fingerTips

Module-13

Connecting SQL with Python & Tableau

1) Steps to connecting SQL with Python

To connect MySQL with Python, we can use the mysql.connector module, which is a third-party library that provides a Python interface to the MySQL database.

Here's how you can use mysql.connector to connect to a MySQL database in Python:

Step-1: Install the mysql.connector module by running the following command in your terminal or command prompt:

pip install mysql-connector-python

Step-2: Import the mysql.connector module in your Python script:

import mysql.connector

Step-3: Set up a connection to your MySQL database by creating a connection object with the mysql.connector.connect() method. You'll need to provide the database host, user, password, and database name as arguments to the method:

```
mydb = mysql.connector.connect(
  host="localhost",
  user="yourusername",
  password="yourpassword",
  database="mydatabase"
)
```

Step:4 Create a cursor object by calling the cursor() method on the connection object:

mycursor = mydb.cursor()

Step-5: Execute SQL queries using the execute() method on the cursor object:

mycursor.execute("SELECT * FROM mytable")

Step-6: Fetch the results of the query using one of the fetch

methods on the cursor object:

result = mycursor.fetchall()

Here's an example that demonstrates how to connect to a MySQL database using mysql.connector and fetch the results of a query:

```
import mysql.connector
mydb = mysql.connector.connect(
  host="localhost",
  user="yourusername",
  password="yourpassword",
  database="mydatabase"
)
mycursor = mydb.cursor()
mycursor.execute("SELECT * FROM mytable")
result = mycursor.fetchall()
for row in result:
  print(row)
```

2) Steps to connect SQL with Tableau

Steps to connect MySQL with Tableau:

i. Open Tableau Desktop.
ii. Click on "Connect to Data" on the start page, or navigate to "Connect" from the top menu bar.
iii. Select "MySQL" from the list of available data sources.
iv. Enter the server name, port number, and database name for your MySQL database. You may also need to enter login credentials if required.
v. Click on "Connect" to establish a connection to the MySQL database.
vi. Once connected, you can select the tables and fields you want to use in your analysis.
vii. Drag and drop the desired fields onto the rows and columns shelves to create your visualization.
viii. Customize your visualization as desired using the formatting options available in Tableau.

Note: If you encounter any issues connecting to your MySQL database, make sure that your database is configured to allow remote connections and that your firewall is not blocking incoming traffic on the MySQL port.