Experiment:Working with SnowSQL

Overview

This experiment uses the Snowflake Python Connector, to introduce key concepts and tasks, including:

- Setting up the connector.
- Loading a small amount of sample data from CSV files into a table.

Snowflake Python Connector

The Snowflake Connector for Python provides an interface for developing Python applications that can connect to cloud data warehouse and perform all standard operations.
The connector is a pure python package that can be used to connect your application to the cloud data warehouse. The connector supports all standard operations. For example, query execution, loading, accessing data from external source (S3), and many more.

Install Snowflake Python Connector

You can install connector by using ***pip*** command or ***conda*** installer. There are many ways you can install connector, but, pip and conda installer are easiest as the package is installed along with dependent packages.
For example,

pip command

```
pip install snowflake-connector-python
```

Conda command
Snowflake connector is not available on standard conda libraries. You have to use *conda-forge* channel to install using conda installer.

```
conda install -c conda-forge snowflake-connector-python
```

Snowflake Connector Login Parameters

Following example provides creating connection object by providing login parameters.

```
conn = snowflake.connector.connect(
                user='USER',
```

```
                password='PASSWORD',
                account='ACCOUNT',
                warehouse='WAREHOUSE',
                database='DATABASE',
                schema='SCHEMA'
                )
```

where, *user, password* and *account* are mandatory parameters. However, other parameters are optional and Snowflake uses default values.

You can also read the credentials from the Windows or Linux environment variables, as we did in the previous experiment in snow SQL.

For example, use below syntax to read environment variable in Python.

```
PASSWORD = os.getenv('SNOWSQL_PWD')
```

Snowflake Python Connector Simple Programming

Firstly, it is very easy to use the Python connector in your application. You just have to set the login parameters with required credential details and you are good to go.

Following Python code demonstrates the usage of Snowflake python connector to get current date. It assumes you have updated for your user and is using the default COMPUTE_WH warehouse created by the Snowflake trial.

```
import snowflake.connector
# Connection string
#PASSWORD = os.getenv('SNOWSQL_PWD')
conn = snowflake.connector.connect(
                user='geoniece',
                password= 'password@123',
                account='pd81480.us-east-2.aws',
                warehouse='COMPUTE_WH',
                database='SNOWFLAKE_SAMPLE_DATA',
                schema='public'
                )

# Create cursor
cur = conn.cursor()

# Execute SQL statement
cur.execute("select current_date;")

# Fetch result
print(cur.fetchone()[0])
```

Run:
Execute Python program.

```
$ python PythonConnectSample.py
```

Output:
You will get following output when you execute Python program.

```
2022-02-17
```