Problem Statement 1 : Ingest data from a single table in SQL Server database to Azure Blob storage

I solved this problem by using ADF user interface to create a data factory pipeline that copies data from a SQL Server database to Azure Blob storage.

-I created a data factory.

-I created a storage account (specifically, Blob storage) as a destination/ sink data store.

-I created a self-hosted integration runtime and associate it with an on-premises machine with the SQL Server database to copy data from the SQL Server database on my machine to Blob storage.

-I created SQL Server and Azure Storage linked services.

-I created SQL Server and Azure Blob datasets.

-I created a pipeline with a copy activity to move the data.

-I triggered a pipeline run and monitor the pipeline run.

Problem Statement 2 : Ingest data from multiple tables in SQL Server database to Azure Blob storage

I solved this problem by copying a number of tables from Azure SQL Database to Azure Synapse Analytics.

-I created a data factory.

-I created a self-hosted integration runtime and associate it with an on-premises machine with the SQL Server database.

-I created SQL Server and Azure Storage linked services.

-I created SQL Server and Azure Blob datasets.

-I triggered a pipeline run and monitor the pipeline run.

Problem Statement 3 : Load data from Azure Blob storage to a database in Azure SQLDatabase by using Azure Data Factory.

-I created a data factory

-I created a pipeline with a copy activty

-I triggered a pipeline manually and monitor the pipeline and activity runs

-I encountered some problems while creating the New linked service by inputting wrong Database name and server name which made the connection failed but later connected successfully after the correction.

Problem 4:- In this Problem 4, we saw how we can build a metadata-driven pipeline in Azure Data Factory. Using metadata stored in a key-value pair table in SQL Server, we can use this data to populate parameters of the different datasets. Because of those parameters, we can use a single dataset dynamically to pick up multiple types of files or write to different tables in a database. The ForEach iterator loops over the metadata and executes a CopyData activity dynamically.

Problem encountered- I created only one parameter for the Delimiter and none for the Folder and I didn’t change the object value, so I have to rectify the problems.

Problem 5:- Prepare the data store to store the watermark value.

* I Created a data factory.
* I Created linked services.
* I Create source, sink, and watermark datasets.
* Create a pipeline.
* Run the pipeline.
* Monitor the pipeline run.
* Review results
* Add more data to the source.
* Run the pipeline again.
* Monitor the second pipeline run
* Review results from the second run

In this Problem, the pipeline copied data from a single table in SQL Database to Blob storage.

Problem encountered- I specified wrong values for the stored procedure parameters, so I had to rectify the problem after going through the Microsoft documentation and shouting out to the team.

Problem 6:- I Created a Database named universitydb

- I Created tables and relations among them as in the diagram above

- I Inserted fake data into these tables

- I Wrote a query to show Student Id, Name, Course Name, Teacher, Grade, Attempt information.

Problem 7:- I Created a Database named personinfo

2. I Created tables and relations among them as in the diagram above

3. I Inserted fake data into these tables

4. I Wrote a query to show First Name, Last Name, City, Contact Detail information.

Problem encountered:- *I encountered a problem when defining the datatypes and when using the primary & foreign Key constraint to join the tables.*

*Problem 8:- I created an Azure Cosmos DB Account, then added a Container from the Data Explorer.*

*I Used fake data and design a json document such that the person's information is all embedded a single*

*json document*

*2. I Used fake data where in you have people with single and multiple addresses and multiple contact*

*details and show the json schemas and verify my output*