

## **ADE Modules:**

1. Azure Blob Storage
2. Azure Data Lake Storage
3. Azure Data Factory
4. Azure SQL
5. Azure Data Bricks
6. Azure Synapse

### **1. Azure Blob Storage**

- Detail knowledge of Blob
- Create a container
- Upload a blob to Azure Storage
- Create a Blob
- List of the blobs in a container
- Delete a container
- Download the blob to your local computer
- Azure Key Vaultgx
- Question and Answers

### **2. Azure Data Lake Storage**

- Detail knowledge of Data Lake
- Create Azure Data Lake Gen 2 Account
- Create Folders
- Upload data
- Secure data
- Delete Azure Data Lake
- Question Answer
- Understand Azure Storage & Create Azure Storage Account
- Azure Data Lake Storage (ADLS)
- Understand Azure File Share
- Lab: Azure File Share
- Understand Azure Queue Services
- Lab: Azure Queue Services
- Understand Azure Table Service
- Lab: Azure Table Service
- Lab: Azure Storage Explorer
- Azure Storage Access Keys and SAS token
- Assignment 1: Azure Storage Account

### **3. Azure SQL Server**

- Introduction To Azure SQL
- Create Azure SQL server and enable private IP
- Create Database, table and insert Data

- Queries for Azure SQL
- Access Azure SQL from SSMS and Query it
- Migration of Databases from On Premise to Cloud using the DMA
- Migration of Databases from On Premise to Cloud using the Wizard
- Secure data
- Perform DML activities on Data
- Question Answer

## 4. Azure Data Factory

- What is ETL?
- ETL vs ELT
- Introduction to Azure Data Factory
- **Activities**
- Copy Data
- Set Variable
- Get Metadata
- For Each
- Append Variable
- Delete
- Lookup
- Stored procedure
- Filter
- IF
- Switch
- Execute Pipeline
- **Transformations in Dataflow**
- Sort
- Filter
- Derived
- Conditional split
- Cast
- Surrogate
- Aggregate
- Pivot
- Unpivot
- Rank
- Window
- Union
- Lookup
- Exists
- Join
- Integration Run Time
- Link Service
- Datastore
- Connect Datastore

- Create Pipeline
- Data factory Triggers
- Debug Pipeline
- Schedule Pipeline
- Monitor Pipeline
- Alert Rule
- Lab
- Question Answer

## 5. Azure Data Bricks

- Detail knowledge of Data Bricks
- Delta Lake
- Configure Data Bricks
- Mount Storage
- Notebook
- Read Data
- Store Data
- Create multiple Notebook
- Create Table and Delta table
- User defined functions
- Create Master Notebook
- Implement Loop
- Implement Retry Mechanism
- Schedule Notebook
- Question Answer
- Create Job
- Job Clusters
- Pyspark Basics
- Logging
- Integration with Azure Blob storage
- Integration With Azure SQL Storage
- Hadoop Introduction
- Spark Overview
- Lab: Azur Databricks Workspace creation
- Lab: Reading File and transformations
- Lab: Aggregation, Joins, Sorting
- Lab: Spark SQL
- Lab: Action vs Transformation, Shuffling, Partitioning
- Lab: Azure Databricks Mount ADLS
- Lab: ADF and Azure data bricks integration
- Lab: Spark Delta tables
- Lab: Azure Databricks Cluster management
- Lab: Azure Databricks Job Scheduling
- Lab: Azure Databricks Streaming
- Databricks utilities and library installations

- Question Answer

## 6. Azure Synapse

- Azure Synapse Introduction and account creation
- MPP architecture
- Design Synapse Pipelines
- SQL pools
- Spark Cluster
- Azure Synapse Lab
- Azure Synapse Assignment