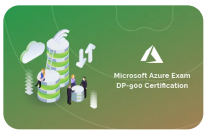
← Back to the **Course**



Level: Intermediate

Microsoft Azure Exam DP-900 Certification

Free Test

Completed on **Thu, 18 Nov 2021**

1st	9/15	60.00%
Attempt	Marks Obtained	Your Score

0h 8m 3s	FAIL
Time Taken	Result

Domain wise Quiz Performance Report

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No.	Domain	Total Question	Correct	Incorrect	Unattempted
1	Describe core data concepts	4	2	2	0
2	Describe how to work with relational data on Azure	4	3	1	0
3	Describe how to work with non-relational data on Azure	3	2	1	0
4	Describe an analytics workload on Azure	4	2	2	0
Total	**All Domains**	**15**	**9**	**6**	**0**

Review the Answers

Filter By All Questions

Question 1

Correct

Domain: Describe core data concepts

The common tasks and responsibilities of a data analyst include,

- A. Finding hidden patterns using data right
- B. Focuses only on the available data
- C. Restricts access to data in the company
- D. Arrives at conclusions with one-step analysis

Explanation:

Correct Answer: A

A data analyst uses various techniques and tools for collating data from different sources to visualize the data in an understandable and relevant format. Data analysts use the visualization tools for the transformation of data into graphical formats that can help in finding useful patterns in the data.

Option A is CORRECT. Data analysts are primarily responsible for using visualization tools, and their skills in using data can help them in the transformation of data into understandable formats according to business requirements.

Option B is incorrect. Data analysts combine the resultant sets of data from different sources, and in some cases; they rely on live operational data.

Option C is incorrect. Data analysts have to share their data visualization reports with employees in other departments while also addressing the responsibility of integrating data from many sources for better insights.

Option D is incorrect. Data analysts don't just observe the data from different sources arranged in a specific format to deliver insights. They have to refine the data by removing redundancies and errors in raw data from different sources and transform it, followed by improvements before visualizing them into desired formats.

Reference:

To know more about the tasks and responsibilities of data analysts refer to the following Azure documentation,

https://docs.microsoft.com/en-us/learn/modules/explore-roles-responsibilities-world-of-data/5-review-tasks-tools-for-data-visualization-reporting

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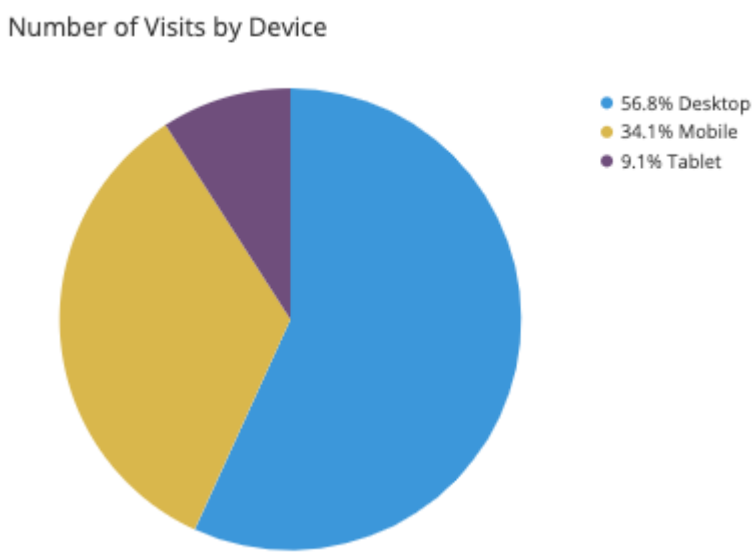
Question 2

Correct

Domain: Describe core data concepts

Choose the right type of the following graph.



A. Bar chart

B. Pie chart right

C. Tree map

D. Line Chart

E. Scatter Chart

Explanation:

Correct Answer: B

A pie chart displays the division of the total amount among different categories as a circle divided into radial slices. A single slice in the circle represents a category and the size of the slice represents the proportion of that category out of the total.

Option A is incorrect. A bar chart displays numeric values against different categories in a 2-axis plot. One axis lists the category levels and for each category, one bar is plotted, and the length of the bar along the other axis represents the numeric value assigned to that category.

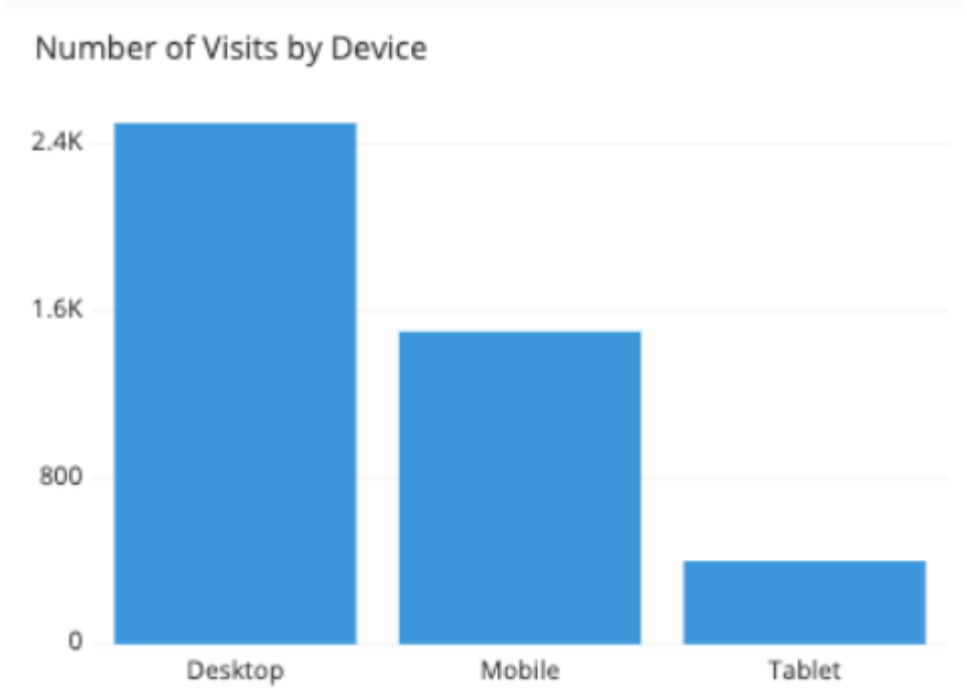


Figure: An example of bar chart

Option B is correct. As in the above diagram, the categories and their share are denoted by the slices of the circle. The above diagram is an example of a Pie chart.

Option C is incorrect. Treemap is a chart of colored rectangles where size represents the relative value of each item. They can be hierarchical, with rectangles nested within the main rectangles.

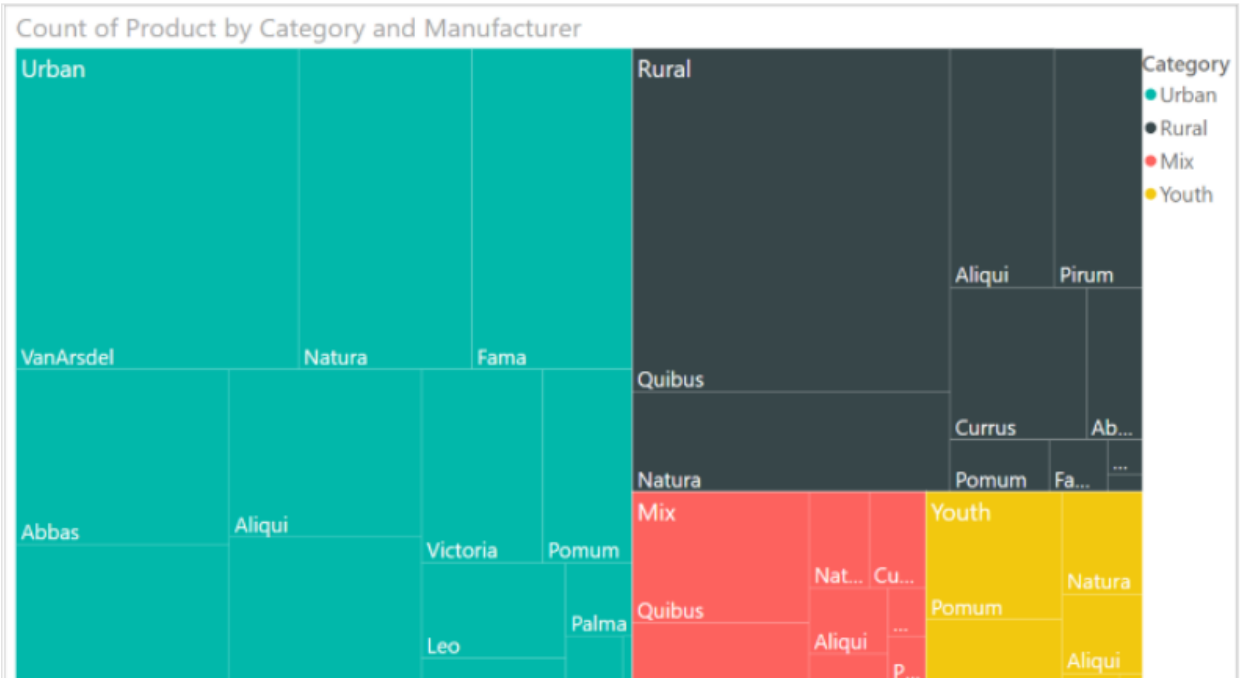


Figure: An example of TreeMap

Option D is incorrect. The line chart emphasizes the overall shape of an entire series of values, generally over time.

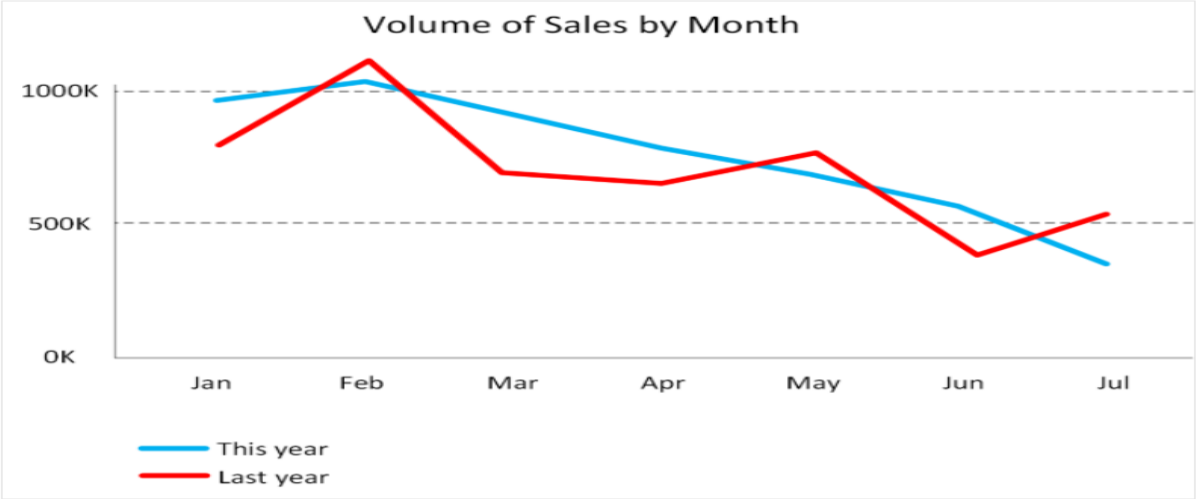


Figure: Example of a Line Chart

Option E is incorrect. A scatter chart displays the relationship between two numerical values.

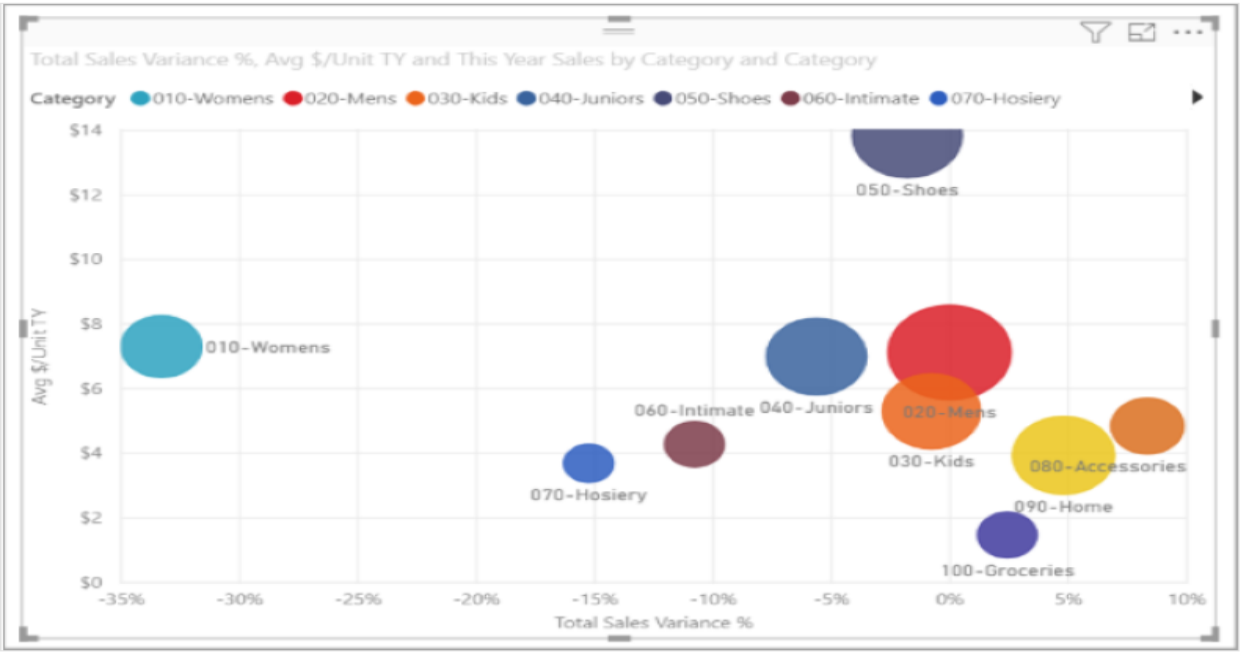


Figure: An example of Scatter chart

References:

To know more, please refer to the Azure documentation below:

https://docs.microsoft.com/en-us/learn/modules/explore-concepts-of-data-analytics/3-explore-data-visualization

https://chartio.com/learn/charts/how-to-choose-pie-chart-vs-bar-chart/

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Question 3 Incorrect

Domain: Describe core data concepts0

In Azure Data Lake storage, there is some important data present in the files. You need to retrieve and use this data to fill the tables present in Azure Synapse Analytics. Which of the following processing options would you use? (Choose the best option)

A. Synapse Link wrong

B. Synapse Spark pool

C. Synapse pipelines

D. Synapse SQL pool right

Explanation:

Correct Answer: D

Explanation:

In Azure Synapse Analytics, SQL pool can be used in the following cases:

Complex reporting. Transact-SQL can be optimally used for running complex SQL queries, summarizing, and aggregating the data.

Data ingestion. PolyBase helps you in retrieving the data from multiple external sources and change it into a tabular type/format. This data can be reformatted and saved as tables in Azure Synapse.

Option A is incorrect. Synapse link enables you to connect to Cosmos DB, not Azure Data Lake Storage.

Option B is incorrect. Although Spark pool can be used for extracting the data from Data Lake storage, it is not the best solution in the given case.

Option C is incorrect. Synapse pipelines can't be used to retrieve the data from Data Lake Storage.

Option D is correct. Polybase from Synapse SQL Pool is the best solution in the given case.

Reference:

To know more about how to access external data from Azure Synapse Analytics using Polybase, please visit the below-given link:

https://www.sqlservercentral.com/articles/access-external-data-from-azure-synapse-analytics-using-polybase

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Question 4

Incorrect

Domain: Describe core data concepts

Which of the following are the roles and responsibilities of a database administrator? (Choose 3 Options)

- [x] A. To install and upgrade the database server and application tools. right
- [ ] B. To enroll the users and maintain system security. right
- [x] C. To develop, construct, test, and maintain the databases and data structures. wrong
- [x] D. To monitor and optimize the performance of the database right
- [ ] E. To Prepare the data for prescriptive and predictive modeling

Explanation:

Correct Answers: A, B and D

Database Administrator is tasked to manage and organize the databases. The main job of a database administrator is to ensure that data is available and protected from loss, theft, and corruption and is easily accessible whenever needed. The following figure shows the common roles and responsibilities of a database administrator:

To install and upgrade the database server and application tools.

To allocate system storage and plan storage needs for the database system.

To modify the database structure, as necessary, from information provided by application developers.

To enroll the users and maintain system security.

To ensure compliance with the database vendor license agreement.

To control and monitor user access to the database.

To monitor and optimize the performance of the database.

To do Planning for backup and recovery of database information.

To maintain archived data.

To ensure Backing up and restoring databases.

To contact database vendor for technical support.

To generate various reports from the database using appropriate queries as per needs.

To manage and monitor data replication.

Option A is correct. To install and upgrade the database server and application tools is one of the common roles and responsibilities of a database administrator.

Option B is correct. To enroll the users and maintain system security is one of the common roles and responsibilities of a database administrator.

Option C is incorrect. To develop, construct, test, and maintain the databases and data structures is the responsibility of the data engineer, not the data administrator.

Option D is correct. To monitor and optimize the performance of the database is one of the common roles and responsibilities of a database administrator.

Option E is incorrect. To Prepare the data for prescriptive and predictive modeling is the responsibility of the data engineer, not the data administrator

References:

To know more about the roles and responsibilities of a Data Administrator, please refer to the Azure documentation below:

https://docs.microsoft.com/en-us/learn/modules/explore-roles-responsibilities-world-of-data/3-review-tasks-tools-for-database-administration

https://docs.microsoft.com/en-us/learn/modules/explore-roles-responsibilities-world-of-data/4-review-tasks-tools-for-data-engineering

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Question 5

Correct

Domain: Describe how to work with relational data on Azure

Fill in the blank:

A database index allows a query to _____ data efficiently from a database.

A. Delete

B. Retrieve right

C. Find

D. Search

Explanation:

Correct Answer: B

A database index consists of one or more keys and is related to the specific tables. It allows a query to retrieve data efficiently from a database. As a database index increases the speed of data retrieval, it is required to define correct indexes for each table.

Option A is incorrect. A database index allows a query to retrieve, not delete data efficiently from a database.

Option B is correct. A database index allows a query to retrieve data efficiently from a database.

Option C is incorrect. A database index allows a query to retrieve, not find data efficiently from a database.

Option D is incorrect. A database index allows a query to retrieve, not search for data efficiently from a database.

Reference: To know more about Database Index, refer to the link below:

https://www.essentialsql.com/what-is-a-database-index/

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Question 6

Correct

Domain: Describe how to work with relational data on Azure

Which of the following is used to create and modify the structure of database objects?

A. DQL (Data Query Language)

B. DDL (Data Definition Language) right

C. DCL (Data Control Language)

D. DML (Data Manipulation Language)

Explanation:

Correct Answer: B

SQL is a database language used to create a database and perform certain operations on the existing database. There are four different types of SQL commands -

DDL (Data Definition Language)

DQL (Data Query Language)

DML (Data Manipulation Language)

DCL (Data Control Language)

Data Definition Language (DDL) used to create and modify the structure of database objects.

Option A is incorrect. Data Query Language (DQL) is used to perform queries on the data within schema objects.

Option B is correct. Data Definition Language (DDL) used to create and modify the structure of database objects.

Option C is incorrect. Data Control Language (DCL) is used for the permissions, rights, and other controls of the database system.

Option D is incorrect. Data Manipulation Language (DML) is used for the manipulation of data present in the database.

Reference: To know more about the different types of SQL commands, refer to the link below:

https://www.geeksforgeeks.org/sql-ddl-dql-dml-dcl-tcl-commands/

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Question 7

Corr

Domain: Describe how to work with relational data on Azure

Which of the following categories of delivery models do Azure data services belong to?

A. IaaS

B. PaaS right

C. SaaS

D. DaaS

Explanation:

Correct Answer : B

PaaS or Platform as a Service delivery model involves the installation and management of database software by the user. It allows the specification of resources required for specific operations such as the size of the database, number of users, and desired levels of performance.

Option A is incorrect. IaaS or Infrastructure as a Service involves creating a virtual infrastructure in the cloud that resembles the working of an on-premises data center.

Option B is CORRECT. Azure data services don't deal with creating virtual infrastructures, they allow users to install and manage the services of the database software. Azure takes care of the management and other desired configurations such as the addition or removal of virtual machines according to your requirements with PaaS.

Option C is incorrect. SaaS or Software as a Service delivery models deal with the particular software packages capable of installation and operations on virtual hardware on the cloud.

Option D is incorrect. DaaS or Desktop or Data as a Service delivery models deal with the facility of pre-configured system configurations for a user machine delivered on a virtualized environment.

Reference:

To know more about service delivery models of Azure Data Services, you can refer to the following Azure documentation,

https://docs.microsoft.com/en-us/learn/modules/explore-relational-data-offerings/2-azure-data-services

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Question 8

Incorrect

Domain: Describe how to work with relational data on Azure

Fill in the blank:

The _____ contains trusted Fabric Controllers and supporting systems.

A. Device VLAN

B. Main VLAN

C. FC VLAN right

D. All the Above wrong

Explanation:

Correct Answer - C

The Azure production network is segregated into three primary VLANs in a logical manner.

The FC VLAN: It contains supporting systems and trusted Fabric Controllers

The Main VLAN: It interconnects the untrusted customer nodes

The Device VLAN: It contains a trusted network and all other infrastructure devices

Option A is incorrect. The Device VLAN contains a trusted network and all other infrastructure devices.

Option B is incorrect. The main VLAN interconnects the untrusted customer nodes.

Option C is correct. The FC VLAN contains supporting systems and trusted Fabric Controllers.

Option D is incorrect. Azure SQL Database provides a firewall functionality to protect customer data. It's not a type of VLAN.

Reference: To know more about the VLAN Isolation, refer to the link below:

https://docs.microsoft.com/en-us/azure/security/fundamentals/infrastructure-sql

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Question 9

Correct Marked for rev

Domain: Describe how to work with non-relational data on Azure

You are working as a Data Associate in an organization. Your client has accomplished the tasks with his Azure CosmoDB account and wants to delete it.

He does not know about the steps to be followed for it. You need to help him to follow the right sequence of steps to clean up his Azure Cosmos DB account. How will you arrange the following steps in the right sequence?

1. Select the created resource group for the quickstart.
2. Search and Select Resource Groups in the Azure Portal Search Bar.
3. Enter the name of the resource group you want to delete and select Delete.
4. Select Delete Resource Group on the Resource Group Overview Page.

- A. 2143 right
- B. 1342
- C. 4231
- D. 1234

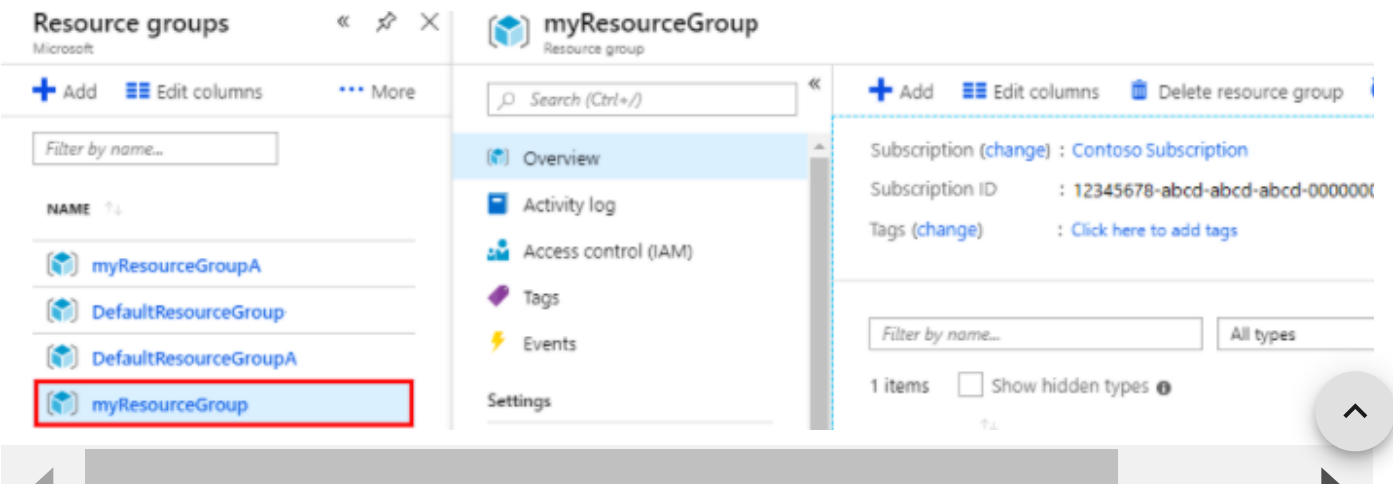
Explanation:

Correct Answer: A

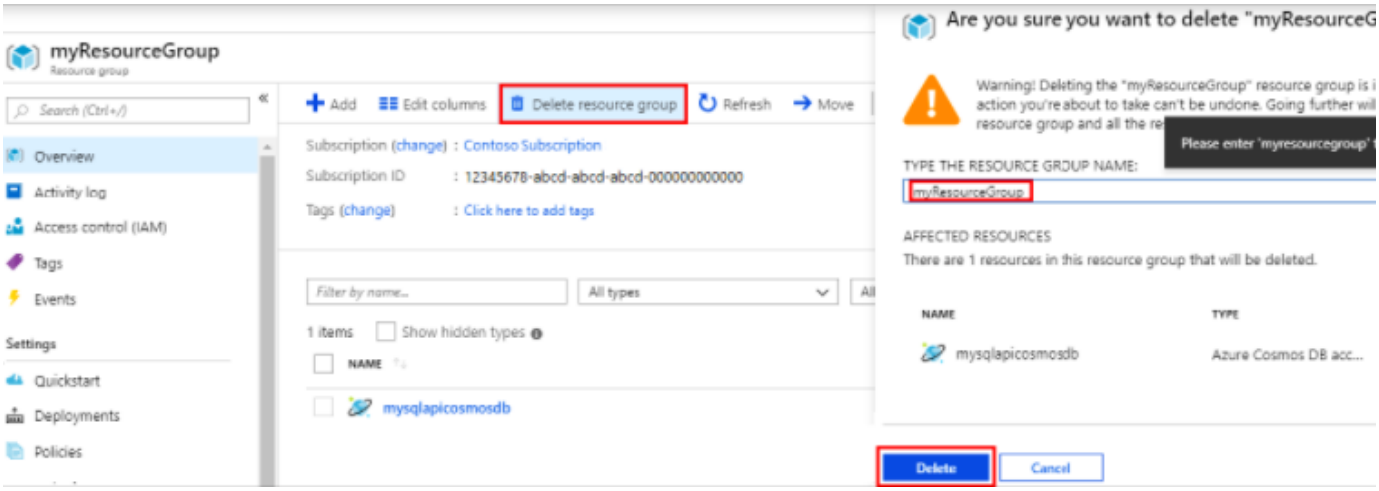
You can delete the Azure resources when you are done with them. In the same manner, when you are done with the Azure Cosmo DB, you can delete your Azure Cosmo DB account. The steps to delete an Azure Cosmo DB account are as below:

1. Search and Select Resource Groups in the Azure Portal Search Bar.

2. Select the created resource group.



3. Select Delete Resource Group on the Resource Group Overview Page.



4. Enter the name of the resource group you want to delete and select Delete.

Option A is correct. Search and Select Resource Groups in the Azure Portal Search Bar, Select the created resource group, Select Delete Resource Group on the Resource Group Overview Page, Enter the name of the resource group you want to delete, and select Delete is the correct sequence of steps to delete an Azure Cosmo DB account.

Option B is incorrect. 1342 doesn't form the correct sequence of steps for the deletion of an Azure Cosmo DB account.

Option C is incorrect. 4321 doesn't form the correct sequence of steps for the deletion of an Azure Cosmo DB account.

Option D is incorrect. 1234 doesn't form the correct sequence of steps for the deletion of an Azure Cosmo DB account.

Reference: To know more about Cosmo DB Resources, refer to the link below:

https://docs.microsoft.com/en-us/azure/cosmos-db/create-cosmosdb-resources-portal

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Question 10 Incorrect

Domain: Describe how to work with non-relational data on Azure

Which of the following characteristics relates closely to NoSQL databases?

A. Cost-effective right

B. Fixed schema

C. Complex relationships wrong

D. Limited scalability

Explanation:

Correct Answer: A

NoSQL databases offer distributed computing and provide reliable mechanisms for storage, processing, and analysis of considerably huge amounts of unstructured data. Therefore, they can ensure better cost advantages.

Option A is CORRECT. NoSQL databases are cost-effective as they don't require normalization on a mandatory basis, and limited focus on ACID (Atomicity, Consistency, Isolation, and Durability) enables easier and flexible management of unstructured data.

Option B is incorrect. NoSQL databases provide support for a flexible schema with capabilities to support unstructured as well as semi-structured data.

Option C is incorrect. NoSQL databases don't involve complex relationships, such as the relationships between different tables in an RDBMS.

Option D is incorrect. NoSQL databases utilize distributed computing to facilitate higher scalability.

Reference:

To learn more about the characteristics of non-relational data, you can refer to the following documentation.

https://docs.rackspace.com/support/how-to/properties-of-rdbmss-and-nosql-databases/#properties-of-nosql-databases

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Question 11

Correct

Domain: Describe how to work with non-relational data on Azure

Your organization needs to design a data store that will have Employees data. The data needs to be stored in the below-given format.

Employee_Id	Employee_Information
1001	FName: Aron LName: Smith Email: abc@ajopo.com
1002	FirstName: Ben Last: Stokes Contact: 123-456-389
1003	FirstName: David LastName: Hussain

Which kind of data store would you use?

A. Document

B. Graph

C. Columnar right

D. Key/Value

Explanation:

Correct Answer: C

Columnar or column family data store stores the data in form of tables having rows, and dynamic columns. This data store is more flexible than relational databases as here each row does not need to have the same columns. This data store is preferable when there is a need to store a large amount of data and the query patterns are predictable.

Option A is incorrect. A Document data store stores the data in documents in JSON (JavaScript Object Notation) format. Here, each document has pairs of fields and values. A field value can be

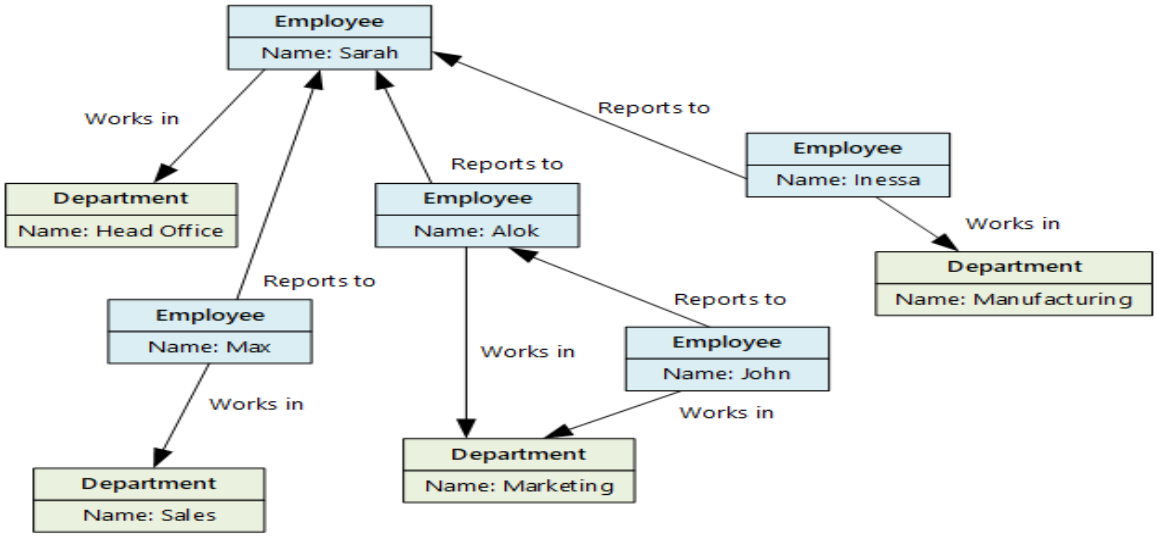
scalar item like number or string, or a compound item like parent-child collection or list. A document has complete data for an entity. For example, an entity can have the details of the customer, order placed by that customer, or both. Below is an example of document data store.

Key	Document

1001	<pre>{
	"CustomerID": 99,
	"OrderItems": [
	{ "ProductID": 2010,
	"Quantity": 2,
	"Cost": 520
	},
	{ "ProductID": 4365,
	"Quantity": 1,
	"Cost": 18
	}],
	"OrderDate": "04/01/2017"
	}</pre>

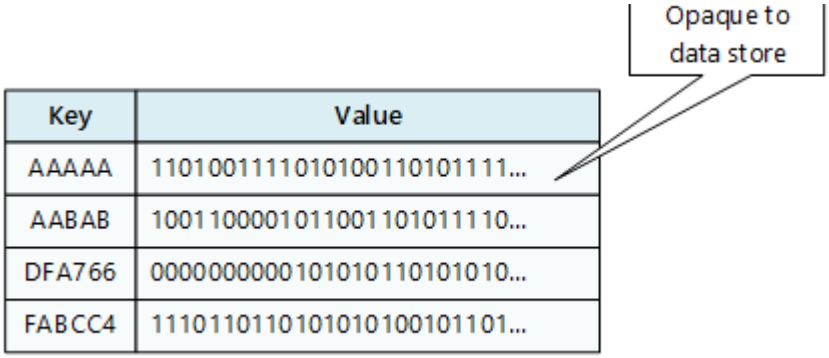
1002	<pre>{
	"CustomerID": 220,
	"OrderItems": [
	{ "ProductID": 1285,
	"Quantity": 1,
	"Cost": 120
	}],
	"OrderDate": "05/08/2017"
	}</pre>

Option B is incorrect. A graph data store provides two types of information in form of nodes and edges. Here, the nodes represent entities, and the edges indicate the relationships among those entities. The following figure shows an example of Graph data store.



Option C is CORRECT as data is available in the format of a table with rows and columns that is the major feature of columnar data type along with additional flexibility in format.

Option D is incorrect. Key/value store is a kind of large hash table where each data value is associated with a unique key. This key is used to store the data with the help of a hashing function. Below is an example of key-value data store.



Reference:

To know more about the different type of data stores, please refer to the Azure doc below:

https://docs.microsoft.com/en-us/azure/architecture/data-guide/big-data/non-relational-data

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Question 12

Correct

Domain: Describe an analytics workload on Azure

Which of the following element of Azure Synapse enables you to access all the Synapse Analytics tools?

A. Synapse Spark pool

B. Synapse pipelines

C. Synapse Link

D. Synapse Studio right

Explanation:

Correct Answer: D

Synapse SQL pool, Synapse Spark pool, Synapse Pipelines, Synapse Link, and Synapse Studio are the elements of Azure Synapse. Out of these elements, Synapse Studio is a web user interface that enables the data engineers to access all the Synapse Analytics tools. Synapse Studio can be used for creating SQL and Spark pools, defining and running pipelines, and configuring links to external data sources.

Option A is incorrect. Synapse Spark Pool is the element that supports Azure Machine Learning through integration with the AzureML and SparkML packages.

Option B is incorrect. A Synapse pipeline represents a logical grouping of activities that collectively perform a task. The activities of the pipeline define the actions to be performed on your data.

Option C is incorrect. Synapse Link is the component that enables you to connect to Azure Cosmos DB. It can be used to perform/run near real-time analytics over the operational data stored in an Azure Cosmos DB.

Option D is correct. Synapse Studio is a web user interface that enables data engineers to access all the Synapse Analytics tools. Synapse Studio can be used for creating SQL and Spark pools, defining and running pipelines, and configuring links to external data sources.

Reference:

To know more about the Azure Synapse, please refer to the Azure documentation below:

https://docs.microsoft.com/en-us/learn/modules/explore-data-storage-processing-azure/3-explore-azure-synapse-analytics

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Question 13

Incorrect

Domain: Describe an analytics workload on Azure

You have retrieved data formatted in a different format from multiple sources. Now, you need to transform the data into a single uniform format. Which of the following data services would you use?

A. Azure Data Factory right

B. Azure Data Lake Storage

C. Azure Databricks wrong

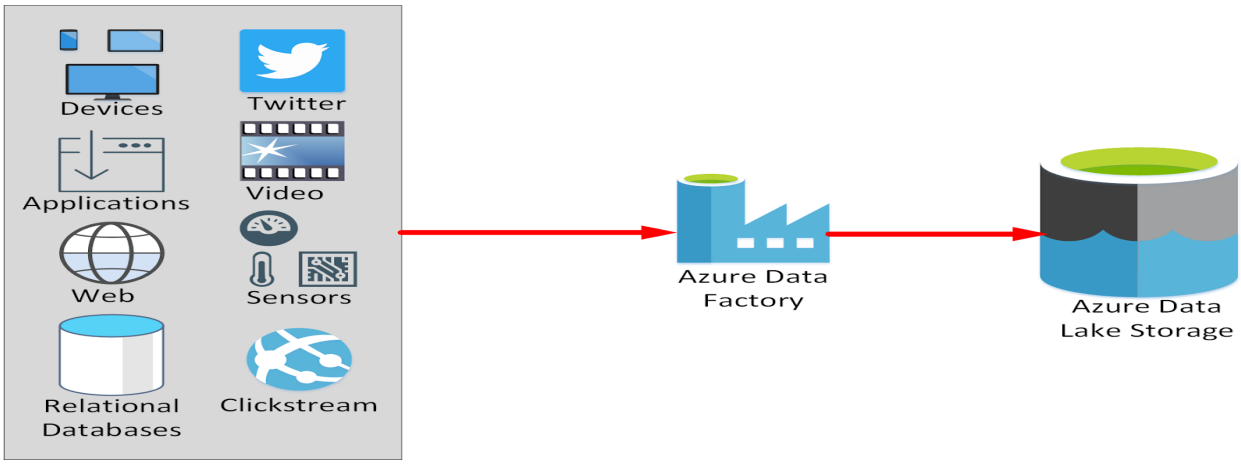
D. None of These

Explanation:

Correct Answer: A

Azure Data Factory is a *data integration service* that allows users to retrieve data from one or multiple data sources, and convert it into the desired format. The various data sources might have different data representation and have *a noise* that is needed to be filtered out. Azure Data Factory allows to extract

only the interesting/required data, and discard the rest. Even if the interesting data is not presented in the required format for processing by other services, it can be transformed into the desired format.



Option A is correct. Azure Data Factory allows transforming the data from multiple sources in the desired uniform format.

Option B is incorrect. Azure Data Lake Storage is a secure cloud platform that offers cost-effective and scalable storage for big data analytics. In an Azure Data Services data warehouse solution, data is generally loaded into Azure Data Lake Storage before it is processed into a structure that supports efficient analysis in Azure Synapse Analytics.

Option C is incorrect. Azure Databricks is an Apache Spark environment that runs on Azure to offer big data processing, streaming, and machine learning.

Option D is incorrect. Azure Data Factory allows users to transform the data from multiple sources in the desired uniform format.

Reference:

To know more about Azure Data Factory, please refer to the Azure documentation below:

https://docs.microsoft.com/en-us/learn/modules/examine-components-of-modern-data-warehouse/3-explore-azure-data-services-warehousing

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Question 14

Correct

Domain: Describe an analytics workload on Azure

Which of the following statements is/are true for batch processing? (Select Multiple)

- [x] A. It processes a large volume of data all at once right
- [ ] B. data is always processed in real-time
- [ ] C. There is no or significantly low latency
- [x] D. there is an expected latency right

Explanation:

Correct Answers: A and D

Batch data processing is an effective method of processing a huge amount of data where a set of transactions is collected over a time period. It involves collecting, entering, and processing data and eventually producing the batch results. In batch processing, latency is common.

Option A is correct. Batch processing processes the large volume of data all at once.

Option B is incorrect. It is real-time data processing that processes the data in real-time.

Option C is incorrect. It is real-time processing where there is no or very low latency.

Option D is correct. In batch processing, there are the expected latencies.

References:

To know more about Batch Data Processing, please refer to the URLs below:

https://www.bmc.com/blogs/what-is-batch-processing-batch-processing-explained/

https://www.7wdata.be/business-analytics/batch-vs-real-time-data-processing/

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Question 15

Incorrect

Domain: Describe an analytics workload on Azure

Select the right sequence for implementing the Extract, Load, and Transform (ELT) process.

- [ ] A. Extract the source data into text files, Prepare the data for loading, Load the data into staging tables with PolyBase or the COPY command, Land the data into Azure Blob storage or Azure Data Lake Store, Transform the data, Insert the data into production tables. wrong

B. Extract the source data into text files, Land the data into Azure Data Lake Store or Azure Blob storage, Prepare the data for loading, Load the data into staging tables with PolyBase or the COPY command, Transform the data, Insert the data into production tables. right

C. Extract the source data into text files, Land the data into Azure Blob storage or Azure Data Lake Store, Prepare the data for loading, Load the data into staging tables with PolyBase or the COPY command, Insert the data into production tables, Transform the data.

D. Extract the source data into text files, Prepare the data for loading, Load the data into staging tables with PolyBase or the COPY command, Land the data into Azure Blob storage or Azure Data Lake Store, Insert the data into production tables, Transform the data.

Explanation:

Correct Answer: B

ELT is a process that extracts the data from a source system, loads it into a SQL pool, and then transforms it.

The basic steps for implementing the Extract, Load, and Transform (ELT) process are:

1. Extract the source data into text files.
2. Land the data into Azure Data Lake Store or Azure Blob storage.
3. Prepare the data for loading.
4. Load the data into staging tables through PolyBase or the COPY command.
5. Transform the data.
6. Insert the data into the production tables.

References:

To know more about the implementation of the Extract, Load, and Transform (ELT) process, please refer to the Azure documentation below:

https://docs.microsoft.com/en-us/azure/synapse-analytics/sql-data-warehouse/design-elt-data-loading

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