Lab 1 - Explore Synapse

1. Provision an Azure Synapse Analytics workspace

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1. Explore Synapse Studio

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1. Ingest data with a pipeline

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1. View the ingested data

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1. Use a serverless SQL pool to analyze data

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1. Use a Spark pool to analyze data

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1. Use a dedicated SQL pool to query a data warehouse

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1. Delete Azure Resources

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Summary:

Azure Synapse Analytics provides a unified platform for end-to-end data analytics. Using a PowerShell script, we provisioned a Synapse workspace and cloned a GitHub repository into Azure Data Lake Storage Gen2 for future use. Through Synapse Studio, we managed resources and performed tasks like data ingestion using the Copy Data tool to pull data via HTTP into the data lake. SQL queries, including the OPENROWSET function, were used to explore the data, with results visualized as tables or charts. Advanced analytics were conducted using Spark pools and Python notebooks, while a dedicated SQL pool was utilized for querying the data warehouse. To manage costs, the dedicated SQL pool was paused, and the Azure Resource Group was deleted at the end of the process.