Azure Data Factory (ADF) Practice Activities Guide

Step 1: Set Up Your Azure Environment

- Create an Azure account (https://portal.azure.com)

- Create a Data Factory instance

- Create Linked Services: Azure Blob Storage, Azure SQL Database

- Use default Integration Runtime unless self-hosting

Step 2: Prepare Your Data Sources

Azure Blob Storage:

- Upload sample CSVs: sales.csv, users.csv, etc.

Azure SQL Database:

- Example table:

  CREATE TABLE Sales (

    Id INT, Product VARCHAR(50), Amount DECIMAL(10,2), Date DATE

  );

Step 3: Create Pipelines for Practice Activities

Practice: Loop Through File Names

- Use ForEach to loop through ["file1.csv", "file2.csv", "file3.csv"]

- Use Set Variable inside the loop to print @item()

Practice: Check File Exists (Get Metadata + If Condition)

- Use Get Metadata with fieldList=exists

- Use If Condition on output.exists to branch logic

Practice: Until Loop for File Arrival

- Use Until + Get Metadata + Wait

- Loop until output.exists is true

Practice: Trigger the Pipeline

- Add Schedule Trigger (e.g., every 15 mins)

- Publish and monitor runs

Step 4: Monitor and Debug

- Use Monitor tab to check logs, errors, output

Step 5: Combine Activities

- Mix If, Switch, Get Metadata, ForEach, Web, Stored Proc, Delete

- Create parameterized templates

Optional Tools & Tips:

- Azure Storage Explorer, SSMS, Git Integration, Logic Apps for alerts

Practice Projects:

1. Daily Sales Pipeline (trigger, clean CSV, load to SQL, log)

2. File Ingestion Monitor (wait for file, move, notify)

3. Parameterized Loader (dynamic file + table input)