**Lab Exercise 10– dbt packages (dbt\_utils)**

**Objective:**

* Load static data from a CSV file into your data warehouse (Snowflake) using dbt seeds in **dbt Cloud**.
* Use the loaded seed data in a dbt model.

**Step-by-Step Guide**

**1. Set up your dbt Cloud Project**

If you haven't already set up a dbt Cloud project, follow these steps:

1. Go to dbt Cloud.
2. Log in or create a new account.
3. Create a new project and link it to your **Snowflake** data warehouse.
4. Follow the instructions to set up your **Snowflake connection** in dbt Cloud's Connections tab.

**2. Create the Seed File (CSV)**

1. In your dbt Cloud project, open the **IDE**.
2. Navigate to the **Data** tab in the left sidebar.
3. Create a new folder named data (or another name if you prefer).
4. Inside the data folder, upload a CSV file. For this exercise, we'll use a countries.csv file with the following contents:

**countries.csv**:

country\_code,country\_name

US,United States

CA,Canada

MX,Mexico

FR,France

DE,Germany

**3. Run dbt seed**

1. **Navigate to the Seeds tab** in dbt Cloud.
2. You will see the list of seed files (e.g., countries.csv).
3. **Click on the Run button** next to countries to load the data from the CSV file into your Snowflake database.

Alternatively, you can run the dbt seed command from the dbt Cloud **CLI** or **Development Environment**:

dbt seed

dbt will automatically create a table named countries in your Snowflake schema (using the name of the CSV file, but without the .csv extension).

**4. Check the Seed Table in Snowflake**

After running the dbt seed command, you can query the countries table in Snowflake to verify that the data has been loaded correctly.

Execute the following SQL in your Snowflake UI or any Snowflake SQL tool:

SELECT \* FROM my\_schema.countries;

You should see the following data:

| **country\_code** | **country\_name** |
| --- | --- |
| US | United States |
| CA | Canada |
| MX | Mexico |
| FR | France |
| DE | Germany |

**5. Create a Model Using the Seed Data**

Now, let’s create a simple model that joins the countries seed table with another table, say customers, which contains customer data with country\_code.

1. **Create a Model**: In the dbt Cloud IDE, navigate to the models folder, and create a new file named customer\_with\_country.sql.
2. **Write the SQL code in the model**:

-- models/customer\_with\_country.sql

SELECT

customer\_id,

name,

customers.country\_code,

countries.country\_name

FROM {{ ref('customers') }}

Here, we are using the ref function to reference both the customers and countries tables. ref ensures that the correct dependency chain is maintained.

**6. Verify the Results**

After running dbt run, you can check the results by querying the newly created model in Snowflake:

SELECT \* FROM my\_schema.customer\_with\_country;

You should see customer data along with the country names fetched from the countries seed table.

**Conclusion**

In this lab exercise, you've learned how to:

1. Upload a CSV file to dbt Cloud and use it as a seed.
2. Load the seed data into your Snowflake database.
3. Use the seed data in dbt models.
4. Verify the data and results.

This exercise demonstrates how dbt seeds are an effective way to load small reference data into your warehouse, making it easy to work with static datasets in dbt Cloud.