# **Domain 1 : Implement Data Solutions:**

## Implement Non-Relational Data Stores:

* Implement a data solution that uses:
  + **Cosmos DB**
  + **Data Lake Storage**
  + **Blob Storage**
* Implement **Data Distribution** and **Partitions**.
* Implement a **consistency model** in Cosmos DB.
* Provision a Non-Relational Data Store.
* Provide Access to data to meet security requirements.
* Implement for: High availability, disaster recovery and global distribution.

## Implement Relational Data Stores:

* Configure elastic pools.
* Configure geo-replication.
* Provide access to data to meet security requirements.
* Implement for: High availability, disaster recovery and global distribution.
* Implement data distribution and partitions for Azure Synapse Analytics.
* Implement Polybase.

## Manage data security:

* Implement data masking
* Encrypt data at rest and in motion.

# **Domain 2: Manage and Develop Data Processing:**

## Develop batch processing solutions:

* Develop Batch P
* Processing solutions using:
  + Data Factory
  + Azure Databricks
* Ingest data by using Polybase.
* Implement the integration runtime for Data Factory.
* Implement Copy Activity within Azure Data Factory.
* Create Linked Services and DataSets.
* Create pipelines and activities.
* Implement Mapping Data Flows in Azure Data Factory.
* Create and schedule triggers.
* Implement Azure Databricks clusters, notebooks, jobs, and autoscaling.
* Ingest Data into Azure Databricks

## Develop Streaming Solutions:

* Configure input and output.
* Select the appropriate windowing functions
* Implement event processing by using Stream Analytics.

# **Domain 3: Monitor and Optimize Data Solutions**

## Monitor Data Storage:

* Monitor relational and non-relational data sources.
* Implement blob storage monitoring.
* Implement Data Lake storage monitoring.
* Implement SQL database monitoring.
* Implement Azure Synapse Analytics Monitoring.
* Implement Cosmos DB monitoring.
* Configure Azure Monitor alerts.
* Implement auditing by using Azure Log Analytics.

## Monitor Data Factory Pipelines:

* Monitor Data Factory pipelines.
* Monitor Azure Databricks.
* Configure Azure Monitor Alerts.
* Implement auditing by using Azure Log Analytics.

## Monitor Data Factory Pipelines:

* Troubleshoot data partitioning bottlenecks.
* Optimize data lake Storage.
* Optimize Stream Analytics.
* Optimize Synapse Analytics
* Optimize SQL database.

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