

Microsoft Azure Data Fundamentals

Duration: 1 Day

Course Description:

In this course, students will gain foundational knowledge of core data concepts and related Microsoft Azure data services. Students will learn about core data concepts such as relational, non-relational, big data, and analytics, and build their foundational knowledge of cloud data services within Microsoft Azure. Students will explore fundamental relational data concepts and relational database services in Azure. They will explore Azure storage for non-relational data and the fundamentals of Azure Cosmos DB. Students will learn about large-scale data warehousing, real-time analytics, and data visualization.

Intended Audience:

The audience for this course is individuals who want to learn the fundamentals of database concepts in a cloud environment, get basic skilling in cloud data services, and build their foundational knowledge of cloud data services within Microsoft Azure.

Course Outline:

Explore core data concepts

- Introduction
- Identify data formats
- Explore file storage
- Explore databases
- Explore transactional data processing
- Explore analytical data processing

Explore data roles and services

- Introduction
- Explore job roles in the world of data
- Identify data services

Explore fundamental relational data concepts

- Introduction
- Understand relational data
- Understand normalization
- Explore SQL
- Describe database objects

Explore relational database services in Azure

- Introduction
- Describe Azure SQL services and capabilities
- Describe Azure services for open-source databases
- Exercise: Explore Azure relational database services

Explore Azure Storage for non-relational data

- Introduction
- Explore Azure blob storage
- Explore Azure DataLake Storage Gen2
- Explore Azure Files
- Explore Azure Tables
- Exercise: Explore Azure Storage

Explore fundamentals of Azure Cosmos DB

- Introduction
- Describe data warehousing architecture
- Explore data ingestion pipelines
- Explore analytical data stores
- Explore platform-as-a-service (PaaS) solutions
- Exercise: Explore data analytics in Azure with Azure Synapse Analytics
- Explore Microsoft Fabric
- Exercise: Explore Microsoft Fabric

Explore fundamentals of large-scale analytics

- Introduction
- Explore end-to-end analytics with Microsoft Fabric
- Data teams and Microsoft Fabric
- Enable and use Microsoft Fabric

Explore fundamentals of real-time analytics

- Introduction
- Understand batch and stream processing
- Explore common elements of stream processing architecture
- Explore Azure Stream Analytics
- Exercise: Explore Azure Stream Analytics
- Explore Apache Spark on Microsoft Azure
- Exercise: Explore Spark Streaming in Azure Synapse Analytics
- Explore Realtime Analytics in Microsoft Fabric
- Exercise: Explore Realtime Analytics in Microsoft
 Fabric

Explore fundamentals of data visualization

- Introduction
- Describe Power BI tools and workflow
- Describe core concepts of data modeling
- Describe considerations for data visualization
- Exercise Explore fundamentals of data visualization with Power BI