database
C. Azure Storage
D. Azure Cognitive Search
E. Azure App Service

Correct Answer: DE
Section: [none]
Explanation

Explanation/Reference:
Reference:
https://docs.microsoft.com/en-us/azure/cognitive-services/qnamaker/how-to/set-up-qnamaker-service-azure?tabs=v1#delete-azure-resources

QUESTION 21 You are building a language model by using a Language Understanding service.

You create a new Language Understanding resource.

You need to add more contributors.

What should you use?

A. a conditional access policy in Azure Active Directory (Azure AD)
B. the Access control (IAM) page for the authoring resources in the Azure portal
C. the Access control (IAM) page for the prediction resources in the Azure portal

Correct Answer: B
Section: [none]
Explanation

Explanation/Reference:
Reference:
https://docs.microsoft.com/en-us/azure/cognitive-services/luis/luis-how-to-collaborate

QUESTION 22
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 have an Azure Cognitive Search service.

During the past 12 months, query volume steadily increased.

VCEUp

You discover that some search query requests to the Cognitive Search service are being throttled.

You need to reduce the likelihood that search query requests are throttled.

Solution: You migrate to a Cognitive Search service that uses a higher tier.

Does this meet the goal?

A. Yes
B. No

Correct Answer: A
Section: [none]
Explanation

Explanation/Reference:
A simple fix to most throttling issues is to throw more resources at the search service (typically replicas for query-based throttling, or partitions for indexing-based throttling). However, increasing replicas or partitions adds cost, which is why it is important to know the reason why throttling is occurring at all.

Reference:
https://docs.microsoft.com/en-us/azure/search/search-performance-analysis

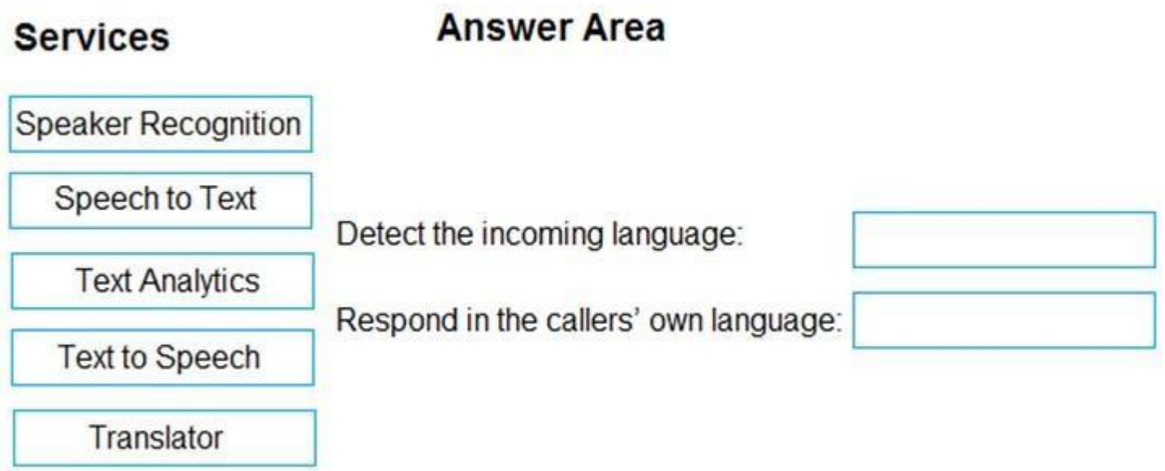
QUESTION 23
DRAG DROP

You need to develop an automated call handling system that can respond to callers in their own language. The system will support only French and English.

Which Azure Cognitive Services service should you use to meet each requirement? To answer, drag the appropriate services to the correct requirements. Each service may be used once, more than once, or not at all. You may need to drag the split bat between panes or scroll to view content.

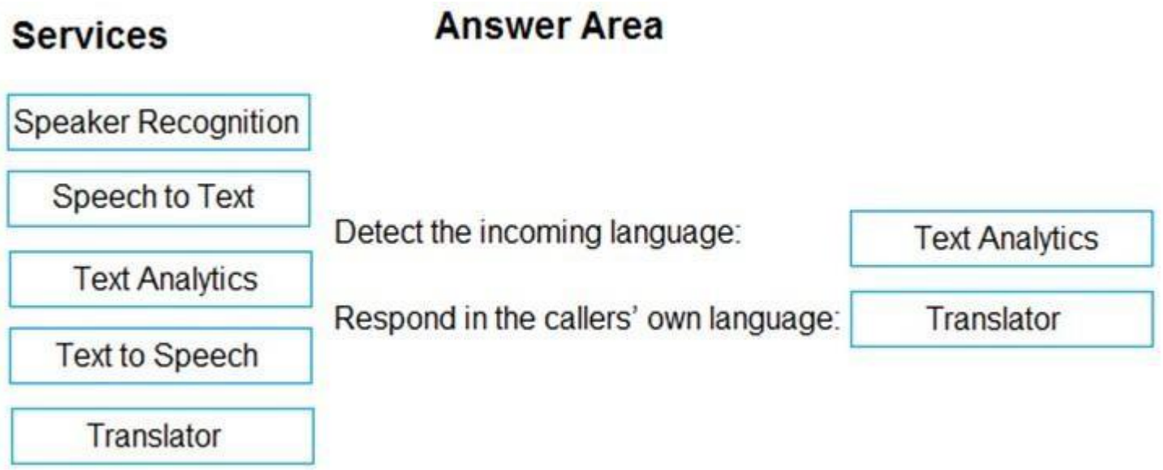
NOTE: Each correct selection is worth one point.

Select and Place:



Correct Answer:

VCEûp



Section: [none]
Explanation

Explanation/Reference:
Explanation:
Box 1: Text Analytics
The Language Detection feature of the Azure Text Analytics REST API evaluates text input for each document and returns language identifiers with a score that indicates the strength of the analysis.

Incorrect Answers:
Speaker Recognition which accurately verifies and identifies speakers by their unique voice characteristics.

Box 2: Translator
Translator is a cloud-based neural machine translation service that is part of the Azure Cognitive Services family of REST APIs. Translator can be used with any operating system and powers many Microsoft products and services used by thousands of businesses worldwide to perform language translation and other language-related operations.

Reference:
https://docs.microsoft.com/en-us/azure/cognitive-services/text-analytics/how-tos/text-analytics-how-to-language-detection https://docs.microsoft.com/en-us/azure/cognitive-services/translator/translator-overview

QUESTION 24 You have receipts that are
accessible from a URL.

You need to extract data from the receipts by using Form Recognizer and the SDK. The solution must use a prebuilt model.

Which client and method should you use?

A. the `FormRecognizerClient` client and the `StartRecognizeContentFromUri` method
B. the `FormTrainingClient` client and the `StartRecognizeContentFromUri` method
C. the `FormRecognizerClient` client and the `StartRecognizeReceiptsFromUri` method
D. the `FormTrainingClient` client and the `StartRecognizeReceiptsFromUri` method

Correct Answer: D
Section: [none]
Explanation

Explanation/Reference:
Explanation:
To analyze receipts from a URL, use the StartRecognizeReceiptsFromUri method

Example code:

VCEUp

```
private static async Task AnalyzeReceipt(
    FormRecognizerClient recognizerClient, string receiptUri)
{
    RecognizedFormCollection receipts = await recognizerClient.StartRecognizeReceiptsFromUri(new Uri(receiptUrl)).WaitForCompletionAsync();
```

Reference:
https://docs.microsoft.com/en-us/azure/applied-ai-services/form-recognizer/quickstarts/client-library

QUESTION 25 You have a collection of 50,000 scanned documents
that contain text.

You plan to make the text available through Azure Cognitive Search.

You need to configure an enrichment pipeline to perform optical character recognition (OCR) and text analytics. The solution must minimize costs.

What should you attach to the skillset?

A. a new Computer Vision resource
B. a free (Limited enrichments) Cognitive Services resource
C. an Azure Machine Learning pipeline
D. a new Cognitive Services resource that uses the S0 pricing tier

Correct Answer: A
Section: [none]
Explanation

Explanation/Reference:
Explanation:
The Computer Vision API uses text recognition APIs to extract and recognize text information from images. Read uses the latest recognition models, and is optimized for large, text-heavy documents and noisy images.

Reference:
https://docs.microsoft.com/en-us/azure/architecture/solution-ideas/articles/cognitive-search-with-skillsets

QUESTION 26
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 have an Azure Cognitive Search service.

During the past 12 months, query volume steadily increased.

You discover that some search query requests to the Cognitive Search service are being throttled.

You need to reduce the likelihood that search query requests are throttled.

Solution: You add indexes.

Does this meet the goal?

A. Yes
B. No

Correct Answer: B
Section: [none]
Explanation

Explanation/Reference:
Explanation:

VCEUp

Instead, you could migrate to a Cognitive Search service that uses a higher tier.

Note: A simple fix to most throttling issues is to throw more resources at the search service (typically replicas for query-based throttling, or partitions for indexing-based throttling). However, increasing replicas or partitions adds cost, which is why it is important to know the reason why throttling is occurring at all.

Reference:
https://docs.microsoft.com/en-us/azure/search/search-performance-analysis

QUESTION 27
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 have an Azure Cognitive Search service.

During the past 12 months, query volume steadily increased.

You discover that some search query requests to the Cognitive Search service are being throttled.

You need to reduce the likelihood that search query requests are throttled.

Solution: You enable customer-managed key (CMK) encryption.

Does this meet the goal?

A. Yes
B. No

Correct Answer: B
Section: [none]
Explanation

Explanation/Reference:
Explanation:
Customer-managed key (CMK) encryption does not affect throttling.

Instead, you could migrate to a Cognitive Search service that uses a higher tier.

Note: A simple fix to most throttling issues is to throw more resources at the search service (typically replicas for query-based throttling, or partitions for indexing-based throttling). However, increasing replicas or partitions adds cost, which is why it is important to know the reason why throttling is occurring at all.

Reference:
https://docs.microsoft.com/en-us/azure/search/search-performance-analysis

Testlet 2

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.

VCEûp

Overview

A company named Wide World Importers is developing an e-commerce platform.

You are working with a solutions architect to design and implement the features of the e-commerce platform. The platform will use microservices and a serverless environment built on Azure.

Wide World Importers has a customer base that includes English, Spanish, and Portuguese speakers.

Existing Environment

Applications

Wide World Importers has an App Service plan that contains the web apps shown in the following table.

Name	Description
Product Management	An app used by employees to create and manage products. The app and the expected inputs from the employees are in English.
Inventory Tracking	An app used by employees to manage inventory when dispatching orders, receiving refunds, and receiving consignments from suppliers.

Azure Resources

You have the following resources:

- An Azure Active Directory (Azure AD) tenant
  - The tenant supports internal authentication.
  - All employees belong to a group named AllUsers.
  - Senior managers belong to a group named LeadershipTeam.
- An Azure Functions resource
  - A function app posts to Azure Event Grid when stock levels of a product change between OK, Low Stock, and Out of Stock. The function app uses the Azure Cosmos DB change feed.
- An Azure Cosmos DB account
  - The account uses the Core (SQL) API.
  - The account stores data for the Product Management app and the Inventory Tracking app.
- An Azure Storage account
  - The account contains blob containers for assets related to products.
  - The assets include images, videos, and PDFs.
- An Azure Cognitive Services resource named wwics
- A Video Indexer resource named wwivi

Requirements

Business Goals

Wide World Importers wants to leverage AI technologies to differentiate itself from its competitors. **Planned**

Changes

Wide World Importers plans to start the following projects:

- A product creation project: Help employees create accessible and multilingual product entries, while expediting product entry creation.
- A smart e-commerce project: Implement an Azure Cognitive Search solution to display products for customers to browse.

A shopping on-the-go project: Build a chatbot that can be integrated into smart speakers to support customers. **Business**

Requirements

Wide World Importers identifies the following business requirements for all the projects:

- Provide a multilingual customer experience that supports English, Spanish, and Portuguese.

Whenever possible, scale based on transaction volumes to ensure consistent performance. Minimize costs.

Governance and Security Requirements

VCEUp

Wide World Importers identifies the following governance and security requirements:

▪ Data storage and processing must occur in datacenters located in the United States. ▪
Azure Cognitive Services must be inaccessible directly from the internet.

Accessibility Requirements

Wide World Importers identifies the following accessibility requirements:

▪ All images must have relevant alt text.
▪ All videos must have transcripts that are associated to the video and included in product descriptions. ▪
Product descriptions, transcripts, and alt text must be available in English, Spanish, and Portuguese.

Product Creation Requirements

Wide World Importers identifies the following requirements for improving the Product Management app:

▪ Minimize how long it takes for employees to create products and add assets. ▪
Remove the need for manual translations.

Smart E-Commerce Requirements

Wide World Importers identifies the following requirements for the smart e-commerce project:

▪ Ensure that the Cognitive Search solution meets a Service Level Agreement (SLA) of 99.9% availability for searches and index writes.
▪ Provide users with the ability to search insight gained from the images, manuals, and videos associated with the products.
▪ Support autocompletion and autosuggestion based on all product name variants.
▪ Store all raw insight data that was generated, so the data can be processed later.
▪ Update the stock level field in the product index immediately upon changes. ▪
Update the product index hourly.

VCEUp

Shopping On-the-Go Requirements

Wide World Importers identifies the following requirements for the shopping on-the-go chatbot:

▪ Answer common questions.
▪ Support interactions in English, Spanish, and Portuguese.
▪ Replace an existing FAQ process so that all Q&A is managed from a central location.
▪ Provide all employees with the ability to edit Q&As. Only senior managers must be able to publish updates.
▪ Support purchases by providing information about relevant products to customers. Product displays must include images and warnings when stock levels are low or out of stock.

Product JSON Sample
You have the following JSON sample for a product.

VCEûp


```
{
    "sku": "b1",
    "name": {
        "en":"Bicycle",
        "es": "Bicicleta",
        "pt": "Bicicleta"
    },
    "stocklevel": "Out of Stock",
    "description": {
        "en":"Bicycle",
        "es": "Bicicleta",
        "pt": "Bicicleta"
    },
    "image":
{"uri": "https://upload.worldwideimporters.org/bicycle.jpg",
          "alttext": {
               "en":"Bicycle",
               "es": "Bicicleta",
               "pt": "Bicicleta"
        }
       },
    "createdUtc": "2020-02-14T06:08:39Z",
    "language": "en"

}
```


praw733771

QUESTION 1
DRAG DROP

You are developing the smart e-commerce project.

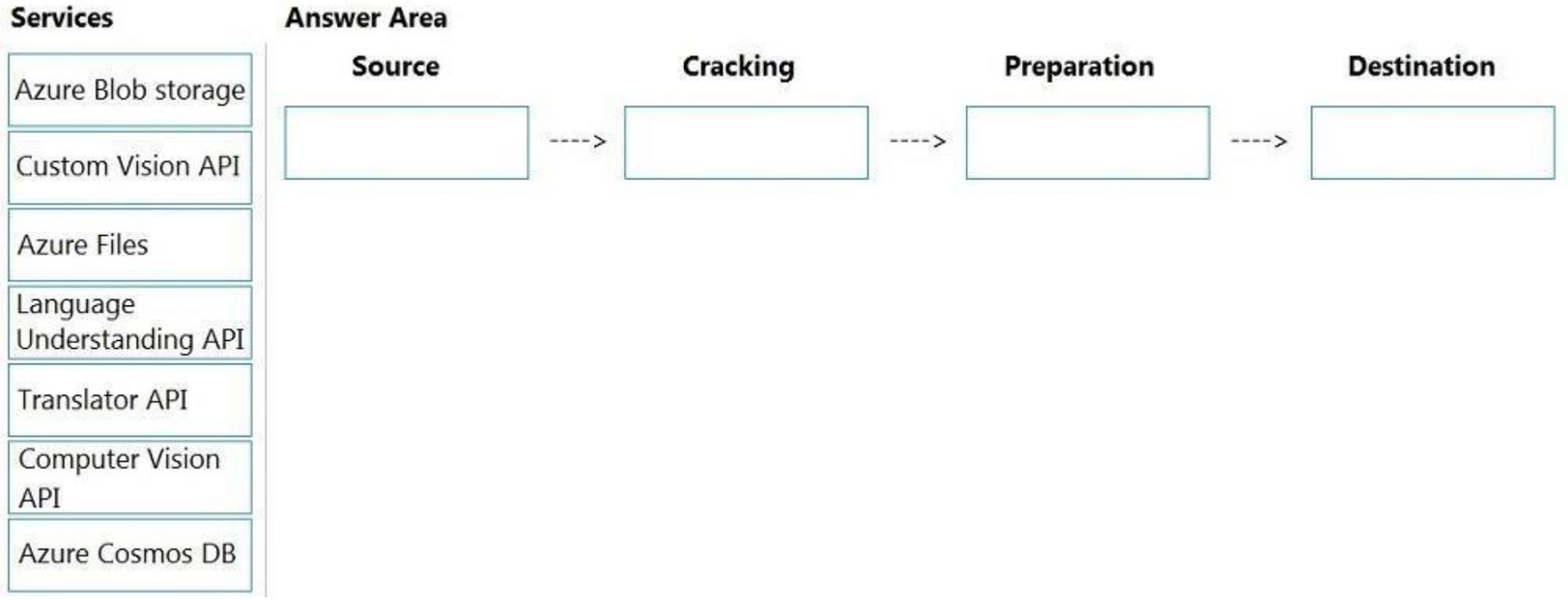
You need to design the skillset to include the contents of PDFs in searches.

How should you complete the skillset design diagram? To answer, drag the appropriate services to the correct stages. Each service 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.

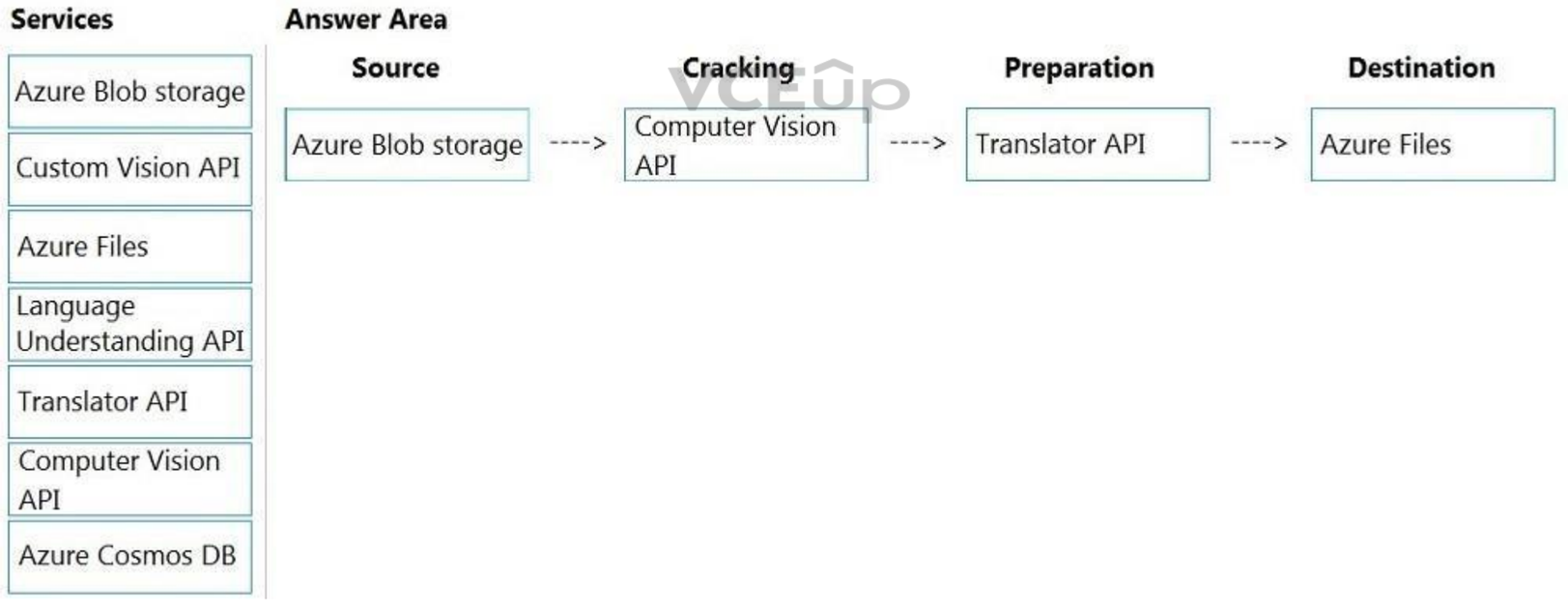
NOTE: Each correct selection is worth one point.

Select and Place:

VCEûp



Correct Answer:



Section: [none]
Explanation

Explanation/Reference:
Explanation:

Box 1: Azure Blob storage
At the start of the pipeline, you have unstructured text or non-text content (such as images, scanned documents, or JPEG files). Data must exist in an Azure data storage service that can be accessed by an indexer.

VCEUp

Box 2: Computer Vision API
Scenario: Provide users with the ability to search insight gained from the images, manuals, and videos associated with the products.

The Computer Vision Read API is Azure's latest OCR technology (learn what's new) that extracts printed text (in several languages), handwritten text (English only), digits, and currency symbols from images and multi-page PDF documents.

Box 3: Translator API
Scenario: Product descriptions, transcripts, and alt text must be available in English, Spanish, and Portuguese.

Box 4: Azure Files
Scenario: Store all raw insight data that was generated, so the data can be processed later.

Incorrect Answers:
The custom vision API from Microsoft Azure learns to recognize specific content in imagery and becomes smarter with training and time.

Reference: https://docs.microsoft.com/en-us/azure/search/cognitive-search-concept-intro https://docs.microsoft.com/en-us/azure/cognitive-services/computer-vision/overview-ocr

VCEUp

VCEûp

Question Set 1

QUESTION 1

HOTSPOT

You are developing an application that will use the Computer Vision client library. The application has the following code.

```
public async TaskAnalyzeImage(ComputerVisionClient client, string localImage)
{
        List<VisualFeatureTypes> features = new List<VisualFeatureTypes>()
                {
                        VisualFeatureTypes.Description,
                        VisualFeatureTypes.Tags,
                };
        using (Stream imageStream = File.OpenRead(localImage))
        {
                try
                {
                  ImageAnalysis results = await client.AnalyzeImageInStreamAsync(imageStream, features);

                  foreach (var caption in results.Description.Captions)
                  {
                       Console.WriteLine($"{caption.Text} with confidence {caption.Confidence}");
                  }

                  foreach (var tag in results.Tags)
                  {
                       Console.WriteLine($"{tag.Name} {tag.Confidence}");
                  }
                }
                catch (Exception ex)
                {
                        Console.WriteLine(ex.Message);
                }
        }
}
```

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
The code will perform face recognition.	○	○
The code will list tags and their associated confidence.	○	○
The code will read a file from the local file system.	○	○

Correct Answer:

VCEûp

Answer Area

Statements	Yes	No
The code will perform face recognition.	○	●
The code will list tags and their associated confidence.	●	○
The code will read a file from the local file system.	○	●

Section: [none]
Explanation

Explanation/Reference:
Explanation:

Box 1: No

Box 2: Yes
The ComputerVision.analyzeImageInStreamAsync operation extracts a rich set of visual features based on the image content.

Box 3: No
Images will be read from a stream.

Reference: https://docs.microsoft.com/en-us/java/api/com.microsoft.azure.cognitiveservices.vision.computervision.computervision.analyzeimageinstreamasync

QUESTION 2

You are developing a method that uses the Computer Vision client library. The method will perform optical character recognition (OCR) in images. The method has the following code.

```
public static async Task ReadFileUrl(ComputerVisionClient client, string urlFile)
{
        const int numberOfCharsInOperationId = 36;

        var txtHeaders = await client.ReadAsync(urlFile, language: "en");

        string opLocation = textHeaders.OperationLocation;
        string operationId = opLocation.Substring(opLocation.Length -
numberOfCharsInOperationId);

        ReadOperationResult results;

        results = await client.GetReadResultAsync(Guid.Parse(operationId));

        var textUrlFileResults = results.AnalyzeResult.ReadResults;
        foreach (ReadResult page in textUrlFileResults)
        {
                foreach (Line line in page.Lines)
                {
                        Console.WriteLine(line.Text);
                }
        }
}
```

During testing, you discover that the call to the `GetReadResultAsync` method occurs before the read operation is complete.

VCEUp

You need to prevent the `GetReadResultAsync` method from proceeding until the read operation is complete.

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

NOTE: Each correct selection is worth one point.

A. Remove the `Guid.Parse(operationId)` parameter.
B. Add code to verify the `results.Status` value.
C. Add code to verify the status of the `txtHeaders.Status` value.
D. Wrap the call to `GetReadResultAsync` within a loop that contains a delay.

Correct Answer: BD
Section: [none]
Explanation

Explanation/Reference:
Explanation:
Example code :

```
do
        {
           results = await client.GetReadResultAsync(Guid.Parse(operationId));
        }
        while ((results.Status == OperationStatusCodes.Running ||
results.Status == OperationStatusCodes.NotStarted));
```

Reference: https://github.com/Azure-Samples/cognitive-services-quickstart-code/blob/master/dotnet/ComputerVision/ComputerVisionQuickstart.cs

QUESTION 3 HOTSPOT

VCEUp

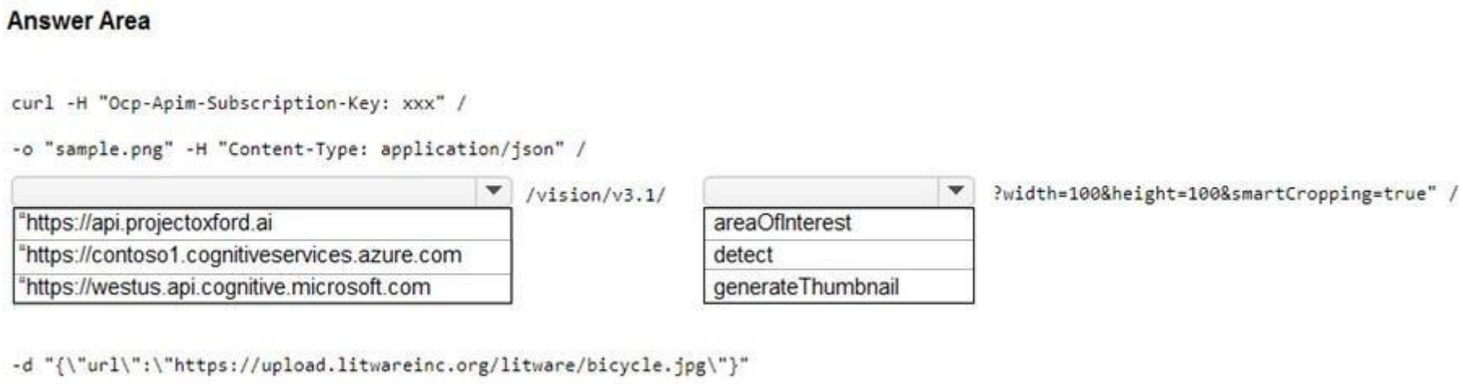
You have a Computer Vision resource named contoso1 that is hosted in the West US Azure region.

You need to use contoso1 to make a different size of a product photo by using the smart cropping feature.

How should you complete the API URL? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:



Correct Answer:

VCEûp

Answer Area

Section: [none]
Explanation

Explanation/Reference:
Reference: https://westus.dev.cognitive.microsoft.com/docs/services/computer-vision-v3-2/operations/56f91f2e778daf14a499f21b

https://docs.microsoft.com/en-us/azure/cognitive-services/computer-vision/concept-generating-thumbnails#examples

QUESTION 4
DRAG DROP

You are developing a webpage that will use the Video Indexer service to display videos of internal company meetings.

You embed the Player widget and the Cognitive Insights widget into the page.

You need to configure the widgets to meet the following requirements:

Ensure that users can search for keywords.
Display the names and faces of people in the video.
Show captions in the video in English (United States).

How should you complete the URL for each widget? To answer, drag the appropriate values to the correct targets. Each value 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:

VCEûp

Correct Answer:

Section: [none]
Explanation

Explanation/Reference:
Reference: https://docs.microsoft.com/en-us/azure/azure-video-analyzer/video-analyzer-for-media-docs/video-indexer-embed-widgets

QUESTION 5
DRAG DROP

You train a Custom Vision model to identify a company's products by using the Retail domain.

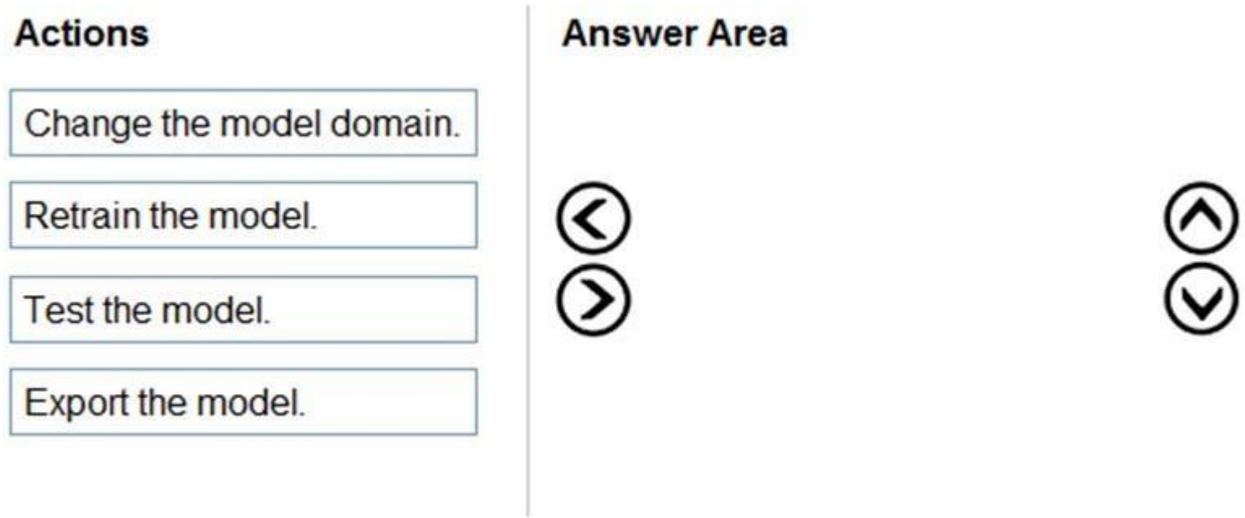
You plan to deploy the model as part of an app for Android phones.

You need to prepare the model for deployment.

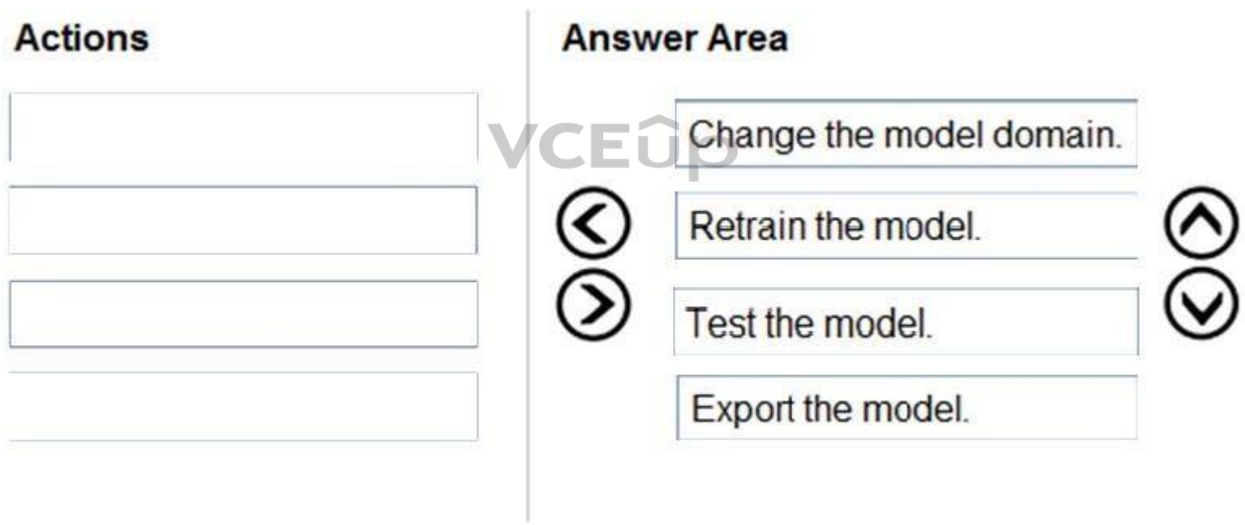
Which three actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Select and Place:

VCEûp



Correct Answer:



Section: [none]
Explanation

Explanation/Reference:
Reference: https://docs.microsoft.com/en-us/azure/cognitive-services/custom-vision-service/export-your-model

QUESTION 6 HOTSPOT

You are developing an application to recognize employees' faces by using the Face Recognition API. Images of the faces will be accessible from a URI endpoint.

The application has the following code.

VCEûp

```
static async void AddFace(string subscription_key, string personGroupId, string personId, string imageURI)
{
  var client = new HttpClient();
  client.DefaultRequestHeaders.Add("Ocp-Apim-Subscription-Key", subscription_key);
  var endpointURI = $"https://westus.api.cognitive.microsoft.com/face/v1.0/persongroups/{personGroupId}/persons/{personId}/persistedFaces";
  HttpResponseMessage response;
  var body = "{ \"url\": \"" + imageURI + "\"}";
  var content = new StringContent(body, Encoding.UTF8, "application/json");
  var response = await client.PutAsync(endpointURI, content);
}
```

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
The code will add a face image to a person object in a person group.	○	○
The code will work for a group of 10,000 people.	○	○
`AddFace` can be called multiple times to add multiple face images to a person object.	○	○

Correct Answer:

Answer Area

Statements	Yes	No
The code will add a face image to a person object in a person group.	○	○
The code will work for a group of 10,000 people.	○	○
`AddFace` can be called multiple times to add multiple face images to a person object.	○	○

Section: [none]
Explanation

VCEûp

Explanation/Reference:
Reference: https://docs.microsoft.com/en-us/azure/cognitive-services/face/face-api-how-to-topics/use-persondirectory

QUESTION 7
DRAG DROP

You have a Custom Vision resource named acvdev in a development environment.

You have a Custom Vision resource named acvprod in a production environment.

In acvdev, you build an object detection model named obj1 in a project named proj1.

You need to move obj1 to acvprod.

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:

Correct Answer:

VCEûp

Section: [none]
Explanation

Explanation/Reference:
Reference: https://docs.microsoft.com/en-us/azure/cognitive-services/custom-vision-service/copy-move-projects

QUESTION 8
DRAG DROP

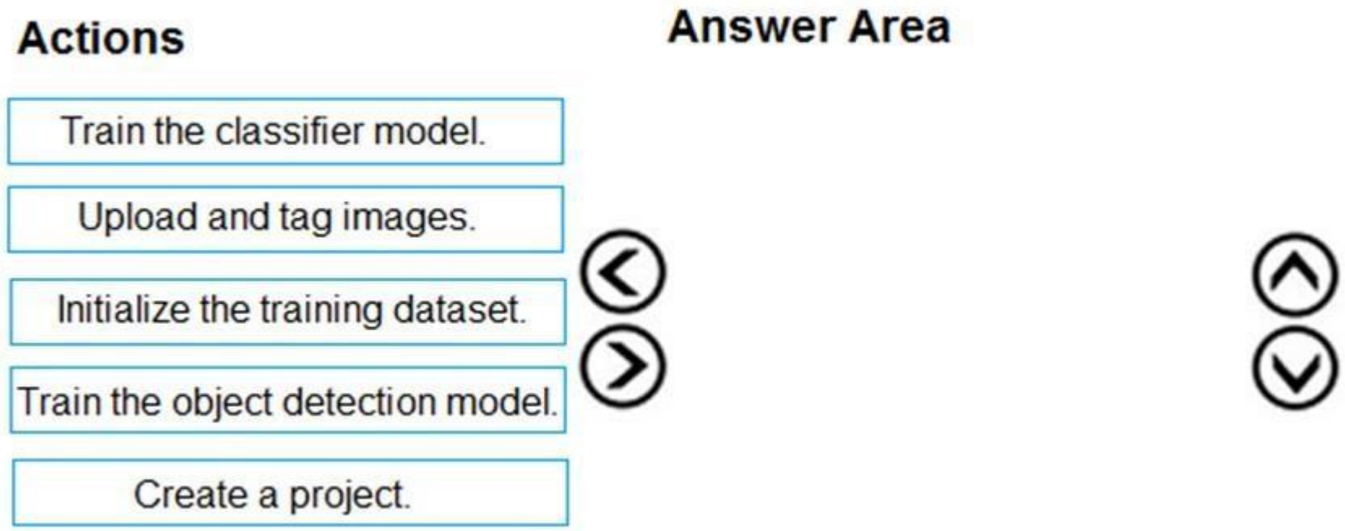
You are developing an application that will recognize faults in components produced on a factory production line. The components are specific to your business.

You need to use the Custom Vision API to help detect common faults.

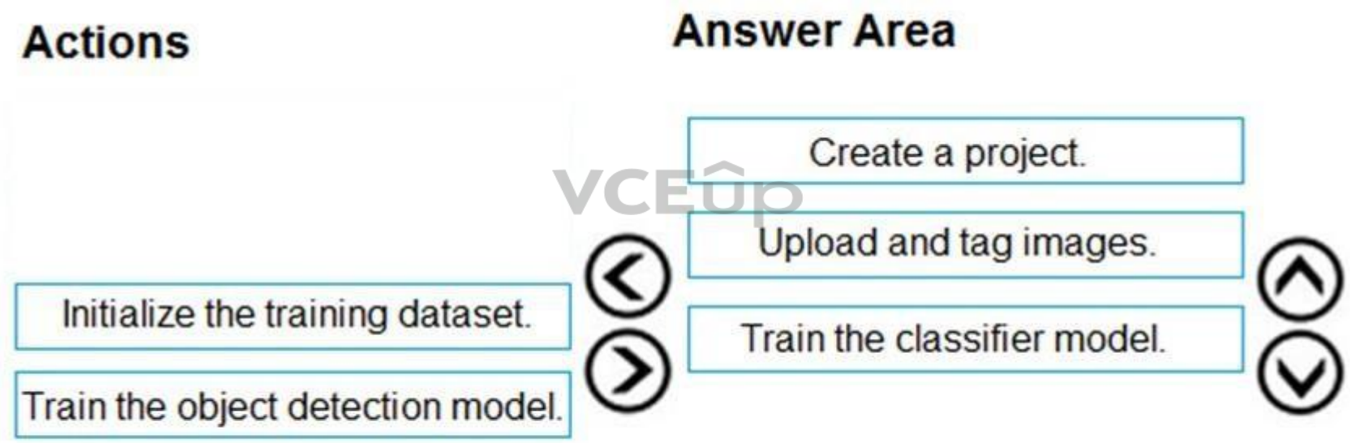
Which three actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Select and Place:

VCEûp



Correct Answer:



Section: [none]
Explanation

Explanation/Reference:
Explanation: Step 1:
Create a project Create
a new project.

Step 2: Upload and tag the images
Choose training images. Then upload and tag the images.

Step 3: Train the classifier model.
Train the classifier

Reference: https://docs.microsoft.com/en-us/azure/cognitive-services/custom-vision-service/getting-started-build-a-classifier

VCEUp

QUESTION 9 HOTSPOT

You are building a model that will be used in an iOS app.

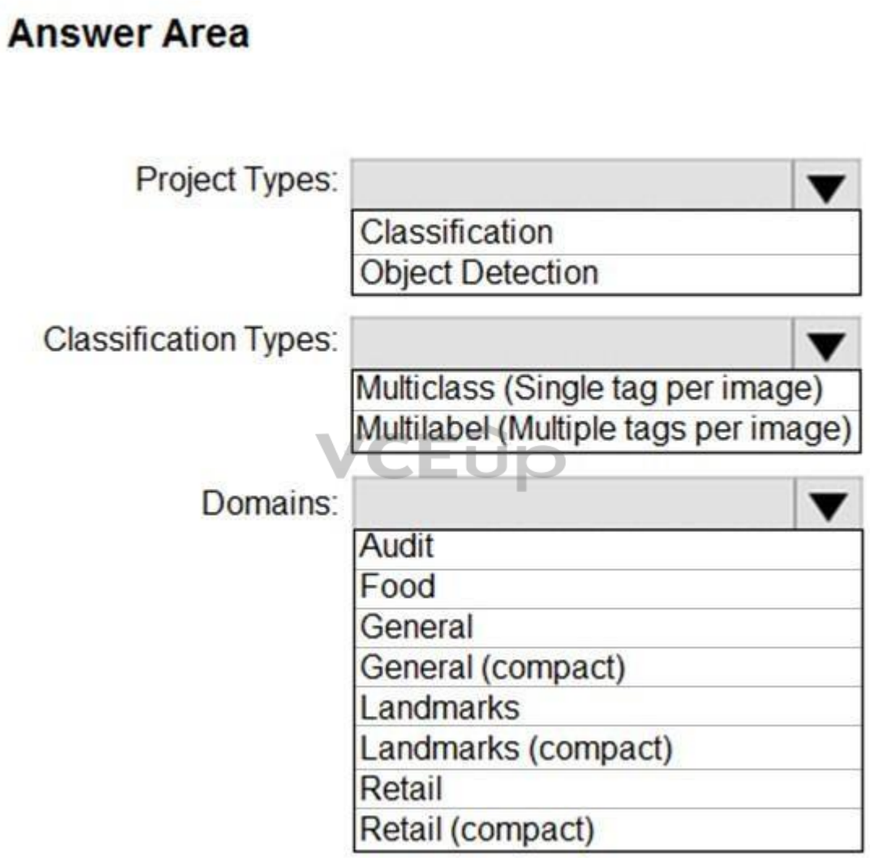
You have images of cats and dogs. Each image contains either a cat or a dog.

You need to use the Custom Vision service to detect whether the images is of a cat or a dog.

How should you configure the project in the Custom Vision portal? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

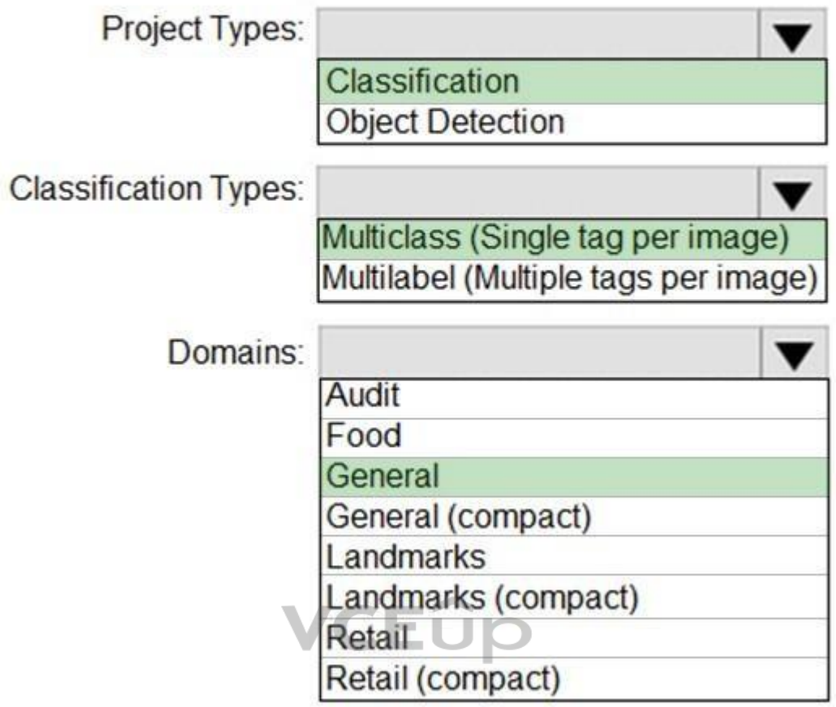
Hot Area:



Correct Answer:

VCEûp

Answer Area



VCEûp

Section: [none]
Explanation

Explanation/Reference:
Explanation: Box 1:
Classification

Incorrect Answers:
An object detection project is for detecting which objects, if any, from a set of candidates are present in an image.

Box 2: Multiclass
A multiclass classification project is for classifying images into a set of tags, or target labels. An image can be assigned to one tag only.

Incorrect Answers:
A multilabel classification project is similar, but each image can have multiple tags assigned to it.

Box 3: General
General: Optimized for a broad range of image classification tasks. If none of the other specific domains are appropriate, or if you're unsure of which domain to choose, select one of the General domains.

Reference:
https://cran.r-project.org/web/packages/AzureVision/vignettes/customvision.html

QUESTION 10
You have a Video Indexer service that is used to provide a search interface over company videos on your company's website.

You need to be able to search for videos based on who is present in the video.

VCEUp

What should you do?

A. Create a person model and associate the model to the videos.
B. Create person objects and provide face images for each object.
C. Invite the entire staff of the company to Video Indexer.
D. Edit the faces in the videos.
E. Upload names to a language model.

Correct Answer: A
Section: [none]
Explanation

Explanation/Reference:
Explanation:
Video Indexer supports multiple Person models per account. Once a model is created, you can use it by providing the model ID of a specific Person model when uploading/indexing or reindexing a video. Training a new face for a video updates the specific custom model that the video was associated with.

Note: Video Indexer supports face detection and celebrity recognition for video content. The celebrity recognition feature covers about one million faces based on commonly requested data source such as IMDB, Wikipedia, and top LinkedIn influencers. Faces that aren't recognized by the celebrity recognition feature are detected but left unnamed. Once you label a face with a name, the face and name get added to your account's Person model. Video Indexer will then recognize this face in your future videos and past videos.

Reference:
https://docs.microsoft.com/en-us/azure/media-services/video-indexer/customize-person-model-with-api

QUESTION 11 You use the Custom Vision service to
build a classifier.

After training is complete, you need to evaluate the classifier.

Which two metrics are available for review? Each correct answer presents a complete solution. (Choose two.) **NOTE:**
Each correct selection is worth one point.

A. recall
B. F-score
C. weighted accuracy
D. precision
E. area under the curve (AUC)

Correct Answer: AD
Section: [none]
Explanation

Explanation/Reference:
Explanation:
Custom Vision provides three metrics regarding the performance of your model: precision, recall, and AP.

Reference:
https://www.tallan.com/blog/2020/05/19/azure-custom-vision/

QUESTION 12
DRAG DROP

You are developing a call to the Face API. The call must find similar faces from an existing list named employeefaces. The employeefaces list contains 60,000 images.

How should you complete the body of the HTTP request? To answer, drag the appropriate values to the correct targets. Each value 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.

VCEûp

Select and Place:

Values

- "faceListId"
- "LargeFaceListId"
- "matchFace"
- "matchPerson"

Answer Area

```
{
"faceId": "18c51a87-3a69-47a8-aedc-a54745f708a1",
                    : "employeefaces",
"maxNumOfCandidatesReturned": 1,
"mode":
}
```

Correct Answer:

Values

- "faceListId"
- "LargeFaceListId"
- "matchFace"
- "matchPerson"

Answer Area

```
{
"faceId": "18c51a87-3a69-47a8-aedc-a54745f708a1",
 "LargeFaceListId" : "employeefaces",
"maxNumOfCandidatesReturned": 1,
"mode": "matchFace"
}
```

Section: [none]
Explanation

Explanation/Reference:
Explanation:

Box 1: LargeFaceListID
LargeFaceList: Add a face to a specified large face list, up to 1,000,000 faces.

Note: Given query face's faceId, to search the similar-looking faces from a faceId array, a face list or a large face list. A "faceListId" is created by FaceList - Create containing persistedFaceIds that will not expire. And a "largeFaceListId" is created by LargeFaceList - Create containing persistedFaceIds that will also not expire.

Incorrect Answers:
Not "faceListId": Add a face to a specified face list, up to 1,000 faces.

Box 2: matchFace
Find similar has two working modes, "matchPerson" and "matchFace". "matchPerson" is the default mode that it tries to find faces of the same person as possible by using internal same-person thresholds. It is useful to find a known person's other photos. Note that an empty list will be returned if no faces pass the internal thresholds. "matchFace" mode ignores same-person thresholds and returns ranked similar faces anyway, even the similarity is low. It can be used in the cases like searching celebrity-looking faces.

Reference:
https://docs.microsoft.com/en-us/rest/api/faceapi/face/findsimilar

QUESTION 13
DRAG DROP

You are developing a photo application that will find photos of a person based on a sample image by using the Face API.

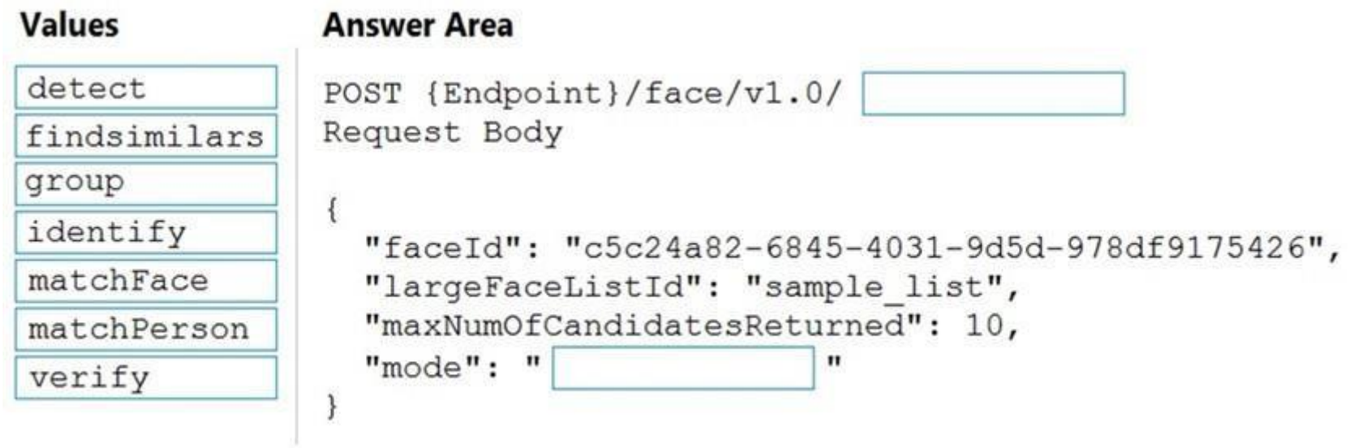
VCEûp

You need to create a `POST` request to find the photos.

How should you complete the request? To answer, drag the appropriate values to the correct targets. Each value 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: [none]
Explanation

Explanation/Reference:
Explanation:

Box 1: detect
Face - Detect With Url: Detect human faces in an image, return face rectangles, and optionally with faceIds, landmarks, and attributes.

POST {Endpoint}/face/v1.0/detect

Box 2: matchPerson

VCEûp

Find similar has two working modes, "matchPerson" and "matchFace". "matchPerson" is the default mode that it tries to find faces of the same person as possible by using internal same-person thresholds. It is useful to find a known person's other photos. Note that an empty list will be returned if no faces pass the internal thresholds. "matchFace" mode ignores same-person thresholds and returns ranked similar faces anyway, even the similarity is low. It can be used in the cases like searching celebrity-looking faces.

Reference:
https://docs.microsoft.com/en-us/rest/api/faceapi/face/detectwithurl https://docs.microsoft.com/en-

us/rest/api/faceapi/face/findsimilar

QUESTION 14
HOTSPOT

You develop a test method to verify the results retrieved from a call to the Computer Vision API. The call is used to analyze the existence of company logos in images. The call returns a collection of brands named brands.

You have the following code segment.

```
foreach (var brand in brands)
{
    if (brand.Confidence >= .75)
        Console.WriteLine($"Logo of {brand.Name} between {brand.Rectangle.X},
{brand.Rectangle.Y} and {brand.Rectangle.W}, {brand.Rectangle.H}");
}
```

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
The code will return the name of each detected brand with a confidence equal to or higher than 75 percent.	○	○
The code will return coordinates for the top-left corner of the rectangle that contains the brand logo of the displayed brands.	○	○
The code will return coordinates for the bottom-right corner of the rectangle that contains the brand logo of the displayed brands.	○	○

Correct Answer:

VCEûp

Answer Area

Statements	Yes	No
The code will return the name of each detected brand with a confidence equal to or higher than 75 percent.	○	○
The code will return coordinates for the top-left corner of the rectangle that contains the brand logo of the displayed brands.	○	○
The code will return coordinates for the bottom-right corner of the rectangle that contains the brand logo of the displayed brands.	○	○

Section: [none]
Explanation

Explanation/Reference:
Explanation:

Box 1: Yes

Box 2: Yes
Coordinates of a rectangle in the API refer to the top left corner.

Box 3: No

Reference: https://docs.microsoft.com/en-us/azure/cognitive-services/computer-vision/concept-brand-detection

QUESTION 15
HOTSPOT

You develop an application that uses the Face API.

You need to add multiple images to a person group.

How should you complete the code? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

VCEûp

Answer Area

```
Parallel.For(0, PersonCount, async i =>
{
    Guid personId = persons[i].PersonId;
    string personImageDir = $"/path/to/person/{i}/images";
    foreach (string imagePath in Directory.GetFiles(personImageDir, "*.jpg"))
    {
        using (                t = File.OpenRead(imagePath))
        {
          await faceClient.PersonGroupPerson.
(personGroupId, personId, t);
        }
    }
});
```

File
Stream
Uri
Url

AddFaceFromStreamAsync
AddFaceFromUrlAsync
CreateAsync
GetAsync

VCEûp

Correct Answer:

VCEup

Answer Area

```
Parallel.For(0, PersonCount, async i =>
{
    Guid personId = persons[i].PersonId;
    string personImageDir = $"/path/to/person/{i}/images";
    foreach (string imagePath in Directory.GetFiles(personImageDir, "*.jpg"))
    {
        using ( [ ▼ ] t = File.OpenRead(imagePath))
                File
                Stream
                Uri
                Url

        {
          await faceClient.PersonGroupPerson. [ ▼ ]
                                                AddFaceFromStreamAsync
                                                AddFaceFromUrlAsync
                                                CreateAsync
                                                GetAsync
(personGroupId, personId, t);
        }
    }
});
```

Section: [none]
Explanation

Explanation/Reference:
Explanation:

Box 1: Stream
The File.OpenRead(String) method opens an existing file for reading.

Example: Open the stream and read it back.
using (FileStream fs = File.OpenRead(path))

Box 2: CreateAsync
Create the persons for the PersonGroup. Persons are created concurrently.
Example:

await faceClient.PersonGroupPerson.CreateAsync(personGroupId, personName);

Reference:
https://docs.microsoft.com/en-us/azure/cognitive-services/face/face-api-how-to-topics/how-to-add-faces
Testlet 2

VCEûp

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.

Overview

A company named Wide World Importers is developing an e-commerce platform.

You are working with a solutions architect to design and implement the features of the e-commerce platform. The platform will use microservices and a serverless environment built on Azure.

Wide World Importers has a customer base that includes English, Spanish, and Portuguese speakers.

Existing Environment

Applications

Wide World Importers has an App Service plan that contains the web apps shown in the following table.

Name	Description
Product Management	An app used by employees to create and manage products. The app and the expected inputs from the employees are in English.
Inventory Tracking	An app used by employees to manage inventory when dispatching orders, receiving refunds, and receiving consignments from suppliers.

VCEûp

Azure Resources

You have the following resources:

- An Azure Active Directory (Azure AD) tenant
  - The tenant supports internal authentication.
  - All employees belong to a group named AllUsers.
  - Senior managers belong to a group named LeadershipTeam.
- An Azure Functions resource
  - A function app posts to Azure Event Grid when stock levels of a product change between OK, Low Stock, and Out of Stock. The function app uses the Azure Cosmos DB change feed.
- An Azure Cosmos DB account
  - The account uses the Core (SQL) API.
  - The account stores data for the Product Management app and the Inventory Tracking app.
- An Azure Storage account
  - The account contains blob containers for assets related to products.
  - The assets include images, videos, and PDFs.
- An Azure Cognitive Services resource named wwics
- A Video Indexer resource named wwivi

Requirements

Business Goals
Wide World Importers wants to leverage AI technologies to differentiate itself from its competitors. **Planned**

Changes

Wide World Importers plans to start the following projects:

VCEUp

▪ A product creation project: Help employees create accessible and multilingual product entries, while expediting product entry creation.
▪ A smart e-commerce project: Implement an Azure Cognitive Search solution to display products for customers to browse. ▪
A shopping on-the-go project: Build a chatbot that can be integrated into smart speakers to support customers. **Business Requirements**

Wide World Importers identifies the following business requirements for all the projects:

▪ Provide a multilingual customer experience that supports English, Spanish, and Portuguese. ▪
Whenever possible, scale based on transaction volumes to ensure consistent performance. ▪ Minimize costs.

Governance and Security Requirements

Wide World Importers identifies the following governance and security requirements:

▪ Data storage and processing must occur in datacenters located in the United States. ▪
Azure Cognitive Services must be inaccessible directly from the internet.

Accessibility Requirements

Wide World Importers identifies the following accessibility requirements:

▪ All images must have relevant alt text.
▪ All videos must have transcripts that are associated to the video and included in product descriptions. ▪
Product descriptions, transcripts, and alt text must be available in English, Spanish, and Portuguese.

Product Creation Requirements

Wide World Importers identifies the following requirements for improving the Product Management app:

▪ Minimize how long it takes for employees to create products and add assets. ▪
Remove the need for manual translations.

Smart E-Commerce Requirements

Wide World Importers identifies the following requirements for the smart e-commerce project:

▪ Ensure that the Cognitive Search solution meets a Service Level Agreement (SLA) of 99.9% availability for searches and index writes.
▪ Provide users with the ability to search insight gained from the images, manuals, and videos associated with the products.
▪ Support autocompletion and autosuggestion based on all product name variants.
▪ Store all raw insight data that was generated, so the data can be processed later.
▪ Update the stock level field in the product index immediately upon changes. ▪
Update the product index hourly.

Shopping On-the-Go Requirements

Wide World Importers identifies the following requirements for the shopping on-the-go chatbot:

▪ Answer common questions.
▪ Support interactions in English, Spanish, and Portuguese.
▪ Replace an existing FAQ process so that all Q&A is managed from a central location.
▪ Provide all employees with the ability to edit Q&As. Only senior managers must be able to publish updates.
▪ Support purchases by providing information about relevant products to customers. Product displays must include images and warnings when stock levels are low or out of stock.

Product JSON Sample
You have the following JSON sample for a product.

VCEûp


```
{
    "sku": "b1",
    "name": {
        "en":"Bicycle",
        "es": "Bicicleta",
        "pt": "Bicicleta"
    },
    "stocklevel": "Out of Stock",
    "description": {
        "en":"Bicycle",
        "es": "Bicicleta",
        "pt": "Bicicleta"
    },
    "image":
{"uri": "https://upload.worldwideimporters.org/bicycle.jpg",
           "alttext": {
                "en":"Bicycle",
                "es": "Bicicleta",
                "pt": "Bicicleta"
        }
       },
    "createdUtc": "2020-02-14T06:08:39Z",
    "language": "en"
}
```


QUESTION 1
DRAG DROP

You are planning the product creation project.

You need to recommend a process for analyzing videos.

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. (Choose four.) **Select and Place:**

IT Exam Dumps – Learn Anything | VCEup.com

VCEûp

Actions	Answer Area
Index the video by using the Video Indexer API.	
Upload the video to blob storage.	
Analyze the video by using the Computer Vision API.	
Extract the transcript from Microsoft Stream.	
Send the transcript to the Language Understanding API as an utterance.	
Extract the transcript from the Video Indexer API.	
Translate the transcript by using the Translator API.	
Upload the video to file storage.	

VCEûp

Correct Answer:

VCEûp

Actions	Answer Area
Index the video by using the Video Indexer API.	Upload the video to blob storage.
Upload the video to blob storage.	Index the video by using the Video Indexer API.
Analyze the video by using the Computer Vision API.	Extract the transcript from the Video Indexer API.
Extract the transcript from Microsoft Stream.	Translate the transcript by using the Translator API.
Send the transcript to the Language Understanding API as an utterance.	
Extract the transcript from the Video Indexer API.	
Translate the transcript by using the Translator API.	
Upload the video to file storage.	

VCEûp

Section: [none]
Explanation

Explanation/Reference:
Explanation:

Scenario: All videos must have transcripts that are associated to the video and included in product descriptions. Product descriptions, transcripts, and alt text must be available in English, Spanish, and Portuguese.

Step 1: Upload the video to blob storage
Given a video or audio file, the file is first dropped into a Blob Storage. T

Step 2: Index the video by using the Video Indexer API.
When a video is indexed, Video Indexer produces the JSON content that contains details of the specified video insights. The insights include: transcripts, OCRs, faces, topics, blocks, etc.

Step 3: Extract the transcript from the Video Indexer API.

Step 4: Translate the transcript by using the Translator API.

Reference: https://azure.microsoft.com/en-us/blog/get-video-insights-in-even-more-languages/

https://docs.microsoft.com/en-us/azure/media-services/video-indexer/video-indexer-output-json-v2

QUESTION 2
HOTSPOT

You need to develop code to upload images for the product creation project. The solution must meet the accessibility requirements.

VCEûp

How should you complete the code? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

```
public static async Task<string> SuggestAltText(ComputerVisionClient client, [ ▼ ] image)
{
    List<VisualFeatureTypes?> features = new List<VisualFeatureTypes?>()
    {
        [ ▼ ]
    };
ImageAnalysis results = await client.AnalyzeImageAsync(image, features);
[ ▼ ]
if(c.Confidence>0.5) return(c.Text);
}
```

Dictionary
stream
string

VisualFeatureTypes.Description
VisualFeatureTypes.ImageType
VisualFeatureTypes.Objects
VisualFeatureTypes.Tags

var c = results.Brands.DetectedBrands[0]
var c = results.Description.Captions[0]
var c = results.Metadata[0]
var c = results.Objects[0]

VCEûp

Correct Answer:

VCEûp

Answer Area

```
public static async Task<string> SuggestAltText(ComputerVisionClient client, [Dictionary | stream | string] image)
{
    List<VisualFeatureTypes?> features = new List<VisualFeatureTypes?>()
    {
        [VisualFeatureTypes.Description | VisualFeatureTypes.ImageType | VisualFeatureTypes.Objects | VisualFeatureTypes.Tags]
    };
ImageAnalysis results = await client.AnalyzeImageAsync(image, features);
[var c = results.Brands.DetectedBrands[0] | var c = results.Description.Captions[0] | var c = results.Metadata[0] | var c = results.Objects[0]]
if(c.Confidence>0.5) return(c.Text);
}
```

Section: [none]
Explanation

Explanation/Reference:
Reference: https://github.com/Azure-Samples/cognitive-services-dotnet-sdk-samples/blob/master/documentation-samples/quickstarts/ComputerVision/Program.cs
Question Set 1

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 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 build a language model by using a Language Understanding service. The language model is used to search for information on a contact list by using an intent named `FindContact`.

A conversational expert provides you with the following list of phrases to use for training.

Find contacts in London.
Who do I know in Seattle?
Search for contacts in Ukraine.

You need to implement the phrase list in Language Understanding.

Solution: You create a new pattern in the `FindContact` intent.

Does this meet the goal?

A. Yes

VCEUp

B. No

Correct Answer: B
Section: [none]
Explanation

Explanation/Reference:
Explanation:
Instead use a new intent for location.

Note: An intent represents a task or action the user wants to perform. It is a purpose or goal expressed in a user's utterance.

Define a set of intents that corresponds to actions users want to take in your application.

Reference: https://docs.microsoft.com/en-us/azure/cognitive-services/luis/luis-concept-intent

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 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 develop an application to identify species of flowers by training a Custom Vision model.

You receive images of new flower species.

You need to add the new images to the classifier.

Solution: You add the new images, and then use the Smart Labeler tool.

Does this meet the goal?

VCEUp

A. Yes
B. No

Correct Answer: B
Section: [none]
Explanation

Explanation/Reference:
Explanation:
The model need to be extended and retrained.

Note: Smart Labeler to generate suggested tags for images. This lets you label a large number of images more quickly when training a Custom Vision model.

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 develop an application to identify species of flowers by training a Custom Vision model.

You receive images of new flower species.

You need to add the new images to the classifier.

Solution: You add the new images and labels to the existing model. You retrain the model, and then publish the model.

Does this meet the goal?

VCEûp

A. Yes
B. No

Correct Answer: A
Section: [none]
Explanation

Explanation/Reference:
Explanation:
The model needs to be extended and retrained.

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 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 develop an application to identify species of flowers by training a Custom Vision model.

You receive images of new flower species.

You need to add the new images to the classifier.

Solution: You create a new model, and then upload the new images and labels.

Does this meet the goal?

A. Yes
B. No

Correct Answer: B
Section: [none]
Explanation

Explanation/Reference:
Explanation:
The model needs to be extended and retrained.

QUESTION 5 HOTSPOT

You are developing a service that records lectures given in English (United Kingdom).

You have a method named `AppendToTranscriptFile` that takes translated text and a language identifier.

You need to develop code that will provide transcripts of the lectures to attendees in their respective language. The supported languages are English, French, Spanish, and German.

How should you complete the code? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

VCEup

Answer Area

```
static async Task TranslateSpeechAsync()
{
    var config =SpeechTranslationConfig.FromSubscription("69cad5cc-0ab3-4704-bdff-afbf4aa07d85", "uksouth");

    var lang = new List<string>
                                  {"en-GB"}
                                  {"fr", "de", "es"}
                                  {"French", "Spanish", "German"}
                                  {languages}

    config.SpeechRecognitionLanguage = "en-GB";
    lang.ForEach(config.AddTargetLanguage);

    using var audioConfig = AudioConfig.FromDefaultMicrophoneInput();
    using var recognizer = new                    (config, audioConfig);
                                  IntentRecognizer
                                  SpeakerRecognizer
                                  SpeechSynthesizer
                                  TranslationRecognizer

    var result = awit recognizer.RecognizeOnceAsync();
    if (result.Reason == ResultReason.TranslatedSpeech)
```

Correct Answer:

Answer Area

```
static async Task TranslateSpeechAsync()
{
    var config =SpeechTranslationConfig.FromSubscription("69cad5cc-0ab3-4704-bdff-afbf4aa07d85", "uksouth");

    var lang = new List<string>
                                  {"en-GB"}
                                  {"fr", "de", "es"}
                                  {"French", "Spanish", "German"}
                                  {languages}

    config.SpeechRecognitionLanguage = "en-GB";
    lang.ForEach(config.AddTargetLanguage);

    using var audioConfig = AudioConfig.FromDefaultMicrophoneInput();
    using var recognizer = new                    (config, audioConfig);
                                  IntentRecognizer
                                  SpeakerRecognizer
                                  SpeechSynthesizer
                                  TranslationRecognizer

    var result = awit recognizer.RecognizeOnceAsync();
    if (result.Reason == ResultReason.TranslatedSpeech)
```

VCEUp

Section: [none]
Explanation

Explanation/Reference:
Explanation:

Box 1: {"fr", "de", "es"}
A common task of speech translation is to specify target translation languages, at least one is required but multiples are supported. The following code snippet sets both French and German as translation language targets.

```
static async Task TranslateSpeechAsync()
{
    var translationConfig =
        SpeechTranslationConfig.FromSubscription(SPEECH__SUBSCRIPTION__KEY, SPEECH__SERVICE__REGION);

translationConfig.SpeechRecognitionLanguage = "it-IT";

    // Translate to languages. See, https://aka.ms/speech/sttt-languages
translationConfig.AddTargetLanguage("fr");
translationConfig.AddTargetLanguage("de");
}
```

Box 2: TranslationRecognizer
After you've created a SpeechTranslationConfig, the next step is to initialize a TranslationRecognizer.

Example code:

```
static async Task TranslateSpeechAsync()
{
    var translationConfig =
        SpeechTranslationConfig.FromSubscription(SPEECH__SUBSCRIPTION__KEY, SPEECH__SERVICE__REGION);

    var fromLanguage = "en-US";
    var toLanguages = new List<string> { "it", "fr", "de" };

    translationConfig.SpeechRecognitionLanguage = fromLanguage;
toLanguages.ForEach(translationConfig.AddTargetLanguage);

    using var recognizer = new TranslationRecognizer(translationConfig);
}
```

QUESTION 6
DRAG DROP

You train a Custom Vision model used in a mobile app.

You receive 1,000 new images that do not have any associated data.

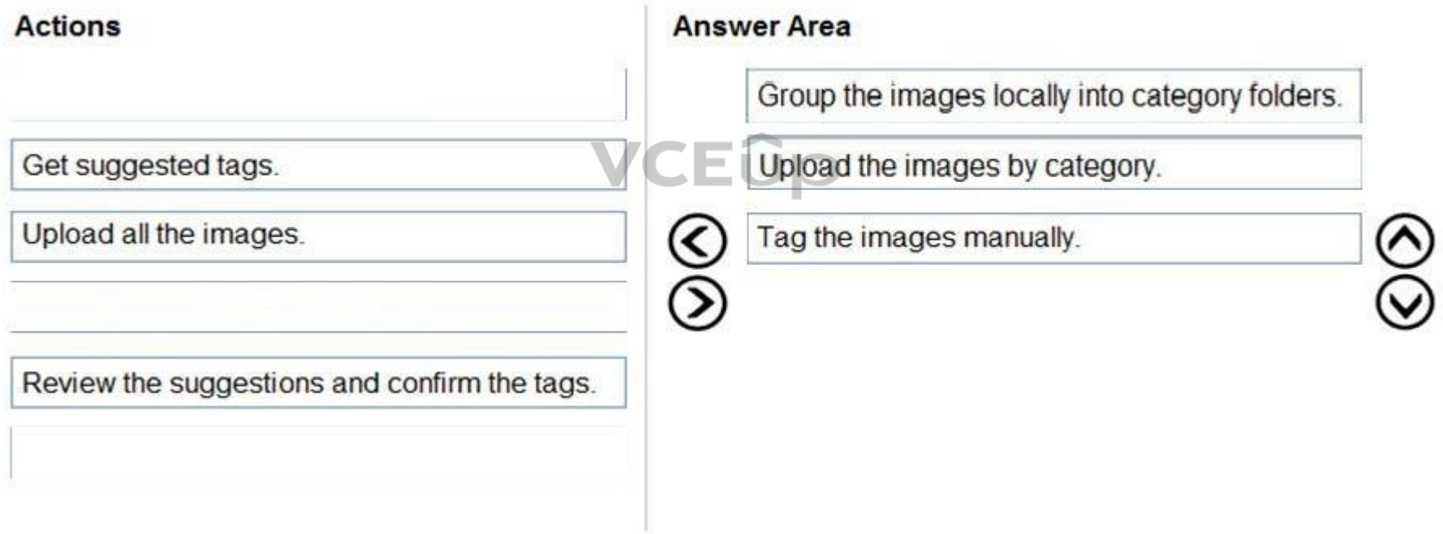
You need to use the images to retrain the model. The solution must minimize how long it takes to retrain the model.

Which three actions should you perform in the Custom Vision portal? 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:

VCEûp

Correct Answer:



VCEûp

Section: [none]
Explanation

Explanation/Reference:
Reference: https://docs.microsoft.com/en-us/azure/cognitive-services/custom-vision-service/getting-started-build-a-classifier

QUESTION 7
You are building a Language Understanding model for an e-commerce chatbot. Users can speak or type their billing address when prompted by the chatbot.

You need to construct an entity to capture billing addresses.

Which entity type should you use?

A. machine learned

VCEûp

B. Regex
C. list
D. Pattern.any

Correct Answer: B
Section: [none]
Explanation

Explanation/Reference:
Reference: https://docs.microsoft.com/en-us/azure/cognitive-services/luis/luis-concept-entity-types

QUESTION 8 You are building an Azure Weblob that will create knowledge bases from an array of URLs.

You instantiate a `QnAMakerClient` object that has the relevant API keys and assign the object to a variable named `client`.

You need to develop a method to create the knowledge bases.

Which two actions should you include in the method? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

A. Create a list of `FileDTO` objects that represents data from the WebJob.
B. Call the `client.Knowledgebase.CreateAsync` method.
C. Create a list of `QnADTO` objects that represents data from the WebJob.
D. Create a `CreateKbDTO` object.

Correct Answer: AC
Section: [none]
Explanation

Explanation/Reference:
Reference: https://docs.microsoft.com/en-us/rest/api/cognitiveservices-qnamaker/qnamaker4.0/knowledgebase/create

QUESTION 9 HOTSPOT

You are developing an application that includes language translation.

The application will translate text retrieved by using a function named `getTextToBeTranslated`. The text can be in one of many languages. The content of the text must remain within the Americas Azure geography.

You need to develop code to translate the text to a single language.

How should you complete the code? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

VCEûp

Answer Area

```
. . .
var endpoint = [ &quot;https://api.cognitive.microsofttranslator.com/translate&quot; | &quot;https://api.cognitive.microsofttranslator.com/transliterate&quot; | &quot;https://api-apc.cognitive.microsofttranslator.com/detect&quot; | &quot;https://api-nam.cognitive.microsofttranslator.com/detect&quot; | &quot;https://api-nam.cognitive.microsofttranslator.com/translate&quot; ];
var apiKey = "FF956C68B83B21B38691ABD200A4C606";
var text = getTextToBeTranslated();
var body = '[{"Text":"' + text + '"}]';
var client = new HttpClient();
client.DefaultRequestHeaders.Add("Ocp-Apim-Subscription-Key", apiKey);
[ var uri = endpoint + &quot;?from=en&quot; | var uri = endpoint + &quot;?suggestedFrom=en&quot; | var uri = endpoint + &quot;?to=en&quot; ];
HttpResponseMessage response;
var content = new StringContent(body, Encoding.UTF8, "application/json");
var response = await client.PutAsync(uri, content);
. . .
```

Correct Answer:

VCEûp

Answer Area

```
. . .
var endpoint = [ &quot;https://api.cognitive.microsofttranslator.com/translate&quot; | &quot;https://api.cognitive.microsofttranslator.com/transliterate&quot; | &quot;https://api-apc.cognitive.microsofttranslator.com/detect&quot; | &quot;https://api-nam.cognitive.microsofttranslator.com/detect&quot; | &quot;https://api-nam.cognitive.microsofttranslator.com/translate&quot; ];
var apiKey = "FF956C68B83B21B38691ABD200A4C606";
var text = getTextToBeTranslated();
var body = '[{"Text":"' + text + '"}]';
var client = new HttpClient();
client.DefaultRequestHeaders.Add("Ocp-Apim-Subscription-Key", apiKey);
[ var uri = endpoint + &quot;?from=en&quot; | var uri = endpoint + &quot;?suggestedFrom=en&quot; | var uri = endpoint + &quot;?to=en&quot; ];
HttpResponseMessage response;
var content = new StringContent(body, Encoding.UTF8, "application/json");
var response = await client.PutAsync(uri, content);
. . .
```

Section: [none]
Explanation

Explanation/Reference:

QUESTION 10 You are building a natural language model.

You need to enable active learning.

What should you do?

A. Add `show-all-intents=true` to the prediction endpoint query.
B. Enable speech priming.
C. Add `log=true` to the prediction endpoint query.
D. Enable sentiment analysis.

Correct Answer: C
Section: [none]
Explanation
Explanation/Reference:

VCEUp

Reference: https://docs.microsoft.com/en-us/azure/cognitive-services/luis/luis-how-to-review-endpoint-utterances#log-user-queries-to-enable-active-learning

QUESTION 11
HOTSPOT

You run the following command.

```
docker run --rm -it -p 5000:5000 --memory 10g --cpus 2 \
mcr.microsoft.com/azure-cognitive-services/textanalytics/sentiment\
Eula=accept \
Billing={ENDPOINT_URI} \
ApiKey={API_KEY}
```

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

Hot Area:

Answer Area

Statements	Yes	No
Going to http://localhost:5000/status will query the Azure endpoint to verify whether the API key used to start the container is valid.	○	○
The container logging provider will write log data.	○	○
Going to http://localhost:5000/swagger will provide the details to access the documentation for the available endpoints.	○	○

Correct Answer:

Answer Area

Statements	Yes	No
Going to http://localhost:5000/status will query the Azure endpoint to verify whether the API key used to start the container is valid.	○	○
The container logging provider will write log data.	○	○
Going to http://localhost:5000/swagger will provide the details to access the documentation for the available endpoints.	○	○

VCEUp

Section: [none]
Explanation

Explanation/Reference: Explanation: Box 1: Yes http://localhost:5000/status : Also requested with GET, this verifies if the api-key used to start the container is valid without causing an endpoint query.

Box 2: Yes
The command saves container and LUIS logs to output mount at C:\output, located on container host

Box 3: Yes
http://localhost:5000/swagger : The container provides a full set of documentation for the endpoints and a Try it out feature. With this feature, you can enter your settings into a web-based HTML form and make the query without having to write any code. After the query returns, an example CURL command is provided to demonstrate the HTTP headers and body format that's required.

Reference:
https://docs.microsoft.com/en-us/azure/cognitive-services/luis/luis-container-howto

QUESTION 12 You are building a Language Understanding model for an e-commerce platform.

You need to construct an entity to capture billing addresses.

Which entity type should you use for the billing address?

A. machine learned
B. Regex
C. geographyV2
D. Pattern.any
E. list

Correct Answer: B
Section: [none]
Explanation

Explanation/Reference:
Explanation:
A regular expression entity extracts an entity based on a regular expression pattern you provide. It ignores case and ignores cultural variant. Regular expression is best for structured text or a predefined sequence of alphanumeric values that are expected in a certain format. For example:

Entity	Regular expression	Example
Flight Number	flight [A-Z]{2} [0-9]{4}	flight AS 1234
Credit Card Number	[0-9]{16}	5478789865437632

Incorrect Answers:
C: The prebuilt geographyV2 entity detects places. Because this entity is already trained, you do not need to add example utterances containing GeographyV2 to the application intents. GeographyV2 entity is supported in English culture.

The geographical locations have subtypes:

VCEûp

Subtype	Purpose
`poi`	point of interest
`city`	name of city
`countryRegion`	name of country or region
`continent`	name of continent
`state`	name of state or province

prepaway
[raw738771]

D: Pattern.any is a variable-length placeholder used only in a pattern's template utterance to mark where the entity begins and ends.

E: A list entity represents a fixed, closed set of related words along with their synonyms. You can use list entities to recognize multiple synonyms or variations and extract a normalized output for them. Use the recommend option to see suggestions for new words based on the current list.

Reference:
https://docs.microsoft.com/en-us/azure/cognitive-services/luis/luis-concept-entity-types

QUESTION 13 You need to upload speech samples to a
Speech Studio project.

VCEûp

How should you upload the samples?

A. Combine the speech samples into a single audio file in the .wma format and upload the file.
B. Upload a .zip file that contains a collection of audio files in the .wav format and a corresponding text transcript file.
C. Upload individual audio files in the FLAC format and manually upload a corresponding transcript in Microsoft Word format.
D. Upload individual audio files in the .wma format.

Correct Answer: B
Section: [none]
Explanation

Explanation/Reference:
Explanation:
To upload your data, navigate to the Speech Studio . From the portal, click Upload data to launch the wizard and create your first dataset. You'll be asked to select a speech data type for your dataset, before allowing you to upload your data.
The default audio streaming format is WAV

Use this table to ensure that your audio files are formatted correctly for use with Custom Speech:

VCEûp

Property	Value
File format	RIFF (WAV)
Sample rate	8,000 Hz or 16,000 Hz
Channels	1 (mono)
Maximum length per audio	2 hours
Sample format	PCM, 16-bit
Archive format	.zip
Maximum archive size	2 GB

prepaway [raw73377]

Reference: https://docs.microsoft.com/en-us/azure/cognitive-services/speech-service/how-to-custom-speech-test-and-train

QUESTION 14 You are developing a method for an application that uses the Translator API.

VCEûp

The method will receive the content of a webpage, and then translate the content into Greek (el). The result will also contain a transliteration that uses the Roman alphabet.

You need to create the URI for the call to the Translator API.

You have the following URI.

```
https://api.cognitive.microsofttranslator.com/translate?api-version=3.0
```

Which three additional query parameters should you include in the URI? Each correct answer presents part of the solution. (Choose three.) **NOTE:**

Each correct selection is worth one point.

A. `toScript=Cyrl`
B. `from=el`
C. `textType=html`
D. `to=el`
E. `textType=plain`
F. `toScript=Latn`

Correct Answer: CDF
Section: [none]
Explanation

Explanation/Reference:
Explanation:
C: textType is an optional parameter. It defines whether the text being translated is plain text or HTML text (used for web pages).

D: to is a required parameter. It specifies the language of the output text. The target language must be one of the supported languages included in the translation scope.

VCEUp

F: toScript is an optional parameter. It specifies the script of the translated text.
We use Latin (Roman alphabet) script.

Reference:
https://docs.microsoft.com/en-us/azure/cognitive-services/translator/reference/v3-0-translate

QUESTION 15 You have a chatbot that was built by using the Microsoft
Bot Framework.

You need to debug the chatbot endpoint remotely.

Which two tools should you install on a local computer? Each correct answer presents part of the solution. (Choose two.) **NOTE:**

Each correct selection is worth one point.

A. Fiddler
B. Bot Framework Composer
C. Bot Framework Emulator
D. Bot Framework CLI
E. ngrok
F. nginx

Correct Answer: CE
Section: [none]
Explanation

Explanation/Reference:
Explanation:
Bot Framework Emulator is a desktop application that allows bot developers to test and debug bots, either locally or remotely.
ngrok is a cross-platform application that "allows you to expose a web server running on your local machine to the internet." Essentially, what we'll be doing is using ngrok to forward messages from external channels on the web directly to our local machine to allow debugging, as opposed to the standard messaging endpoint configured in the Azure portal.

Reference:
https://docs.microsoft.com/en-us/azure/bot-service/bot-service-debug-emulator

QUESTION 16
DRAG DROP

You are building a retail chatbot that will use a QnA Maker service.

You upload an internal support document to train the model. The document contains the following question: "What is your warranty period?"

Users report that the chatbot returns the default QnA Maker answer when they ask the following question: "How long is the warranty coverage?"

The chatbot returns the correct answer when the users ask the following question: 'What is your warranty period?"

Both questions should return the same answer.

You need to increase the accuracy of the chatbot responses.

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. (Choose three.) **Select**

and Place:

VCEûp

Actions

Add a new question and answer (QnA) pair.
Retrain the model.
Add additional questions to the document.
Republish the model.
Add alternative phrasing to the question and answer (QnA) pair.

Answer Area

Correct Answer:

Actions

Add a new question and answer (QnA) pair.
Retrain the model.
Add additional questions to the document.
Republish the model.
Add alternative phrasing to the question and answer (QnA) pair.

Answer Area

Add alternative phrasing to the question and answer (QnA) pair.
Retrain the model.
Republish the model.

VCEûp

Section: [none]
Explanation

Explanation/Reference:
Explanation:

Step 1: Add alternative phrasing to the question and answer (QnA) pair.
Add alternate questions to an existing QnA pair to improve the likelihood of a match to a user query.

Step 2: Retrain the model.
Periodically select Save and train after making edits to avoid losing changes.

VCEûp

Step 3: Republish the model

Note: A knowledge base consists of question and answer (QnA) pairs. Each pair has one answer and a pair contains all the information associated with that answer.

Reference:
https://docs.microsoft.com/en-us/azure/cognitive-services/qnamaker/how-to/edit-knowledge-base

QUESTION 17
You need to measure the public perception of your brand on social media by using natural language processing.

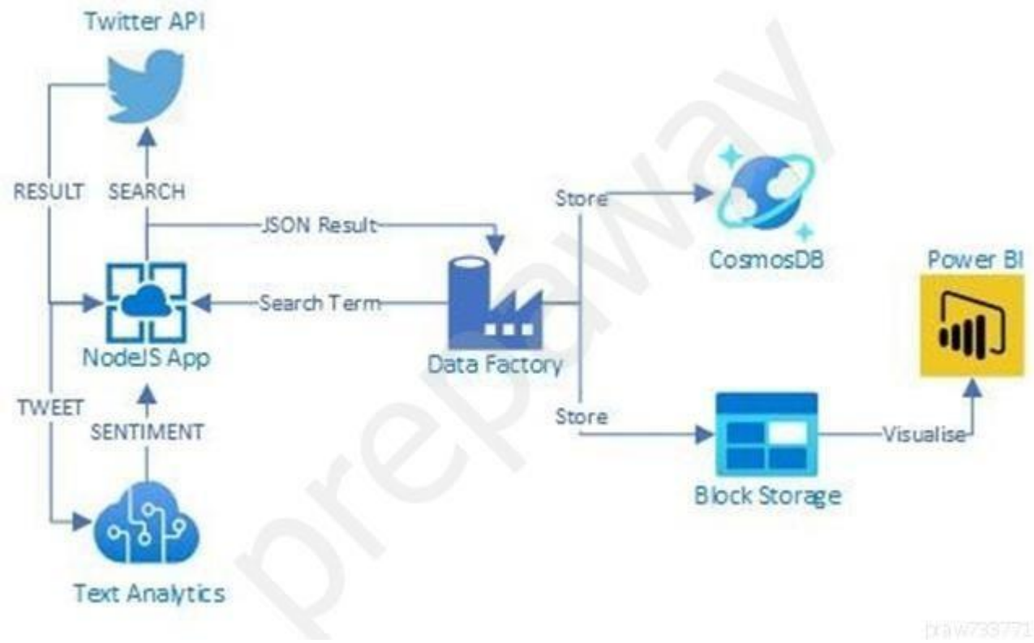
Which Azure Cognitive Services service should you use?

A. Text Analytics
B. Content Moderator
C. Computer Vision
D. Form Recognizer

Correct Answer: A
Section: [none]
Explanation

Explanation/Reference:
Explanation:
Text Analytics Cognitive Service could be used to quickly determine the public perception for a specific topic, event or brand.

Example: A NodeJS app which pulls Tweets from Twitter using the Twitter API based on a specified search term. Then pass these onto Text Analytics for sentiment scoring before storing the data and building a visualisation in PowerBI. The Architecture looked something like this:



Reference:
https://www.linkedin.com/pulse/measuring-public-perception-azure-cognitive-services-steve-dalai
https://docs.microsoft.com/en-us/azure/cognitive-services/text-analytics/overview

QUESTION 18

VCEUp

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 build a language model by using a Language Understanding service. The language model is used to search for information on a contact list by using an intent named `FindContact`.

A conversational expert provides you with the following list of phrases to use for training.

Find contacts in London.
Who do I know in Seattle?
Search for contacts in Ukraine.

You need to implement the phrase list in Language Understanding.

Solution: You create a new intent for location.

Does this meet the goal?

A. Yes
B. No

Correct Answer: A
Section: [none]
Explanation

Explanation/Reference:
Explanation:
An intent represents a task or action the user wants to perform. It is a purpose or goal expressed in a user's utterance.
Define a set of intents that corresponds to actions users want to take in your application.

Reference:
https://docs.microsoft.com/en-us/azure/cognitive-services/luis/luis-concept-intent

QUESTION 19
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 build a language model by using a Language Understanding service. The language model is used to search for information on a contact list by using an intent named `FindContact`.

A conversational expert provides you with the following list of phrases to use for training.

Find contacts in London.
Who do I know in Seattle?
Search for contacts in Ukraine.

You need to implement the phrase list in Language Understanding.

Solution: You create a new entity for the domain.

Does this meet the goal?

A. Yes
B. No

Correct Answer: B
Section: [none]

VCEUp

Explanation
Explanation/Reference:
Explanation:
Instead use a new intent for location.

Note: An intent represents a task or action the user wants to perform. It is a purpose or goal expressed in a user's utterance.

Define a set of intents that corresponds to actions users want to take in your application.

Reference:
https://docs.microsoft.com/en-us/azure/cognitive-services/luis/luis-concept-intent

QUESTION 20 You are training a Language Understanding model for a user support system.

You create the first intent named `GetContactDetails` and add 200 examples.

You need to decrease the likelihood of a false positive.

What should you do?

A. Enable active learning.
B. Add a machine learned entity.
C. Add additional examples to the `GetContactDetails` intent.
D. Add examples to the `None` intent.

Correct Answer: A
Section: [none]
Explanation

VCEUp

Explanation/Reference:
Explanation:
Active learning is a technique of machine learning in which the machine learned model is used to identify informative new examples to label. In LUIS, active learning refers to adding utterances from the endpoint traffic whose current predictions are unclear to improve your model.

Reference:
https://docs.microsoft.com/en-us/azure/cognitive-services/luis/luis-glossary

QUESTION 21
DRAG DROP

You are building a Language Understanding model for purchasing tickets.

You have the following utterance for an intent named `PurchaseAndSendTickets`.

```
Purchase [2 audit business] tickets to [Paris] [next Monday] and send tickets to [email@domain.com]
```

You need to select the entity types. The solution must use built-in entity types to minimize training data whenever possible.

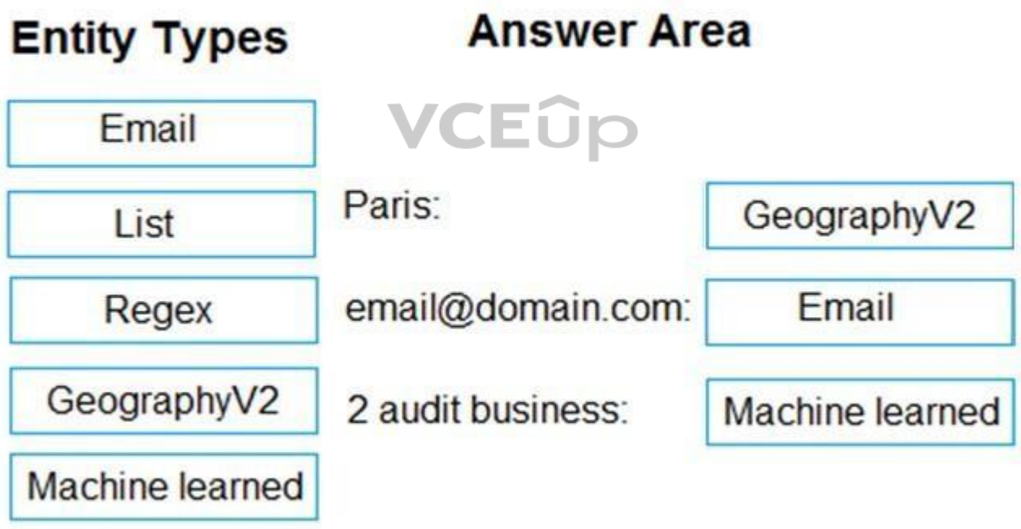
Which entity type should you use for each label? To answer, drag the appropriate entity types to the correct labels. Each entity type may be used once, more than once, or not at all.

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

Select and Place:

VCEûp

Correct Answer:



Section: [none]
Explanation

Explanation/Reference:
Explanation:
Box 1: GeographyV2
The prebuilt geographyV2 entity detects places. Because this entity is already trained, you do not need to add example utterances containing GeographyV2 to the application intents.

Box 2: Email
Email prebuilt entity for a LUIS app: Email extraction includes the entire email address from an utterance. Because this entity is already trained, you do not need to add example utterances containing email to the application intents.

Box 3: Machine learned
The machine-learning entity is the preferred entity for building LUIS applications.

VCEûp

Reference:
https://docs.microsoft.com/en-us/azure/cognitive-services/luis/luis-reference-prebuilt-geographyv2

https://docs.microsoft.com/en-us/azure/cognitive-services/luis/luis-reference-prebuilt-email

https://docs.microsoft.com/en-us/azure/cognitive-services/luis/reference-entity-machine-learned-entity

VCEûp

VCEûp

Testlet 2

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.

Overview

A company named Wide World Importers is developing an e-commerce platform.

You are working with a solutions architect to design and implement the features of the e-commerce platform. The platform will use microservices and a serverless environment built on Azure.

Wide World Importers has a customer base that includes English, Spanish, and Portuguese speakers.

Existing Environment

Applications

Wide World Importers has an App Service plan that contains the web apps shown in the following table.

Name	Description
Product Management	An app used by employees to create and manage products. The app and the expected inputs from the employees are in English.
Inventory Tracking	An app used by employees to manage inventory when dispatching orders, receiving refunds, and receiving consignments from suppliers.

Azure Resources

You have the following resources:

- An Azure Active Directory (Azure AD) tenant
  - The tenant supports internal authentication.
  - All employees belong to a group named AllUsers.
  - Senior managers belong to a group named LeadershipTeam.
- An Azure Functions resource
  - A function app posts to Azure Event Grid when stock levels of a product change between OK, Low Stock, and Out of Stock. The function app uses the Azure Cosmos DB change feed.
- An Azure Cosmos DB account
  - The account uses the Core (SQL) API.
  - The account stores data for the Product Management app and the Inventory Tracking app.
- An Azure Storage account
  - The account contains blob containers for assets related to products.
  - The assets include images, videos, and PDFs.
- An Azure Cognitive Services resource named wwics
- A Video Indexer resource named wwivi

Requirements

Business Goals

VCEUp

Wide World Importers wants to leverage AI technologies to differentiate itself from its competitors. **Planned**

Changes

Wide World Importers plans to start the following projects:

- A product creation project: Help employees create accessible and multilingual product entries, while expediting product entry creation.
- A smart e-commerce project: Implement an Azure Cognitive Search solution to display products for customers to browse.
- A shopping on-the-go project: Build a chatbot that can be integrated into smart speakers to support customers.

Business Requirements

Wide World Importers identifies the following business requirements for all the projects:

- Provide a multilingual customer experience that supports English, Spanish, and Portuguese.
- Whenever possible, scale based on transaction volumes to ensure consistent performance.
- Minimize costs.

Governance and Security Requirements

Wide World Importers identifies the following governance and security requirements:

- Data storage and processing must occur in datacenters located in the United States.
- Azure Cognitive Services must be inaccessible directly from the internet.

Accessibility Requirements

Wide World Importers identifies the following accessibility requirements:

- All images must have relevant alt text.
- All videos must have transcripts that are associated to the video and included in product descriptions.
- Product descriptions, transcripts, and alt text must be available in English, Spanish, and Portuguese.

Product Creation Requirements

Wide World Importers identifies the following requirements for improving the Product Management app:

- Minimize how long it takes for employees to create products and add assets.
- Remove the need for manual translations.

Smart E-Commerce Requirements

Wide World Importers identifies the following requirements for the smart e-commerce project:

- Ensure that the Cognitive Search solution meets a Service Level Agreement (SLA) of 99.9% availability for searches and index writes.
- Provide users with the ability to search insight gained from the images, manuals, and videos associated with the products.
- Support autocompletion and autosuggestion based on all product name variants.
- Store all raw insight data that was generated, so the data can be processed later.
- Update the stock level field in the product index immediately upon changes.
- Update the product index hourly.

Shopping On-the-Go Requirements

Wide World Importers identifies the following requirements for the shopping on-the-go chatbot:

- Answer common questions.
- Support interactions in English, Spanish, and Portuguese.
- Replace an existing FAQ process so that all Q&A is managed from a central location.
- Provide all employees with the ability to edit Q&As. Only senior managers must be able to publish updates.
- Support purchases by providing information about relevant products to customers. Product displays must include images and warnings when stock levels are low or out of stock.

Product JSON Sample

VCEûp

You have the following JSON sample for a product.

```
{
    "sku": "b1",
    "name": {
        "en":"Bicycle",
        "es": "Bicicleta",
        "pt": "Bicicleta"
    },
    "stocklevel": "Out of Stock",
    "description": {
        "en":"Bicycle",
        "es": "Bicicleta",
        "pt": "Bicicleta"
    },
    "image":
{"uri": "https://upload.worldwideimporters.org/bicycle.jpg",
          "alttext": {
               "en":"Bicycle",
               "es": "Bicicleta",
               "pt": "Bicicleta"
          }
        },
    "createdUtc": "2020-02-14T06:08:39Z",
    "language": "en"
}
```

QUESTION 1 HOTSPOT

You are planning the product creation project.

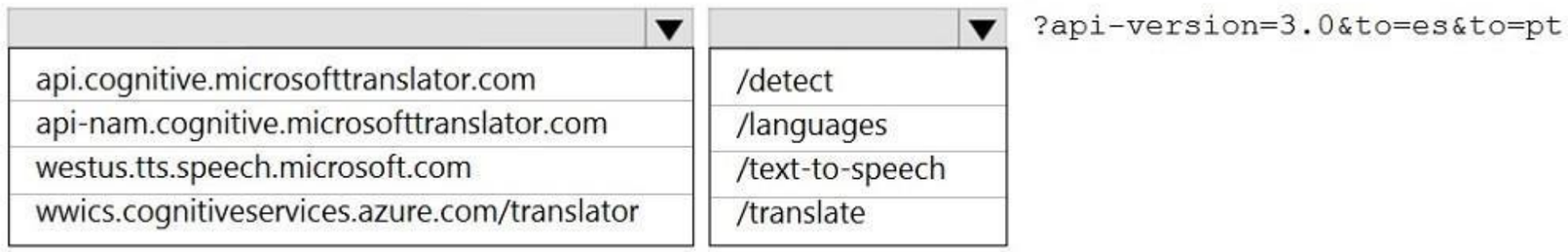
You need to build the REST endpoint to create the multilingual product descriptions.

How should you complete the URI? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

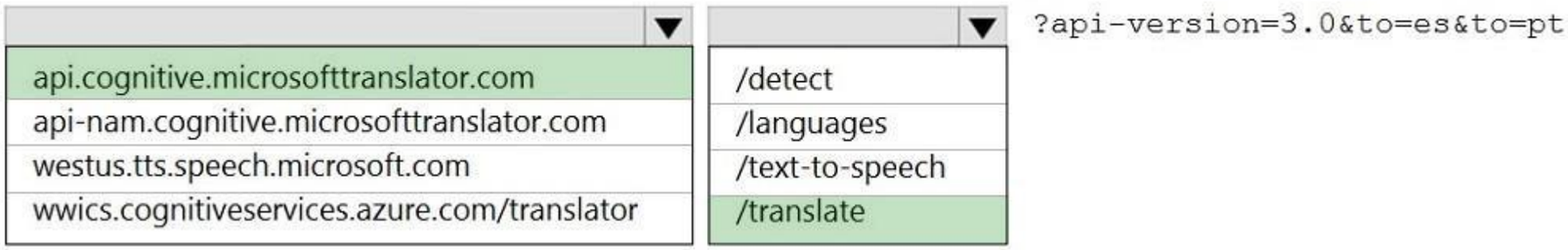
Answer Area



VCEûp

Correct Answer:

Answer Area



Section: [none]
Explanation

Explanation/Reference:
Explanation:

Box 1: api.cognitive.microsofttranslator.com Translator
3.0: Translate. Send a POST request to:

https://api.cognitive.microsofttranslator.com/translate?api-version=3.0

Box 2: /translate

Reference:
https://docs.microsoft.com/en-us/azure/cognitive-services/translator/reference/v3-0-translate **Question Set 1**

QUESTION 1

HOTSPOT

You are developing a text processing solution.

You develop the following method.

```
static void GetKeyPhrases(TextAnalyticsClient textAnalyticsClient, string text)
{
    var response = textAnalyticsClient.ExtractKeyPhrases(text);
    Console.WriteLine("Key phrases:");

    foreach (string keyphrase in response.Value)
    {
        Console.WriteLine($"\t{keyphrase}");
    }
}
```

You call the method by using the following code.

```
GetKeyPhrases(textAnalyticsClient, "the cat sat on the mat");
```

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:

VCEûp

Answer Area

Statements	Yes	No
The call will output key phrases from the input string to the console.	○	○
The output will contain the following words: the, cat, sat, on, and mat.	○	○
The output will contain the confidence level for key phrases.	○	○

Correct Answer:

Answer Area

Statements	Yes	No
The call will output key phrases from the input string to the console.	○	○
The output will contain the following words: the, cat, sat, on, and mat.	○	○
The output will contain the confidence level for key phrases.	○	○

Section: [none]

Explanation

Explanation/Reference:
Explanation:

Box 1: Yes
The Key Phrase Extraction API evaluates unstructured text, and for each JSON document, returns a list of key phrases.

Box 2: No
'the' is not a key phrase.

This capability is useful if you need to quickly identify the main points in a collection of documents. For example, given input text "The food was delicious and there were wonderful staff", the service returns the main talking points: "food" and "wonderful staff".

Box 3: No
Key phrase extraction does not have confidence levels.

Reference: https://docs.microsoft.com/en-us/azure/cognitive-services/text-analytics/how-tos/text-analytics-how-to-keyword-extraction

QUESTION 2
You deploy a web app that is used as a management portal for indexing in Azure Cognitive Search. The app is configured to use the primary admin key.

During a security review, you discover unauthorized changes to the search index. You suspect that the primary access key is compromised.

You need to prevent unauthorized access to the index management endpoint. The solution must minimize downtime.

What should you do next?

A. Regenerate the primary admin key, change the app to use the secondary admin key, and then regenerate the secondary admin key.
B. Change the app to use a query key, and then regenerate the primary admin key and the secondary admin key.

VCEUp

C. Regenerate the secondary admin key, change the app to use the secondary admin key, and then regenerate the primary key.
D. Add a new query key, change the app to use the new query key, and then delete all the unused query keys.

Correct Answer: A
Section: [none]
Explanation

Explanation/Reference:
Explanation:
Regenerate admin keys.
Two admin keys are created for each service so that you can rotate a primary key, using the secondary key for business continuity. In the Settings >Keys page, copy the secondary key.
For all applications, update the API key settings to use the secondary key.
Regenerate the primary key.
Update all applications to use the new primary key.

Note: Two admin api-keys, referred to as primary and secondary keys in the portal, are automatically generated when the service is created and can be individually regenerated on demand. Having two keys allows you to roll over one key while using the second key for continued access to the service.

Reference: https://docs.microsoft.com/en-us/azure/search/search-security-api-keys#regenerate-admin-keys

QUESTION 3 You have an existing Azure Cognitive Search service.

You have an Azure Blob storage account that contains millions of scanned documents stored as images and PDFs.

You need to make the scanned documents available to search as quickly as possible.

What should you do?

A. Split the data into multiple blob containers. Create a Cognitive Search service for each container. Within each indexer definition, schedule the same runtime execution pattern.
B. Split the data into multiple blob containers. Create an indexer for each container. Increase the search units. Within each indexer definition, schedule a sequential execution pattern.
C. Create a Cognitive Search service for each type of document.
D. Split the data into multiple virtual folders. Create an indexer for each folder. Increase the search units. Within each indexer definition, schedule the same runtime execution pattern.

Correct Answer: D
Section: [none]
Explanation

Explanation/Reference:
Incorrect Answers:
A: Need more search units to process the data in parallel.
B: Run them in parallel, not sequentially.
C: Need a blob indexer.

Note: A blob indexer is used for ingesting content from Azure Blob storage into a Cognitive Search index.

Index large datasets
Indexing blobs can be a time-consuming process. In cases where you have millions of blobs to index, you can speed up indexing by partitioning your data and using multiple indexers to process the data in parallel. Here's how you can set this up:

Partition your data into multiple blob containers or virtual folders Set up several data sources, one per container or folder.
Create a corresponding indexer for each data source. All of the indexers should point to the same target search index.
One search unit in your service can run one indexer at any given time. Creating multiple indexers as described above is only useful if they actually run in parallel.

Reference: https://docs.microsoft.com/en-us/azure/search/search-howto-indexing-azure-blob-storage

VCEUp

QUESTION 4
You need to implement a table projection to generate a physical expression of an Azure Cognitive Search index.

Which three properties should you specify in the skillset definition JSON configuration table node? Each correct answer presents part of the solution. (Choose three.) **NOTE:**

Each correct selection is worth one point.

A. `tableName`
B. `generatedKeyName`
C. `dataSource`
D. `dataSourceConnection`
E. `source`

Correct Answer: ABE
Section: [none]
Explanation

Explanation/Reference:
Explanation:
Defining a table projection.
Each table requires three properties:
tableName: The name of the table in Azure Storage.
generatedKeyName: The column name for the key that uniquely identifies this row. source: The node from the enrichment tree you are sourcing your enrichments from.
This node is usually the output of a shaper, but could be the output of any of the skills.

Reference: https://docs.microsoft.com/en-us/azure/search/knowledge-store-projection-overview

QUESTION 5
HOTSPOT

You are creating an enrichment pipeline that will use Azure Cognitive Search. The knowledge store contains unstructured JSON data and scanned PDF documents that contain text.

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

NOTE: Each correct selection is worth one point.

Hot Area:

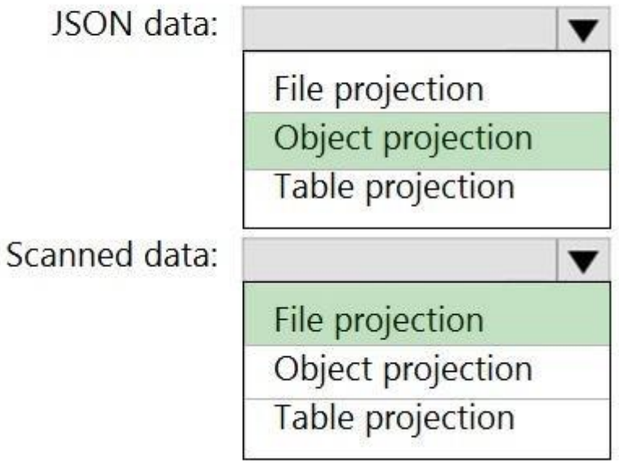
Answer Area

JSON data: [File projection / Object projection / Table projection]
Scanned data: [File projection / Object projection / Table projection]

VCEûp

Correct Answer:

Answer Area



Section: [none]
Explanation

Explanation/Reference:
Explanation:
Box 1: Object projection
Object projections are JSON representations of the enrichment tree that can be sourced from any node.

Box 2: File projection
File projections are similar to object projections and only act on the normalized_images collection.

Reference: https://docs.microsoft.com/en-us/azure/search/knowledge-store-projection-overview

QUESTION 6 HOTSPOT

You are building an Azure Cognitive Search custom skill.

You have the following custom skill schema definition.

IT Exam Dumps – Learn Anything | VCEup.com

VCEûp

```
{
   "@odata.type": "#Microsoft.Skills.Custom.WebApiSkill",
   "description": "My custom skill description",
   "uri": "https://contoso-webskill.azurewebsites.net/api/process",
   "context": "/document/organizations/*",
   "inputs": [
     {
       "name": "companyName",
       "source": "/document/organizations/*"
     }
   ],
   "outputs": [
     {
       "name": "companyDescription",
     }
   ]
}
```

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

NOTE: Each correct selection is worth one point.

Hot Area:

Answer Area

Statements	Yes	No
`CompanyDescription` is available for indexing.	○	○
The definition calls a web API as part of the enrichment process.	○	○
The enrichment step is called only for the first organization under "`/document/organizations`".	○	○

Correct Answer:

Answer Area

Statements	Yes	No
`CompanyDescription` is available for indexing.	○	○
The definition calls a web API as part of the enrichment process.	○	○
The enrichment step is called only for the first organization under "`/document/organizations`".	○	○

VCEUp

Section: [none]
Explanation

Explanation/Reference:
Explanation:

Box 1: Yes
Once you have defined a skillset, you must map the output fields of any skill that directly contributes values to a given field in your search index.

Box 2: Yes
The definition is a custom skill that calls a web API as part of the enrichment process.

Box 3: No
For each organization identified by entity recognition, this skill calls a web API to find the description of that organization.

Reference: https://docs.microsoft.com/en-us/azure/search/cognitive-search-output-field-mapping

QUESTION 7 You have the following
data sources:

Finance: On-premises Microsoft SQL Server database
Sales: Azure Cosmos DB using the Core (SQL) API
Logs: Azure Table storage
HR: Azure SQL database

You need to ensure that you can search all the data by using the Azure Cognitive Search REST API.

What should you do?

A. Configure multiple read replicas for the data in Sales.
B. Mirror Finance to an Azure SQL database.
C. Ingest the data in Logs into Azure Data Explorer.
D. Ingest the data in Logs into Azure Sentinel.

Correct Answer: B
Section: [none]
Explanation

Explanation/Reference:
Explanation:
On-premises Microsoft SQL Server database cannot be used as an index data source.

Note: Indexer in Azure Cognitive Search: : Automate aspects of an indexing operation by configuring a data source and an indexer that you can schedule or run on demand. This feature is supported for a limited number of data source types on Azure.

Indexers crawl data stores on Azure.
Azure Blob Storage
Azure Data Lake Storage Gen2 (in preview)
Azure Table Storage
Azure Cosmos DB
Azure SQL Database
SQL Managed Instance
SQL Server on Azure Virtual Machines

Reference: https://docs.microsoft.com/en-us/azure/search/search-indexer-overview#supported-data-sources

QUESTION 8 You are developing a solution to generate a word cloud based on the reviews of a company's products.

VCEûp

Which Text Analytics REST API endpoint should you use?

A. `keyPhrases`
B. `sentiment`
C. `languages`
D. `entities/recognition/general`

Correct Answer: A
Section: [none]
Explanation

Explanation/Reference:
Reference: https://docs.microsoft.com/en-us/azure/cognitive-services/text-analytics/overview

QUESTION 9
DRAG DROP

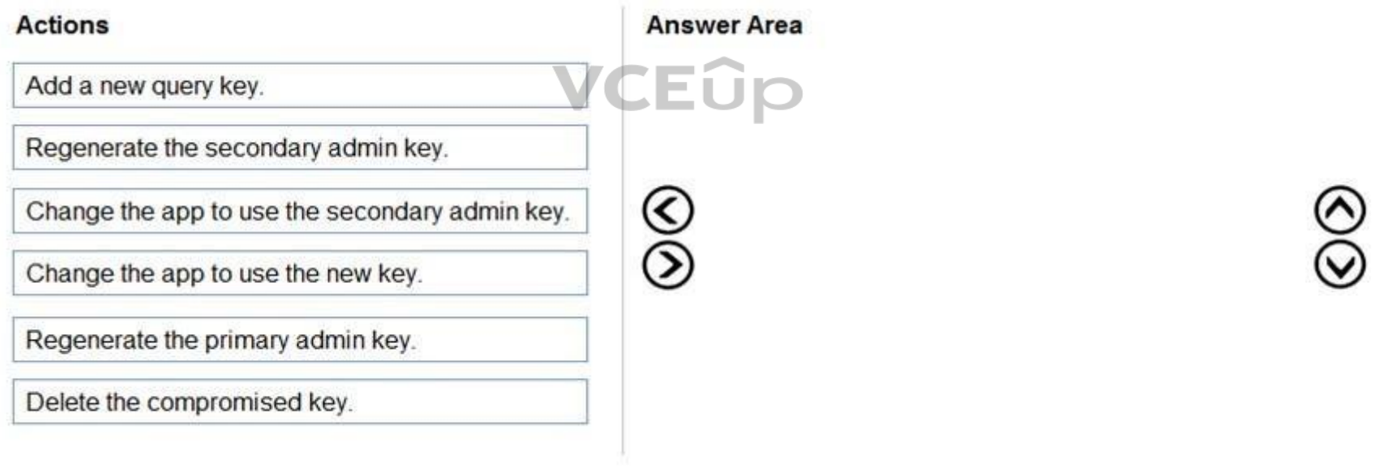
You have a web app that uses Azure Cognitive Search.

When reviewing billing for the app, you discover much higher than expected charges. You suspect that the query key is compromised.

You need to prevent unauthorized access to the search endpoint and ensure that users only have read only access to the documents collection. The solution must minimize app downtime.

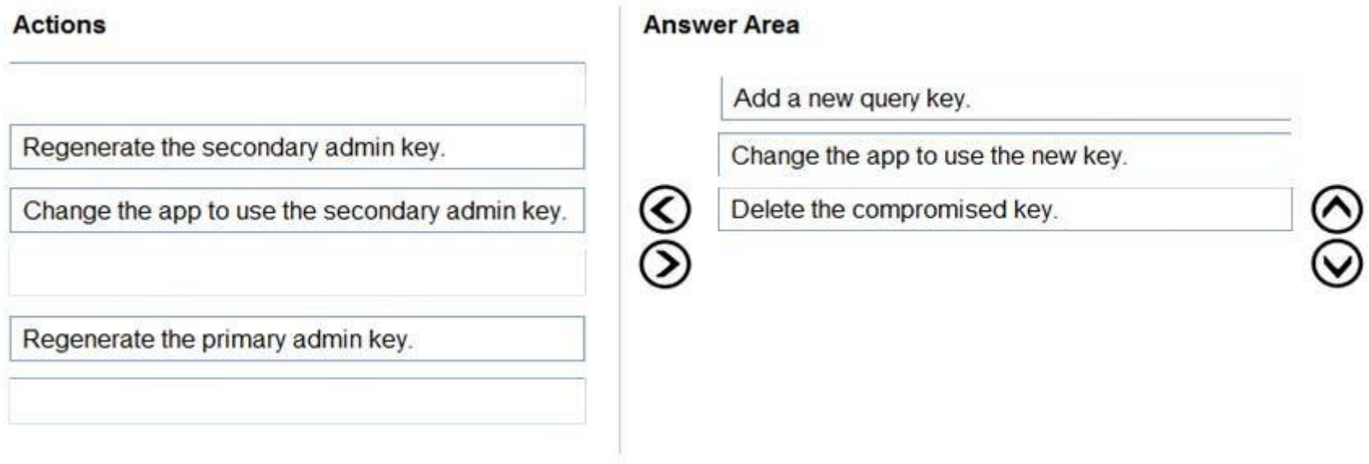
Which three actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

Select and Place:



Correct Answer:

VCEûp



Section: [none]
Explanation

Explanation/Reference:
Reference: https://docs.microsoft.com/en-us/azure/search/search-security-api-keys

QUESTION 10 You are developing an application that will use Azure Cognitive Search for internal documents.

You need to implement document-level filtering for Azure Cognitive Search.

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

NOTE: Each correct selection is worth one point.

A. Send Azure AD access tokens with the search request.
B. Retrieve all the groups.
C. Retrieve the group memberships of the user.
D. Add allowed groups to each index entry.
E. Create one index per group.
F. Supply the groups as a filter for the search requests.

Correct Answer: CDF
Section: [none]
Explanation

Explanation/Reference:
Explanation:
Your documents must include a field specifying which groups have access. This information becomes the filter criteria against which documents are selected or rejected from the result set returned to the issuer.

D: A query request targets the documents collection of a single index on a search service.

CF: In order to trim documents based on group_ids access, you should issue a search query with a group_ids/any(g:search.in(g, 'group_id1, group_id2,...')) filter, where 'group_id1, group_id2,...' are the groups to which the search request issuer belongs.

Reference: https://docs.microsoft.com/en-us/azure/search/search-security-trimming-for-azure-search

VCEûp

Testlet 2

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.

Overview

A company named Wide World Importers is developing an e-commerce platform.

You are working with a solutions architect to design and implement the features of the e-commerce platform. The platform will use microservices and a serverless environment built on Azure.

Wide World Importers has a customer base that includes English, Spanish, and Portuguese speakers.

Existing Environment

Applications

Wide World Importers has an App Service plan that contains the web apps shown in the following table.

Name	Description
Product Management	An app used by employees to create and manage products. The app and the expected inputs from the employees are in English.
Inventory Tracking	An app used by employees to manage inventory when dispatching orders, receiving refunds, and receiving consignments from suppliers.

VCEûp

Azure Resources

You have the following resources:

- An Azure Active Directory (Azure AD) tenant
  - The tenant supports internal authentication.
  - All employees belong to a group named AllUsers.
  - Senior managers belong to a group named LeadershipTeam.
- An Azure Functions resource
  - A function app posts to Azure Event Grid when stock levels of a product change between OK, Low Stock, and Out of Stock. The function app uses the Azure Cosmos DB change feed.
- An Azure Cosmos DB account
  - The account uses the Core (SQL) API.
  - The account stores data for the Product Management app and the Inventory Tracking app.
- An Azure Storage account
  - The account contains blob containers for assets related to products.
  - The assets include images, videos, and PDFs.
- An Azure Cognitive Services resource named wwics
- A Video Indexer resource named wwivi

Requirements

Business Goals

VCEUp

Wide World Importers wants to leverage AI technologies to differentiate itself from its competitors. **Planned**

Changes

Wide World Importers plans to start the following projects:

- A product creation project: Help employees create accessible and multilingual product entries, while expediting product entry creation.
- A smart e-commerce project: Implement an Azure Cognitive Search solution to display products for customers to browse.
- A shopping on-the-go project: Build a chatbot that can be integrated into smart speakers to support customers.

Business Requirements

Wide World Importers identifies the following business requirements for all the projects:

- Provide a multilingual customer experience that supports English, Spanish, and Portuguese.
- Whenever possible, scale based on transaction volumes to ensure consistent performance.
- Minimize costs.

Governance and Security Requirements

Wide World Importers identifies the following governance and security requirements:

- Data storage and processing must occur in datacenters located in the United States.
- Azure Cognitive Services must be inaccessible directly from the internet.

Accessibility Requirements

Wide World Importers identifies the following accessibility requirements:

- All images must have relevant alt text.
- All videos must have transcripts that are associated to the video and included in product descriptions.
- Product descriptions, transcripts, and alt text must be available in English, Spanish, and Portuguese.

Product Creation Requirements

Wide World Importers identifies the following requirements for improving the Product Management app:

- Minimize how long it takes for employees to create products and add assets.
- Remove the need for manual translations.

Smart E-Commerce Requirements

Wide World Importers identifies the following requirements for the smart e-commerce project:

- Ensure that the Cognitive Search solution meets a Service Level Agreement (SLA) of 99.9% availability for searches and index writes.
- Provide users with the ability to search insight gained from the images, manuals, and videos associated with the products.
- Support autocompletion and autosuggestion based on all product name variants.
- Store all raw insight data that was generated, so the data can be processed later.
- Update the stock level field in the product index immediately upon changes.
- Update the product index hourly.

Shopping On-the-Go Requirements

Wide World Importers identifies the following requirements for the shopping on-the-go chatbot:

- Answer common questions.
- Support interactions in English, Spanish, and Portuguese.
- Replace an existing FAQ process so that all Q&A is managed from a central location.
- Provide all employees with the ability to edit Q&As. Only senior managers must be able to publish updates.
- Support purchases by providing information about relevant products to customers. Product displays must include images and warnings when stock levels are low or out of stock.

Product JSON Sample

VCEûp

You have the following JSON sample for a product.

```
{
    "sku": "b1",
    "name": {
        "en":"Bicycle",
        "es": "Bicicleta",
        "pt": "Bicicleta"
    },
    "stocklevel": "Out of Stock",
    "description": {
        "en":"Bicycle",
        "es": "Bicicleta",
        "pt": "Bicicleta"
    },
    "image":
{"uri": "https://upload.worldwideimporters.org/bicycle.jpg",
          "alttext": {
               "en":"Bicycle",
               "es": "Bicicleta",
               "pt": "Bicicleta"
        }
       },
    "createdUtc": "2020-02-14T06:08:39Z",
    "language": "en"
}
```

QUESTION 1 You are developing the smart e-commerce project.

You need to implement autocompletion as part of the Cognitive Search solution.

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

NOTE: Each correct selection is worth one point.

A. Make API queries to the autocomplete endpoint and include `suggesterName` in the body.
B. Add a suggester that has the three product name fields as source fields.
C. Make API queries to the search endpoint and include the product name fields in the `searchFields` query parameter.
D. Add a suggester for each of the three product name fields.
E. Set the `searchAnalyzer` property for the three product name variants.
F. Set the `analyzer` property for the three product name variants.

Correct Answer: ABF
Section: [none]
Explanation

Explanation/Reference:
Explanation:

VCEUp

Scenario: Support autocompletion and autosuggestion based on all product name variants.

A: Call a suggester-enabled query, in the form of a Suggestion request or Autocomplete request, using an API. API usage is illustrated in the following call to the Autocomplete REST API.

```
POST /indexes/myxboxgames/docs/autocomplete?search&api-version=2020-06-30
{
  "search": "minecraf",
  "suggesterName": "sg"
}
```

B: In Azure Cognitive Search, typeahead or "search-as-you-type" is enabled through a suggester. A suggester provides a list of fields that undergo additional tokenization, generating prefix sequences to support matches on partial terms. For example, a suggester that includes a City field with a value for "Seattle" will have prefix combinations of "sea", "seat", "seatt", and "seattl" to support typeahead. F. Use the default standard Lucene analyzer ("analyzer": null) or a language analyzer (for example, "analyzer": "en.Microsoft") on the field.

Reference: https://docs.microsoft.com/en-us/azure/search/index-add-suggesters

VCEUp

VCEûp

Question Set 1

QUESTION 1

You build a bot by using the Microsoft Bot Framework SDK and the Azure Bot Service.

You plan to deploy the bot to Azure.

You register the bot by using the Bot Channels Registration service.

Which two values are required to complete the deployment? Each correct answer presents part of the solution.

NOTE: Each correct selection is worth one point.

A. `botId`
B. `tenantId`
C. `appId`
D. `objectId`
E. `appSecret`

Correct Answer: CE
Section: [none]
Explanation

Explanation/Reference:
Reference:
https://github.com/MicrosoftDocs/bot-docs/blob/live/articles/bot-service-quickstart-registration.md

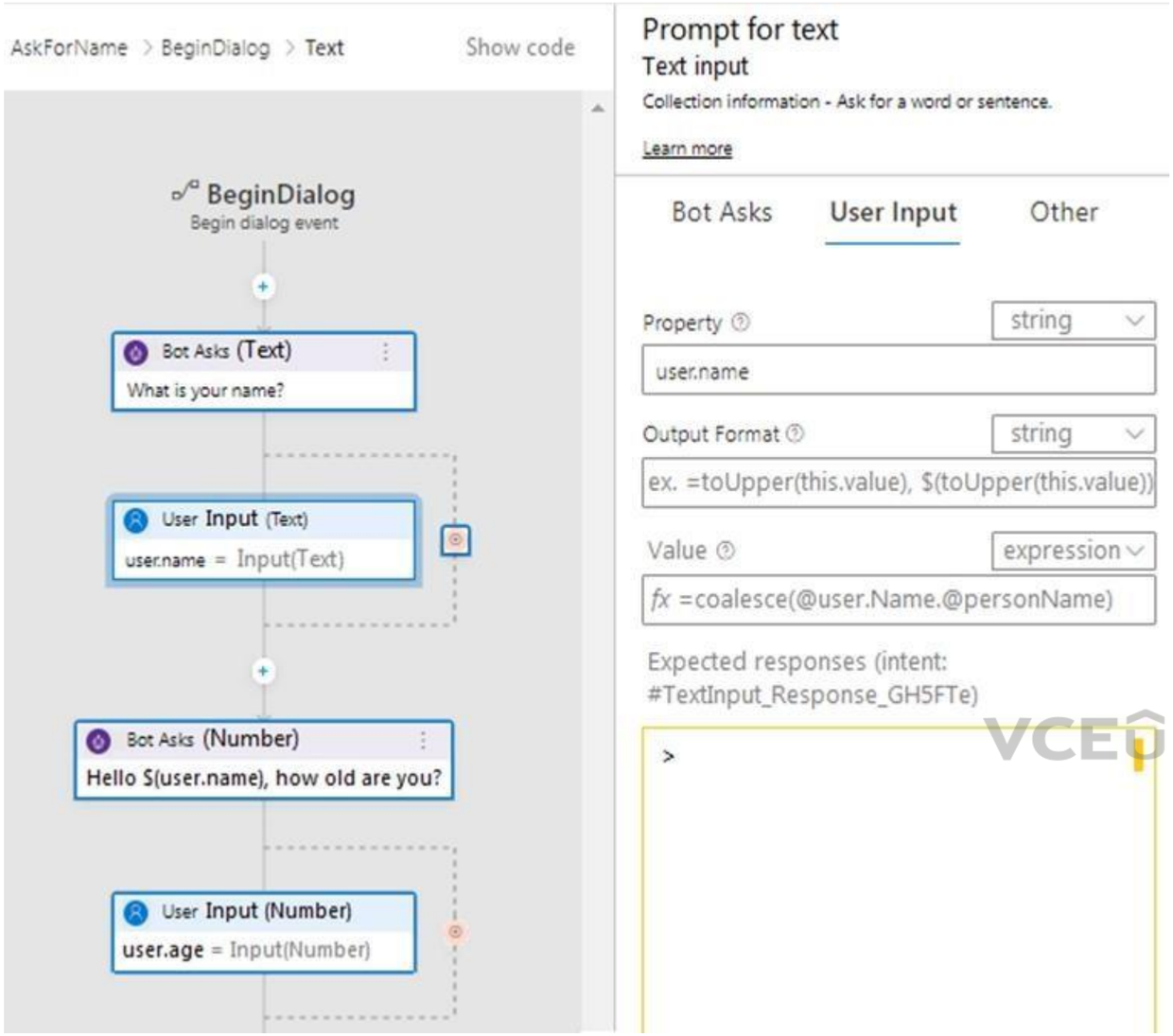
QUESTION 2 HOTSPOT

You are building a chatbot by using the Microsoft Bot Framework Composer.

You have the dialog design shown in the following exhibit.

VCEûp

VCEûp



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:

VCEûp

Answer Area

Statements	Yes	No
`user.name` is an entity.	○	○
The dialog asks for a user name and a user age and assigns appropriate values to the `user.name` and `user.age` properties.	○	○
The chatbot attempts to take the first non-null entity value for `userName` or `personName` and assigns the value to `user.name`.	○	○

Correct Answer:

Answer Area

Statements	Yes	No
`user.name` is an entity.	○	●
The dialog asks for a user name and a user age and assigns appropriate values to the `user.name` and `user.age` properties.	●	○
The chatbot attempts to take the first non-null entity value for `userName` or `personName` and assigns the value to `user.name`.	●	○

Section: [none]
Explanation

Explanation/Reference:
Explanation:

Box 1: No
User.name is a property.

Box 2: Yes

Box 3: Yes
The coalesce() function evaluates a list of expressions and returns the first non-null (or non-empty for string) expression.

Reference: https://docs.microsoft.com/en-us/composer/concept-language-generation https://docs.microsoft.com/en-us/azure/data-explorer/kusto/query/coalescefunction

QUESTION 3 You are building a multilingual chatbot.

You need to send a different answer for positive and negative messages.

Which two Text Analytics APIs should you use? Each correct answer presents part of the solution. (Choose two.)

VCEUp

NOTE: Each correct selection is worth one point.

A. Linked entities from a well-known knowledge base
B. Sentiment Analysis
C. Key Phrases
D. Detect Language
E. Named Entity Recognition

Correct Answer: BD
Section: [none]
Explanation

Explanation/Reference:
Explanation:
B: The Text Analytics API's Sentiment Analysis feature provides two ways for detecting positive and negative sentiment. If you send a Sentiment Analysis request, the API will return sentiment labels (such as "negative", "neutral" and "positive") and confidence scores at the sentence and document-level.

D: The Language Detection feature of the Azure Text Analytics REST API evaluates text input for each document and returns language identifiers with a score that indicates the strength of the analysis.

This capability is useful for content stores that collect arbitrary text, where language is unknown.

Reference:
https://docs.microsoft.com/en-us/azure/cognitive-services/text-analytics/how-tos/text-analytics-how-to-sentiment-analysis?tabs=version-3-1 https://docs.microsoft.com/en-us/azure/cognitive-services/text-analytics/how-tos/text-analytics-how-to-language-detection

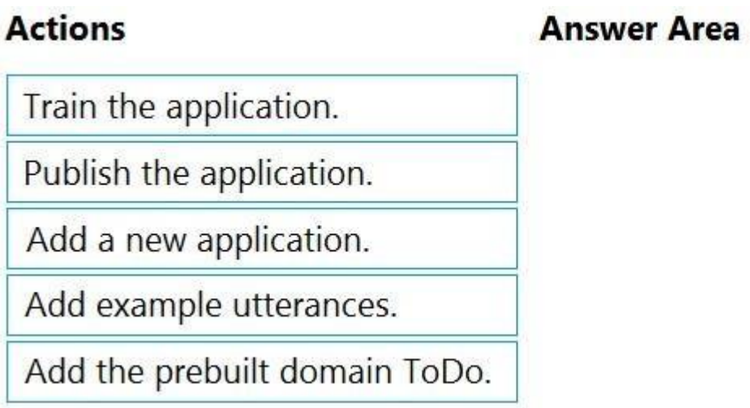
QUESTION 4
DRAG DROP

You plan to build a chatbot to support task tracking.

You create a Language Understanding service named lu1.

You need to build a Language Understanding model to integrate into the chatbot. The solution must minimize development time to build the model.

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. (Choose four.) **Select and Place:**



Correct Answer:

VCEûp

Actions	Answer Area
Train the application.	Add a new application.
Publish the application.	Add example utterances.
Add a new application.	Train the application.
Add example utterances.	Publish the application.
Add the prebuilt domain ToDo.	

Section: [none]
Explanation

Explanation/Reference:
Explanation:

Step 1: Add a new application
Create a new app
Sign in to the LUIS portal with the URL of https://www.luis.ai.
Select Create new app.
Etc.

Step 2: Add example utterances.
In order to classify an utterance, the intent needs examples of user utterances that should be classified with this intent.

Step 3: Train the application

Step 4: Publish the application
In order to receive a LUIS prediction in a chat bot or other client application, you need to publish the app to the prediction endpoint.

Reference:
https://docs.microsoft.com/en-us/azure/cognitive-services/luis/tutorial-intents-only

QUESTION 5
You are building a bot on a local computer by using the Microsoft Bot Framework. The bot will use an existing Language Understanding model.

You need to translate the Language Understanding model locally by using the Bot Framework CLI.

What should you do first?

A. From the Language Understanding portal, clone the model.
B. Export the model as an .lu file.
C. Create a new Speech service.
D. Create a new Language Understanding service.

Correct Answer: B
Section: [none]
Explanation

Explanation/Reference:
Explanation:
You might want to manage the translation and localization for the language understanding content for your bot independently.

VCEûp

Translate command in the @microsoft/bf-lu library takes advantage of the Microsoft text translation API to automatically machine translate .lu files to one or more than 60+ languages supported by the Microsoft text translation cognitive service.

What is translated?
An .lu file and optionally translate
Comments in the lu file
LU reference link texts
List of .lu files under a specific path.

Reference: https://github.com/microsoft/botframework-cli/blob/main/packages/luis/docs/translate-command.md

QUESTION 6
DRAG DROP

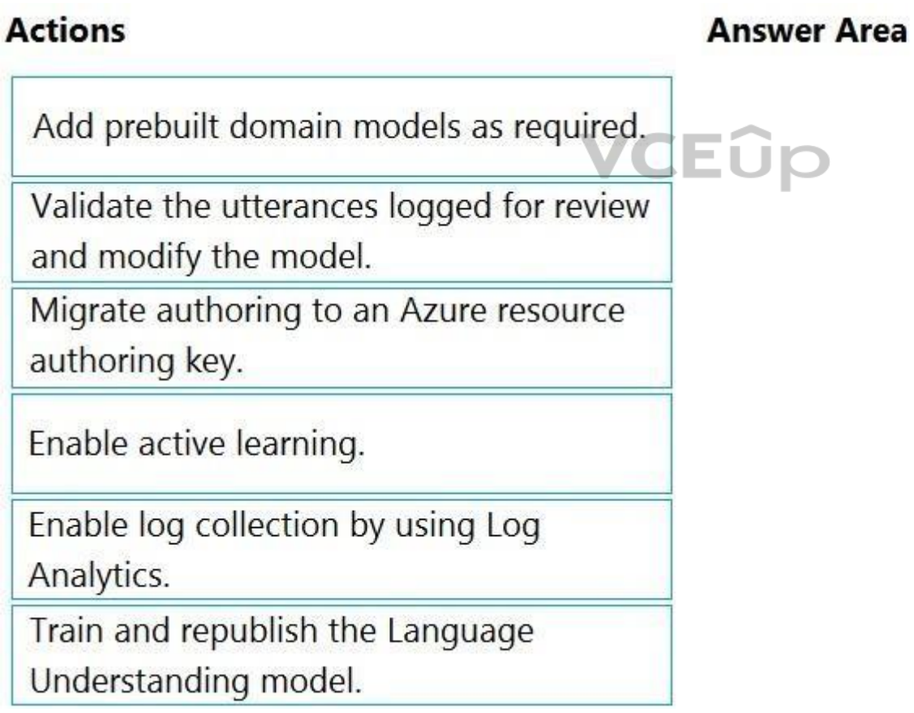
You are using a Language Understanding service to handle natural language input from the users of a web-based customer agent.

The users report that the agent frequently responds with the following generic response: "Sorry, I don't understand that."

You need to improve the ability of the agent to respond to requests.

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. (Choose three.) **Select**

and Place:



Correct Answer:

VCEûp

Actions	Answer Area
Add prebuilt domain models as required.	Add prebuilt domain models as required.
Validate the utterances logged for review and modify the model.	Enable active learning.
Migrate authoring to an Azure resource authoring key.	Train and republish the Language Understanding model.
Enable active learning.	
Enable log collection by using Log Analytics.	
Train and republish the Language Understanding model.	

Section: [none]
Explanation

VCEûp

Explanation/Reference:
Explanation:

Step 1: Add prebuilt domain models as required.
Prebuilt models provide domains, intents, utterances, and entities. You can start your app with a prebuilt model or add a relevant model to your app later.

Note: Language Understanding (LUIS) provides prebuilt domains, which are pre-trained models of intents and entities that work together for domains or common categories of client applications.

The prebuilt domains are trained and ready to add to your LUIS app. The intents and entities of a prebuilt domain are fully customizable once you've added them to your app.

Step 2: Enable active learning
To enable active learning, you must log user queries. This is accomplished by calling the endpoint query with the log=true querystring parameter and value.

Step 3: Train and republish the Language Understanding model
The process of reviewing endpoint utterances for correct predictions is called Active learning. Active learning captures endpoint queries and selects user's endpoint utterances that it is unsure of. You review these utterances to select the intent and mark entities for these real-world utterances. Accept these changes into your example utterances then train and publish. LUIS then identifies utterances more accurately.

Incorrect Answers:
Enable log collection by using Log Analytics
Application authors can choose to enable logging on the utterances that are sent to a published application. This is not done through Log Analytics.

Reference:
https://docs.microsoft.com/en-us/azure/cognitive-services/luis/luis-how-to-review-endpoint-utterances#log-user-queries-to-enable-active-learning https://docs.microsoft.com/en-us/azure/cognitive-services/luis/luis-concept-prebuilt-model

QUESTION 7 You build a conversational
bot named bot1.

You need to configure the bot to use a QnA Maker application.

VCEUp

From the Azure Portal, where can you find the information required by bot1 to connect to the QnA Maker application?

A. Access control (IAM)
B. Properties
C. Keys and Endpoint
D. Identity

Correct Answer: C
Section: [none]
Explanation

Explanation/Reference:
Explanation:
Obtain values to connect your bot to the knowledge base
In the QnA Maker site, select your knowledge base.
With your knowledge base open, select the SETTINGS tab. Record the value shown for service name. This value is useful for finding your knowledge base of interest when using the QnA Maker portal interface. It's not used to connect your bot app to this knowledge base.
Scroll down to find Deployment details and record the following values from the Postman sample HTTP request: POST /knowledgebases/<knowledge-base-id>/generateAnswer
Host: <your-host-url>
Authorization: EndpointKey <your-endpoint-key>

Reference: https://docs.microsoft.com/en-us/azure/bot-service/bot-builder-howto-qna

QUESTION 8 HOTSPOT

You are building a chatbot for a Microsoft Teams channel by using the Microsoft Bot Framework SDK. The chatbot will use the following code.

```
protected override async Task OnMembersAddedAsync(IList<ChannelAccount>
membersAdded, ITurnContext<IConversationUpdateActivity> turnContext,
CancellationToken cancellationToken)
{
    foreach (var member in membersAdded)
        if (member.Id != turnContext.Activity.Recipient.Id)
            await turnContext.SendActivityAsync($"Hi there - {member.Name}.
{WelcomeMessage}", cancellationToken: cancellationToken);
}
```

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
`OnMembersAddedAsync` will be triggered when a user joins the conversation.	○	○
When a new user joins the conversation, the existing users in the conversation will see the chatbot greeting.	○	○
`OnMembersAddedAsync` will be initialized when a user sends a message.	○	○

VCEûp

Correct Answer:

Answer Area

Statements	Yes	No
`OnMembersAddedAsync` will be triggered when a user joins the conversation.	○	○
When a new user joins the conversation, the existing users in the conversation will see the chatbot greeting.	○	○
`OnMembersAddedAsync` will be initialized when a user sends a message.	○	○

Section: [none]
Explanation

Explanation/Reference:
Explanation:

Box 1: Yes
The ActivityHandler.OnMembersAddedAsync method overrides this in a derived class to provide logic for when members other than the bot join the conversation, such as your bot's welcome logic.

Box 2: Yes membersAdded is a list of all the members added to the conversation, as described by the conversation update

activity. Box 3: No

Reference: https://docs.microsoft.com/en-us/dotnet/api/microsoft.bot.builder.activityhandler.onmembersaddedasync?view=botbuilder-dotnet-stable

VCEûp

QUESTION 9 HOTSPOT

You are reviewing the design of a chatbot. The chatbot includes a language generation file that contains the following fragment.

```
# Greet(user)
- ${Greeting()}, ${user.name}
```

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
`${user.name}` retrieves the user name by using a prompt.	○	○
`Greet()` is the name of the language generation template.	○	○
`${Greeting()}` is a reference to a template in the language generation file.	○	○

Correct Answer:

VCEûp

Answer Area

Statements	Yes	No
`${user.name}` retrieves the user name by using a prompt.	○	○
`Greet()` is the name of the language generation template.	○	○
`${Greeting()}` is a reference to a template in the language generation file.	○	○

Section: [none]
Explanation

Explanation/Reference:
Explanation:

Box 1: No
Example: Greet a user whose name is stored in `user.name`
- ${ welcomeUser(user.name) }

Example: Greet a user whose name you don't know:
- ${ welcomeUser() }

Box 2: No
Greet(User) is a Send a response action.

VCEûp

Box 3: Yes

Reference: https://docs.microsoft.com/en-us/composer/how-to-ask-for-user-input

QUESTION 10
HOTSPOT

You are building a chatbot by using the Microsoft Bot Framework SDK.

You use an object named `UserProfile` to store user profile information and an object named `ConversationData` to store information related to a conversation.

You create the following state accessors to store both objects in state.

```
var userStateAccessors = _userState.CreateProperty<UserProfile>(nameof(UserProfile));

var conversationStateAccessors = _conversationState.CreateProperty<ConversationData>(nameof(ConversationData));
```

The state storage mechanism is set to Memory Storage.

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:

VCEûp

Answer Area

Statements	Yes	No
The code will create and maintain the `UserProfile` object in the underlying storage layer.	○	○
The code will create and maintain the `ConversationData` object in the underlying storage layer.	○	○
The `UserProfile` and `ConversationData` objects will persist when the Bot Framework runtime terminates.	○	○

Correct Answer:

Answer Area

Statements	Yes	No
The code will create and maintain the `UserProfile` object in the underlying storage layer.	○	○
The code will create and maintain the `ConversationData` object in the underlying storage layer.	○	○
The `UserProfile` and `ConversationData` objects will persist when the Bot Framework runtime terminates.	○	○

Section: [none]
Explanation

Explanation/Reference:
Explanation:

Box 1: Yes
You create property accessors using the CreateProperty method that provides a handle to the BotState object. Each state property accessor allows you to get or set the value of the associated state property.

Box 2: Yes

Box 3: No
Before you exit the turn handler, you use the state management objects' SaveChangesAsync() method to write all state changes back to storage.

Reference: https://docs.microsoft.com/en-us/azure/bot-service/bot-builder-howto-v4-state

QUESTION 11
HOTSPOT

You are building a chatbot that will provide information to users as shown in the following exhibit.

VCEûp

Passengers
Sarah Hum
Jeremy Goldberg
Evan Litvak

2 Stops
Tue, May 30, 2017 10:25 PM

San Francisco Amsterdam	✈	San Francisco Amsterdam
SFO AMS		SFO AMS

Non-Stop
Fri, Jun 2, 2017 11:55 PM

San Francisco Amsterdam	✈	San Francisco Amsterdam
SFO AMS		SFO AMS

Total	**$4,032.54**

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

NOTE: Each correct selection is worth one point.

Hot Area:

VCEûp

Answer Area

The chatbot is showing **[answer choice]**.

- an Adaptive Card
- a Hero Card
- a Thumbnail Card

The card includes **[answer choice]**.

- an action set
- an image
- an image group
- media

Correct Answer:

Answer Area

The chatbot is showing **[answer choice]**.

- an Adaptive Card
- a Hero Card
- a Thumbnail Card

The card includes **[answer choice]**.

- an action set
- an image
- an image group
- media

Section: [none]
Explanation

Explanation/Reference:
Explanation:

Box 1: A Thumbnail card
A Thumbnail card typically contains a single thumbnail image, some short text, and one or more buttons.

Incorrect Answers:

VCEûp

an Adaptive card is highly customizable card that can contain any combination of text, speech, images, buttons, and input fields. a Hero card typically contains a single large image, one or more buttons, and a small amount of text.

Box 2: an image

Reference: https://docs.microsoft.com/en-us/microsoftteams/platform/task-modules-and-cards/cards/cards-reference

QUESTION 12
HOTSPOT

You are building a bot and that will use Language Understanding.

You have a LUDown file that contains the following content.

```
## Confirm
- confirm
- ok
- yes

## ExtractName
- call me steve !
- i am anna
- (i'm|i am) {@PersonName.Any}[.]
- my name is {@PersonName.Any}[.]

## Logout
- forget me
- log out

## SelectItem
- choose last
- choose the {@DirectionalReference=bottom left}
- choose {@DirectionalReference=top right}
- i like {@DirectionalReference=left} one

## SelectNone
- none

@ ml DirectionalReference
@ prebuilt personName
```

VCEûp

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

NOTE: Each correct selection is worth one point.

Hot Area:

VCEûp

Answer Area

`SelectItem` is **[answer choice]**. — a domain / an entity / an intent / an utterance

`Choose {@DirectionalReference=top right}` is **[answer choice]**. — a domain / an entity / an intent / an utterance

Correct Answer:

Answer Area

`SelectItem` is **[answer choice]**. — a domain / an entity / **an intent** / an utterance

`Choose {@DirectionalReference=top right}` is **[answer choice]**. — a domain / an entity / an intent / **an utterance**

Section: [none]
Explanation

Explanation/Reference:
Reference: https://github.com/solliancenet/tech-immersion-data-ai/blob/master/ai-exp1/README.md

QUESTION 13
HOTSPOT

VCEûp

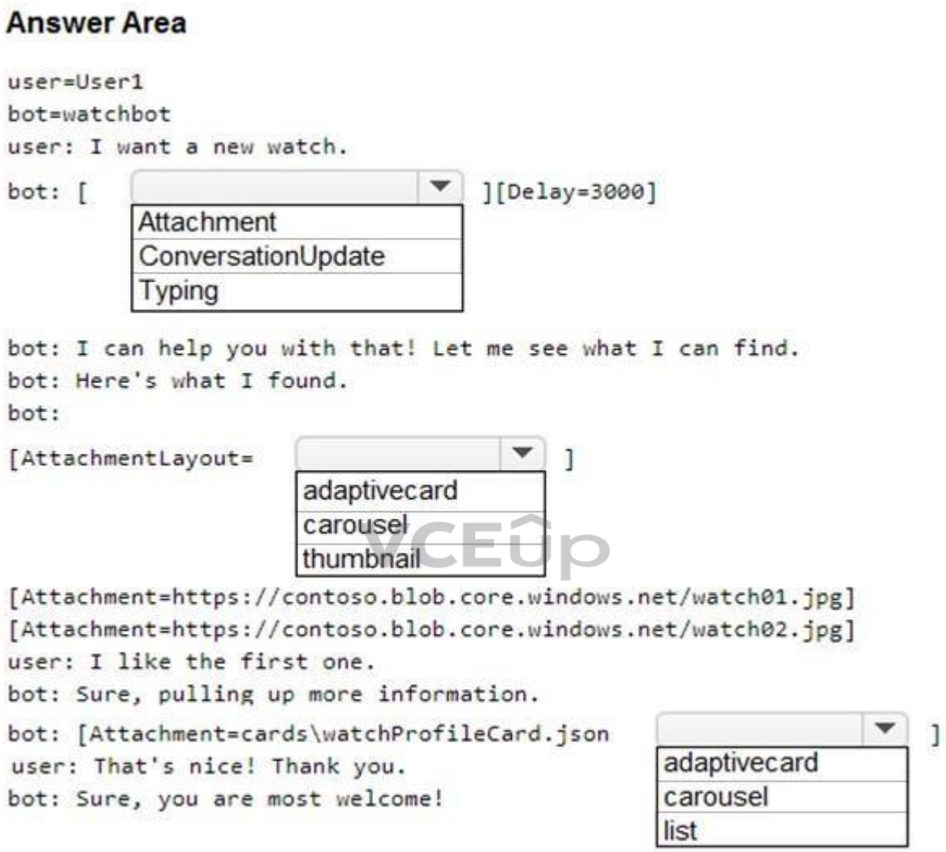
You are designing a conversation flow to be used in a chatbot.

You need to test the conversation flow by using the Microsoft Bot Framework Emulator.

How should you complete the .chat file? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:



Correct Answer:

VCEûp

Answer Area

```
user=User1
bot=watchbot
user: I want a new watch.
bot: [ Attachment ][Delay=3000]
bot: I can help you with that! Let me see what I can find.
bot: Here's what I found.
bot:
[AttachmentLayout= carousel ]
[Attachment=https://contoso.blob.core.windows.net/watch01.jpg]
[Attachment=https://contoso.blob.core.windows.net/watch02.jpg]
user: I like the first one.
bot: Sure, pulling up more information.
bot: [Attachment=cards\watchProfileCard.json adaptivecard ]
user: That's nice! Thank you.
bot: Sure, you are most welcome!
```

Attachment / ConversationUpdate / Typing

adaptivecard / carousel / thumbnail

adaptivecard / carousel / list

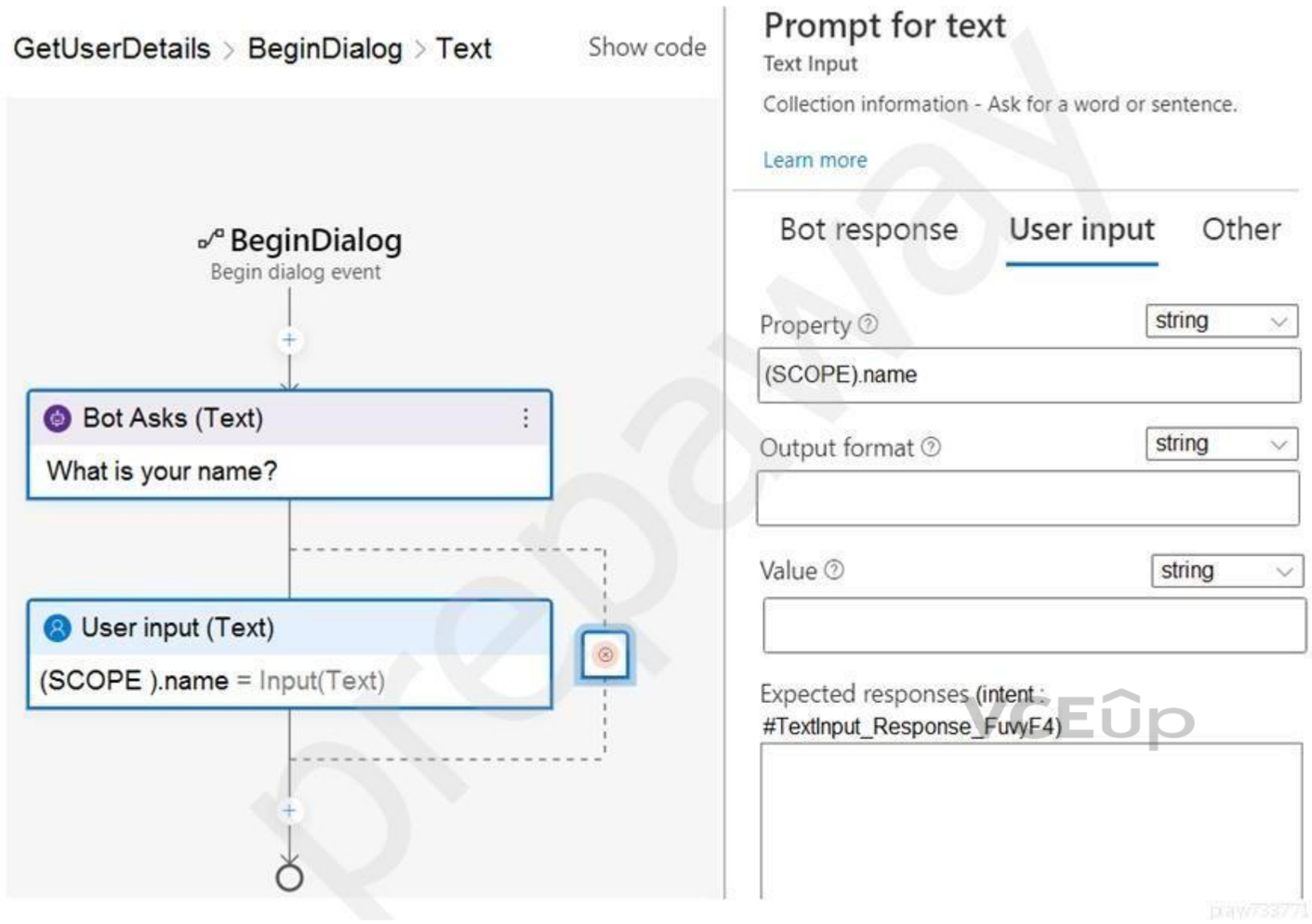
VCEûp

Section: [none]
Explanation

Explanation/Reference:
Reference: https://docs.microsoft.com/en-us/azure/bot-service/bot-builder-howto-add-media-attachments?view=azure-bot-service-4.0&tabs=csharp

QUESTION 14
You are building a chatbot by using the Microsoft Bot Framework Composer as shown in the exhibit. (Click the **Exhibit** tab.)

VCEûp



The chatbot contains a dialog named GetUserDetails. GetUserDetails contains a TextInput control that prompts users for their name.

The user input will be stored in a property named `name`.

You need to ensure that you can dispose of the property when the last active dialog ends.

Which scope should you assign to `name`?

A. `dialog`
B. `user`
C. `turn`
D. `conversation`

Correct Answer: A
Section: [none]
Explanation

Explanation/Reference:
Explanation:

VCEUp

The dialog scope associates properties with the active dialog. Properties in the dialog scope are retained until the dialog ends.

Incorrect Answers:
A: The conversation scope associates properties with the current conversation. Properties in the conversation scope have a lifetime of the conversation itself. These properties are in scope while the bot is processing an activity associated with the conversation (for example, multiple users together in a Microsoft Teams channel).

B: The user scope associates properties with the current user. Properties in the user scope do not expire. These properties are in scope while the bot is processing an activity associated with the user.

C: The turn scope associates properties with the current turn. Properties in the turn scope expire at the end of the turn.

Reference: https://docs.microsoft.com/en-us/composer/concept-memory?tabs=v2x

QUESTION 15
DRAG DROP

You have a chatbot that uses a QnA Maker application.

You enable active learning for the knowledge base used by the QnA Maker application.

You need to integrate user input into the model.

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: [none]
Explanation

Explanation/Reference:
Explanation:
Step 1: For the knowledge base, select Show active learning suggestions.
In order to see the suggested questions, on the Edit knowledge base page, select View Options, then select Show active learning suggestions.

Step 2: Approve and reject suggestions.

Each QnA pair suggests the new question alternatives with a check mark, ✔, to accept the question or an x to reject the suggestions. Select the check mark to add the question.

Step 3: Save and train the knowledge base.
Select Save and Train to save the changes to the knowledge base.

Step 4: Publish the knowledge base.

Select Publish to allow the changes to be available from the GenerateAnswer API.

When 5 or more similar queries are clustered, every 30 minutes, QnA Maker suggests the alternate questions for you to accept or reject.

Reference:
https://docs.microsoft.com/en-us/azure/cognitive-services/qnamaker/how-to/improve-knowledge-base

QUESTION 16 You need to enable speech
capabilities for a chatbot.

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

NOTE: Each correct selection is worth one point.

A. Enable WebSockets for the chatbot app.
B. Create a Speech service.
C. Register a Direct Line Speech channel.
D. Register a Cortana channel.

VCEUp

E. Enable CORS for the chatbot app.

F. Create a Language Understanding service.

Correct Answer: ABC
Section: [none]
Explanation

Explanation/Reference:
Explanation:
You can use the Speech service to voice-enable a chat bot.

The Direct Line Speech channel uses the text-to-speech service, which has neural and standard voices.

You'll need to make a small configuration change so that your bot can communicate with the Direct Line Speech channel using web sockets.

Reference:
https://docs.microsoft.com/en-us/azure/cognitive-services/speech-service/tutorial-voice-enable-your-bot-speech-sdk

VCEUp

VCEûp

Testlet 2

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.

Overview

A company named Wide World Importers is developing an e-commerce platform.

You are working with a solutions architect to design and implement the features of the e-commerce platform. The platform will use microservices and a serverless environment built on Azure.

Wide World Importers has a customer base that includes English, Spanish, and Portuguese speakers.

Existing Environment

Applications

Wide World Importers has an App Service plan that contains the web apps shown in the following table.

Name	Description
Product Management	An app used by employees to create and manage products. The app and the expected inputs from the employees are in English.
Inventory Tracking	An app used by employees to manage inventory when dispatching orders, receiving refunds, and receiving consignments from suppliers.

Azure Resources

You have the following resources:

- An Azure Active Directory (Azure AD) tenant
  - The tenant supports internal authentication.
  - All employees belong to a group named AllUsers.
  - Senior managers belong to a group named LeadershipTeam.
- An Azure Functions resource
  - A function app posts to Azure Event Grid when stock levels of a product change between OK, Low Stock, and Out of Stock. The function app uses the - Azure Cosmos DB change feed.- An Azure Cosmos DB account
  - The account uses the Core (SQL) API.
  - The account stores data for the Product Management app and the Inventory Tracking app.
- An Azure Storage account
  - The account contains blob containers for assets related to products.
  - The assets include images, videos, and PDFs.
- An Azure Cognitive Services resource named wwics
- A Video Indexer resource named wwivi

Requirements

Business Goals

VCEUp

Wide World Importers wants to leverage AI technologies to differentiate itself from its competitors. **Planned**

Changes

Wide World Importers plans to start the following projects:

- A product creation project: Help employees create accessible and multilingual product entries, while expediting product entry creation.
- A smart e-commerce project: Implement an Azure Cognitive Search solution to display products for customers to browse.
- A shopping on-the-go project: Build a chatbot that can be integrated into smart speakers to support customers.

Business Requirements

Wide World Importers identifies the following business requirements for all the projects:

- Provide a multilingual customer experience that supports English, Spanish, and Portuguese.
- Whenever possible, scale based on transaction volumes to ensure consistent performance.
- Minimize costs.

Governance and Security Requirements

Wide World Importers identifies the following governance and security requirements:

- Data storage and processing must occur in datacenters located in the United States.
- Azure Cognitive Services must be inaccessible directly from the internet.

Accessibility Requirements

Wide World Importers identifies the following accessibility requirements:

- All images must have relevant alt text.
- All videos must have transcripts that are associated to the video and included in product descriptions.
- Product descriptions, transcripts, and alt text must be available in English, Spanish, and Portuguese.

Product Creation Requirements

Wide World Importers identifies the following requirements for improving the Product Management app:

- Minimize how long it takes for employees to create products and add assets.
- Remove the need for manual translations.

Smart E-Commerce Requirements

Wide World Importers identifies the following requirements for the smart e-commerce project:

- Ensure that the Cognitive Search solution meets a Service Level Agreement (SLA) of 99.9% availability for searches and index writes.
- Provide users with the ability to search insight gained from the images, manuals, and videos associated with the products.
- Support autocompletion and autosuggestion based on all product name variants.
- Store all raw insight data that was generated, so the data can be processed later.
- Update the stock level field in the product index immediately upon changes.
- Update the product index hourly.

Shopping On-the-Go Requirements

Wide World Importers identifies the following requirements for the shopping on-the-go chatbot:

- Answer common questions.
- Support interactions in English, Spanish, and Portuguese.
- Replace an existing FAQ process so that all Q&A is managed from a central location.
- Provide all employees with the ability to edit Q&As. Only senior managers must be able to publish updates.
- Support purchases by providing information about relevant products to customers. Product displays must include images and warnings when stock levels are low or out of stock.

Product JSON Sample

VCEûp

You have the following JSON sample for a product.

```
{
    "sku": "b1",
    "name": {
        "en":"Bicycle",
        "es": "Bicicleta",
        "pt": "Bicicleta"
    },
    "stocklevel": "Out of Stock",
    "description": {
        "en":"Bicycle",
        "es": "Bicicleta",
        "pt": "Bicicleta"
    },
    "image":
{"uri": "https://upload.worldwideimporters.org/bicycle.jpg",
          "alttext": {
               "en":"Bicycle",
               "es": "Bicicleta",
               "pt": "Bicicleta"
        }
      },
    "createdUtc": "2020-02-14T06:08:39Z",
    "language": "en"

}
```

QUESTION 1 HOTSPOT

You are developing the shopping on-the-go project.

You are configuring access to the QnA Maker resources.

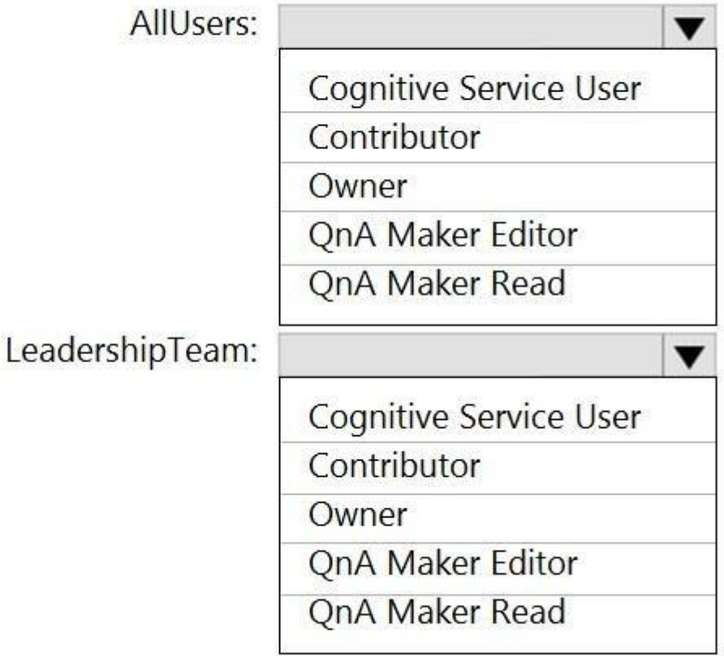
Which role should you assign to AllUsers and LeadershipTeam? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

VCEûp

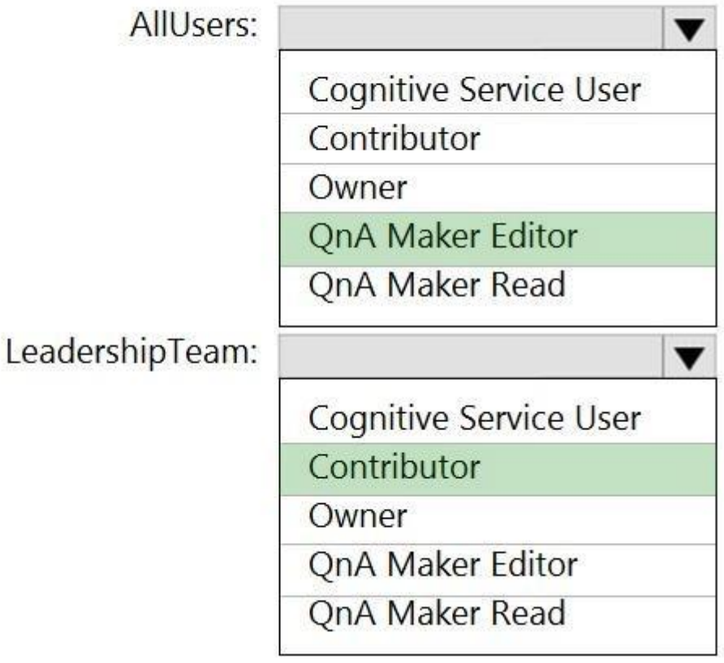
Answer Area



VCEûp

Correct Answer:

Answer Area



VCEUp

Section: [none]
Explanation

Explanation/Reference:
Explanation:

Box 1: QnA Maker Editor
Scenario: Provide all employees with the ability to edit Q&As.

The QnA Maker Editor (read/write) has the following permissions:
Create KB API
Update KB API
Replace KB API
Replace Alterations
"Train API" [in new service model v5]

Box 2: Contributor
Scenario: Only senior managers must be able to publish updates.
Contributor permission: All except ability to add new members to roles

Reference: https://docs.microsoft.com/en-us/azure/cognitive-services/qnamaker/reference-role-based-access-control

QUESTION 2 HOTSPOT

You are developing the shopping on-the-go project.

You need to build the Adaptive Card for the chatbot.

How should you complete the code? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

Hot Area:

VCEUp

VCEup

Answer Area

```
version": "1.3",
"body": [
    {
        "type": "TextBlock",
        "size": "Medium",
        "weight": "Bolder",
        "text": "${ [ ▼ ] }"
```

if(language = = 'en', 'en', name)
name
name.en
name[language]

```
},
{
        "type": "TextBlock",
```

"$when": "${stockLevel ! = 'OK'}"
"$when": "${stockLevel = = 'OK'}"
"$when": "${stockLevel.OK}"

```
        color : Attention
},
{
        "type": "Image",
        "url": "${image.uri}",
        "size": "Medium",
        "alText": "${ [ ▼ ] }"
```

image.altText.en
image.altText.language
image.altText["language"]
image.altText[language]

```
    }
]
}
```

Correct Answer:

VCEûp

Answer Area

```
version": "1.3",
"body": [
    {
        "type": "TextBlock",
        "size": "Medium",
        "weight": "Bolder",
        "text": "${ [ ▼ ] }"
    },
    {
        "type": "TextBlock",
        [ ▼ ]
        color : Attention
    },
    {
        "type": "Image",
        "url": "${image.uri}",
        "size": "Medium",
        "alText": "${ [ ▼ ] }"
    }
]
}
```

- "text": "${ ▼ }"
  - if(language = = 'en', 'en', name)
  - name
  - name.en
  - name[language]
- "type": "TextBlock", ▼
  - "$when": "${stockLevel ! = 'OK'}"
  - "$when": "${stockLevel = = 'OK'}"
  - "$when": "${stockLevel.OK}"
- "alText": "${ ▼ }"
  - image.altText.en
  - image.altText.language
  - image.altText["language"]
  - image.altText[language]

Section: [none]
Explanation

Explanation/Reference:
Explanation:
Box 1: name.en

VCEûp

Box 2: "$when": "${stockLevel != 'OK'}"
Product displays must include images and warnings when stock levels are low or out of stock.

Box 3:image.altText.en

VCEûp