MYSQL IN PYTHON

BY

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DATA MINING
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🚀 Getting Started:

Before you start, make sure you have the MySQL Connector/Python library installed.

```
pip install mysql-connector-python
```

🌐 Establish a connection

```
import mysql.connector
# Establish a connection
connection= mysql.connector.connect(
    host=”localhost”,
    user=”username”,
    password=”password”,
    database=”mydb”
)
```

🔍 Executing Queries

You can execute SQL queries using a cursor. Please note a single cursor can also be used in entire program.

```
cursor = connection.cursor()

# Execute SQL query
cursor.execute(”SELECT*FROM mytable”)

# Fetch results
result = cursor.fetchall()

# Don’t forget to commit changes
connection.commit()

# Close the cursor and connection
cursor.close()
connection.close()
```

Inserting Data

Adding data to a table.

```
cursor = connection.cursor()

# Insert data
sql = ”INSERT INTO mytable (column1,
column2) VALUES (%s, %s)”
values = (”value1”, ”value2”)

cursor.execute(sql, values)

# Commit and close

connection.commit()
cursor.close()
```

✏️ Updating Data

Modify existing data.

```
cursor = connection.cursor()

# Update data
sql = ”UPDATE mytable SET column1 = %s
WHERE column2 = %s”
values =(”new_value”,”criteria_value”)

cursor.execute(sql, values)

# Commit and close

connection.commit()
cursor.close()
```

Deleting Data

Remove data from a table.

```
cursor = connection.cursor()

# Delete data
sql = ”DELETE FROM mytable WHERE
column = %s”
value = ”value_to_delete”


cursor.execute(sql,(value,))

# Commit and close

connection.commit()
cursor.close()
```

Fetching Data

Retrieve data from a query.

```
# Execute SQL query
cursor.execute(”SELECT * FROM mytable”)

# Fetch one row
row = cursor.fetchone()

# Fetch all rows
rows = cursor.fetchall()

# Close the cursor
cursor.close()
```

📋 Using Prepared Statements

Prevent SQL injection by using prepared statements.

```
cursor = connection.cursor(prepared=True)

# Execute prepared statement
stmt = ”INSERT INTO mytable (column1,
column2) VALUES (?, ?)”
data = (”value1”, ”value2”)

cursor.execute(stmt, data)

# Commit and close

connection.commit()
cursor.close()
```

🔐 Transaction Management

Manage transactions to ensure data consistency.

```
connection.start_transaction()

try:

    # Your database operations here
    connection.commit()

except:
    # Undo operations in case of error
    connection.rollback()

# Close the connection
connection.close()
```

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