# Demo Questions

## Microsoft AI-100 Exam

**Designing and Implementing an Azure AI Solution**

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Question #1*Topic 1*

HOTSPOT -
You are designing an application to parse images of business forms and upload the data to a database. The upload process will occur once a week.
You need to recommend which services to use for the application. The solution must minimize infrastructure costs.
Which services should you recommend? To answer, select the appropriate options in the answer area.
NOTE: Each correct selection is worth one point.

Hot Area:

## Answer Area

Parse the images:

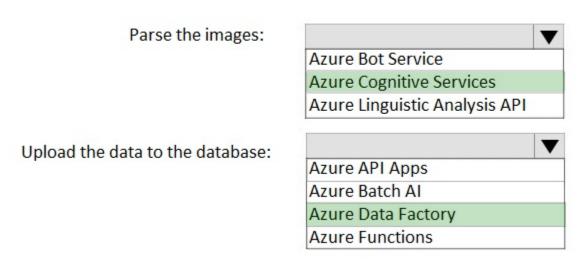| Azure Bot Service |
| Azure Cognitive Services |
| Azure Linguistic Analysis API |

Upload the data to the database:

| Azure API Apps |
| Azure Batch AI |
| Azure Data Factory |
| Azure Functions |

**Correct Answer:**

## Answer Area

Parse the images:

| Azure Bot Service |
| Azure Cognitive Services |
| Azure Linguistic Analysis API |

Upload the data to the database:

| Azure API Apps |
| Azure Batch AI |
| Azure Data Factory |
| Azure Functions |

Box 1: Azure Cognitive Services -
Azure Cognitive Services include image-processing algorithms to smartly identify, caption, index, and moderate your pictures and videos.
Not: Azure Linguistic Analytics API, which provides advanced natural language processing over raw text.

Box 2: Azure Data Factory -

The Azure Data Factory (ADF) is a service designed to allow developers to integrate disparate data sources. It is a platform somewhat like SSIS in the cloud to manage the data you have both on-prem and in the cloud.

It provides access to on-premises data in SQL Server and cloud data in Azure Storage (Blob and Tables) and Azure SQL Database.

References:

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

https://www.jamesserra.com/archive/2014/11/what-is-azure-data-factory/

Question #2*Topic 1*

HOTSPOT -

You plan to deploy an Azure Data Factory pipeline that will perform the following:

☞ Move data from on-premises to the cloud.

☞ Consume Azure Cognitive Services APIs.

You need to recommend which technologies the pipeline should use. The solution must minimize custom code.

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

NOTE: Each correct selection is worth one point.

Hot Area:

## Answer Area

Move data from on-premises to the cloud: ▼

| |
|---|
| Azure-SSIS Integration Runtime |
| Common language runtime (CLR) |
| Integration Runtime (IR) |
| Self-hosted integration runtime |

Consume Cognitive Services APIs: ▼

| |
|---|
| Azure API Management |
| Azure Logic Apps |
| WebJobs in Azure |

**Correct Answer:**

## Answer Area

Move data from on-premises to the cloud:

| |
|---|
| Azure-SSIS Integration Runtime |
| Common language runtime (CLR) |
| Integration Runtime (IR) |
| **Self-hosted integration runtime** |

Consume Cognitive Services APIs:

| |
|---|
| Azure API Management |
| **Azure Logic Apps** |
| WebJobs in Azure |

Box 1: Self-hosted Integration Runtime
A self-hosted IR is capable of running copy activity between a cloud data stores and a data store in private network.
Not Azure-SSIS Integration Runtime, as you would need to write custom code.

Box 2: Azure Logic Apps -
Azure Logic Apps helps you orchestrate and integrate different services by providing 100+ ready-to-use connectors, ranging from on-premises SQL Server or SAP to Microsoft Cognitive Services.
Incorrect:
Not Azure API Management: Use Azure API Management as a turnkey solution for publishing APIs to external and internal customers.
References:
https://docs.microsoft.com/en-us/azure/data-factory/concepts-integration-runtime
https://docs.microsoft.com/en-us/azure/logic-apps/logic-apps-examples-and-scenarios

Question #3*Topic 1*

HOTSPOT -
You need to build an interactive website that will accept uploaded images, and then ask a series of predefined questions based on each image.
Which services should you use? To answer, select the appropriate options in the answer area.
NOTE: Each correct selection is worth one point.

Hot Area:

## Answer Area
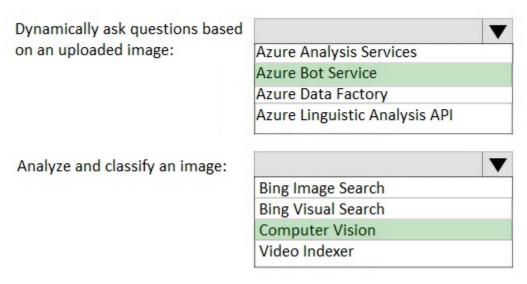
Dynamically ask questions based on an uploaded image:

| Azure Analysis Services |
|---|
| Azure Bot Service |
| Azure Data Factory |
| Azure Linguistic Analysis API |

Analyze and classify an image:

| Bing Image Search |
|---|
| Bing Visual Search |
| Computer Vision |
| Video Indexer |

**Correct Answer:**

## Answer Area

Dynamically ask questions based on an uploaded image:

| Azure Analysis Services |
|---|
| Azure Bot Service |
| Azure Data Factory |
| Azure Linguistic Analysis API |

Analyze and classify an image:

| Bing Image Search |
|---|
| Bing Visual Search |
| Computer Vision |
| Video Indexer |

Box 1: Azure Bot Service -

Box 2: Computer Vision -
The Computer Vision Analyze an image feature, returns information about visual content found in

an image. Use tagging, domain-specific models, and descriptions in four languages to identify content and label it with confidence. Use Object Detection to get location of thousands of objects within an image. Apply the adult/racy settings to help you detect potential adult content. Identify image types and color schemes in pictures.
References:
https://azure.microsoft.com/en-us/services/cognitive-services/computer-vision/

Question #4*Topic 1*

You are designing an AI solution that will analyze millions of pictures.
You need to recommend a solution for storing the pictures. The solution must minimize costs. Which storage solution should you recommend?

- A. an Azure Data Lake store
- B. Azure File Storage
- C. Azure Blob storage
- D. Azure Table storage

**Correct Answer:** *C*
Data Lake will be a bit more expensive although they are in close range of each other. Blob storage has more options for pricing depending upon things like how frequently you need to access your data (cold vs hot storage).
References:
http://blog.pragmaticworks.com/azure-data-lake-vs-azure-blob-storage-in-data-warehousing

Question #5*Topic 1*

You are configuring data persistence for a Microsoft Bot Framework application. The application requires a structured NoSQL cloud data store.
You need to identify a storage solution for the application. The solution must minimize costs. What should you identify?

- A. Azure Blob storage
- B. Azure Cosmos DB
- C. Azure HDInsight
- D. Azure Table storage

**Correct Answer:** *D*
Table Storage is a NoSQL key-value store for rapid development using massive semi-structured datasets

You can develop applications on Cosmos DB using popular NoSQL APIs.

Both services have a different scenario and pricing model.

While Azure Storage Tables is aimed at high capacity on a single region (optional secondary read only region but no failover), indexing by PK/RK and storage- optimized pricing; Azure Cosmos DB Tables aims for high throughput (single-digit millisecond latency), global distribution (multiple failover), SLA-backed predictive performance with automatic indexing of each attribute/property and a pricing model focused on throughput.

References:

https://db-engines.com/en/system/Microsoft+Azure+Cosmos+DB%3BMicrosoft+Azure+Table+Storage