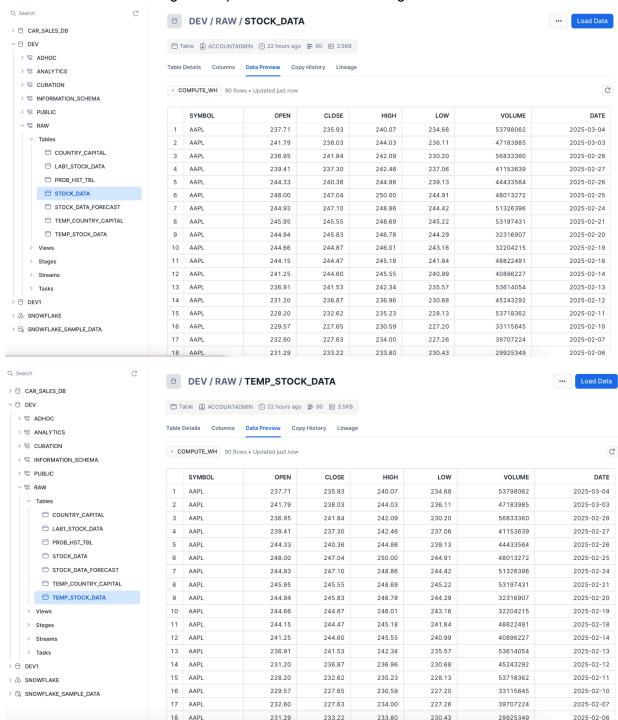
DATA226HW5

Github link: https://github.com/lea2105/data226hw

Please see the GitHub dag as the process of full refresh using SQL and the code.



Task scheduled

```
@task
def load_stock_data(con, records):
    staging_table = "dev.raw.temp_stock_data"
    target_table = "dev.raw.stock_data"
    try:
        con.execute("BEGIN;")
        con.execute(f"""
            CREATE OR REPLACE TABLE {target_table} (
                symbol VARCHAR,
                open DECIMAL(10, 2),
                close DECIMAL(10, 2),
                high DECIMAL(10, 2),
                low DECIMAL(10, 2),
                volume BIGINT,
                date DATE,
                PRIMARY KEY (symbol, date)
        nnny
        con.execute(f"""
            CREATE OR REPLACE TABLE {staging_table} (
                symbol VARCHAR,
                open DECIMAL(10, 2),
                close DECIMAL(10, 2),
                high DECIMAL(10, 2),
                low DECIMAL(10, 2),
                volume BIGINT,
                date DATE,
                PRIMARY KEY (symbol, date)
            );
        nuny
        con.execute(f'DELETE FROM {target_table}')
        con.execute(f'DELETE FROM {staging_table}')
        # Insert the incoming stock data into the staging table
        for r in records:
            open_price = r['1. open']
```

```
# Insert the incoming stock data into the staging table
    for r in records:
       open_price = r['1. open']
       close_price = r['4. close']
       high_price = r['2. high']
       low_price = r['3. low']
       volume = r['5. volume']
       date = r['date']
       sql = f"""
           INSERT INTO {staging_table} (symbol, open, close, high, low, volume, date)
            VALUES ('AAPL', {open_price}, {close_price}, {high_price}, {low_price}, {volume}, '{date}');
       con.execute(sql)
    # Perform the MERGE operation to upsert data from the staging table into the target table
    upsert_sql = f"""
       MERGE INTO {target_table} AS target
       USING {staging_table} AS stage
       ON target.symbol = stage.symbol AND target.date = stage.date
       WHEN MATCHED THEN
           UPDATE SET
               target.open = stage.open,
                target.close = stage.close,
               target.high = stage.high,
               target.low = stage.low,
               target.volume = stage.volume
       WHEN NOT MATCHED THEN
           INSERT (symbol, open, close, high, low, volume, date)
           VALUES (stage.symbol, stage.open, stage.close, stage.high, stage.low, stage.volume, stage.date);
    con.execute(upsert_sql)
    con.execute("COMMIT;")
except Exception as e:
    con.execute("ROLLBACK;")
    print(f"Error: {e}")
    raise e
```

Variables

| List Variable | | | | | | |
|---------------|---------------------|-----------------------------|----------------|------------|----------------|-----------------|
| Search+ | | | | | | |
| + Actions• ← | | | | | | Record Count: 7 |
| | Key ‡ | Val ‡ | Description \$ | <i>i</i> , | Is Encrypted ‡ | |
| | api_key | ****** | | | False | |
| | country_capital_url | https://s3-geospatial.s3.us | | | False | |
| | snowflake_account | ANJOSHA-AK15174 | | | False | |
| | snowflake_password | ****** | | | False | |
| | snowflake_userid | leali | | | False | |
| | symbol | 'AAPL' | | | False | |
| | url | https://www.alphavantage | c | | False | |
| | | | | | | |

Connection details

| Edit Connection | |
|--------------------|--|
| Connection Id * | snowflake_con |
| Connection Type * | Snowflake Connection Type missing? Make sure you've installed the corresponding Airflow Provider Package. |
| Description | |
| Schema | RAW |
| Login | LEALI |
| Password | snowflake password |
| | <pre>{ "account": "ANJOSHA-AK15174", "database": "DEV", "insecure_mode": false, "role": "ACCOUNTADMIN" }</pre> |
| Account | ANJOSHA-AK15174 |
| Warehouse | snowflake warehouse name |
| Database | DEV |
| Region | snowflake hosted region |
| Role | ACCOUNTADMIN |
| Private key (Path) | Path of snowflake private key (PEM Format) |

Airflow web ui, homepage & log

