# Data Loading in Snowflake with Cloud

**Exercise 1: Create File Format**

File formats tell Snowflake how to parse your data

-- Step 1: Create a CSV file format

CREATE OR REPLACE FILE FORMAT my\_csv\_format

TYPE = 'CSV'

FIELD\_OPTIONALLY\_ENCLOSED\_BY = '"'

SKIP\_HEADER = 1;

**Exercise 2: Create External Stage for AWS S3**

-- Step 2: Create external stage for S3

CREATE OR REPLACE STAGE my\_s3\_stage

URL = 's3://your-bucket-name/path/'

STORAGE\_INTEGRATION = my\_integration

FILE\_FORMAT = my\_csv\_format;

For trial without S3:

-- Use Snowflake internal stage instead

CREATE OR REPLACE STAGE my\_internal\_stage

FILE\_FORMAT = my\_csv\_format;

**Exercise 3: Load Data into a Table Using COPY INTO**

-- Create target table

CREATE OR REPLACE TABLE sales\_data (

id INT,

product STRING,

amount FLOAT,

sale\_date DATE

);

-- Load from stage (adjust path/filename as needed)

COPY INTO sales\_data

FROM @my\_s3\_stage/sales.csv

FILE\_FORMAT = (FORMAT\_NAME = my\_csv\_format);

**Exercise 4: Automate Ingestion with Snowpipe**

-- Step 1: Create a pipe

CREATE OR REPLACE PIPE my\_sales\_pipe

AS

COPY INTO sales\_data

FROM @my\_s3\_stage

FILE\_FORMAT = (FORMAT\_NAME = my\_csv\_format);

-- Step 2: Enable auto-ingest (requires S3 event notifications)

-- For simulation, manually call:

ALTER PIPE my\_sales\_pipe REFRESH;

**Bonus exercise:**

* Create a file format for JSON.
* Create a stage (internal if no S3).
* Load a JSON file into a VARIANT column table.
* Query nested JSON using SELECT data:field::STRING FROM my\_json\_table;.