

- **Task 1 :** Copy Data from Database to CSV, Parquet, and Avro File Formats: Extract data from a relational database and export it into multiple file formats: CSV for broad compatibility, Parquet for efficient analytics, and Avro for schema evolution and compact serialization. These formats support various downstream use cases such as reporting, warehousing, or distributed data processing.

### Solution :

Step 1: Create Linked Services Go to Azure Data Factory Studio.

Click on Manage (gear icon on the left).

Under Linked services: Create one for your source (e.g., Azure SQL Database, MySQL).

Create another for your sink (Azure Blob Storage or Data Lake)

Step 2: Create Datasets Go to Author > + Add new Dataset.

Create a source dataset (e.g., Azure SQL Table).

Create three sink datasets: CSV format (select DelimitedText) Parquet format Avro format

Step 3: Create a Pipeline Go to Author > + New pipeline.

Add a Copy Data activity for each format: Set the source as your database dataset.

Set the sink as one of the formats (CSV, Parquet, or Avro).

(Optional) Add 3 separate Copy Data activities or use If Condition / Switch for format selection.

### Copy Data from Database to CSV, Parquet, and Avro File:

The screenshot shows the Microsoft Azure Data Factory Studio interface. The top navigation bar includes 'Home', 'Author', 'Monitor', 'Manage', and 'Learning Center'. The 'Author' tab is active, showing a pipeline named 'assignment-1-pipeline' with three 'Copy data' activities: 'Copy data1', 'Copy data2', and 'Copy data3'. Below the pipeline canvas, the 'Output' tab is selected, displaying the 'Pipeline run ID' and 'Pipeline status' as 'Succeeded'. A table shows the details of the pipeline run, including activity names, status, run start times, durations, integration runtimes, and activity run IDs.

Activity name	Activity st...	Activit...	Run start	Duration	Integration runtime	User prop...	Activity run ID
Copy data1	✓ Succeeded	Copy data	7/9/2025, 8:10:43 PM	17s	AutoResolveIntegrationRuntime (East US)		99ee7b52-b535-4f8f-9dc
Copy data2	✓ Succeeded	Copy data	7/9/2025, 8:10:43 PM	17s	AutoResolveIntegrationRuntime (East US)		3e6b54a1-2507-4a36-a9c
Copy data3	✓ Succeeded	Copy data	7/9/2025, 8:10:43 PM	15s	AutoResolveIntegrationRuntime (East US)		75910372-cf2a-4392-91c

