

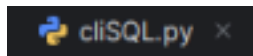
## Finals Lab Task 6. Connection Mysql using Python using CLI

1. Make sure you have installed the following pre-requisites before proceeding:
  - a. Mysql-connector
  - b. Mysql-connector-python
  - c. Xampp is running along with Apache and Mysql in the background
  - d. Make sure you have a database in Mysql named testDB with an employees table with at-least 10 records (You may import the attached SQL file to start with
2. Guided by the Demo code attached in this task. Test\_DemoDB.py
3. Kindly continue working on the code that will allow the user to navigate through the Database and perform CRUD operations. Follow the following **CLI Menu Options**:

```
----- Employee Manager -----  
1. Add Employee  
2. View Employees  
3. Update Employee  
4. Delete Employee  
5. Exit  
Select an option (1-5):
```

4. The user should be able to add New Records when 1 is selected and show the records, 2- Display all records, 3 Update a Record and show the updates, 4 – Delete a record 5- Exit
5. For additional challenge, Task – You are tasked to add a **SEARCH option** in the MENU that will allow the user to search by Name or emp\_id, then display the information about the record being search.

## PROGRAM CODE:



```

1  import mysql.connector
2
3  conn = mysql.connector.connect(
4      host="localhost",
5      user="root",
6      password="",
7      database="testdb"
8  )
9
10 cursor = conn.cursor()
11
12 def add_employee(): 1 usage
13     name = input("Enter name: ")
14     emp_id = input("Enter employee ID: ")
15     salary = float(input("Enter salary: "))
16
17     cursor.execute(
18         operation: "INSERT INTO employees (name, emp_id, salary) VALUES (%s, %s, %s)",
19         params: (name, emp_id, salary)
20     )
21     conn.commit()
22     print("\n✓ Employee added successfully!\n")
23
24 def view_employees(): 1 usage
25     cursor.execute("SELECT * FROM employees")
26     rows = cursor.fetchall()
27
28     print("\n=== EMPLOYEES LIST ===")
29     if rows:
30         for row in rows:
31             print(row)
32     else:
33         print("No employees found.")
34     print()
35
36 def update_employee(): 1 usage
37     emp_id = input("Enter employee ID to update: ")
38
39     cursor.execute(operation: "SELECT * FROM employees WHERE emp_id=%s", params: (emp_id,))
40     result = cursor.fetchone()

```

```

41
42     if not result:
43         print("\n⚠ Employee not found!\n")
44         return
45
46     print("\nCurrent Info:", result)
47
48     new_name = input("Enter new name: ")
49     new_salary = float(input("Enter new salary: "))
50
51     cursor.execute(
52         operation: "UPDATE employees SET name=%s, salary=%s WHERE emp_id=%s",
53         params: (new_name, new_salary, emp_id)
54     )
55     conn.commit()
56     print("\n✓ Employee updated successfully!\n")
57
58 def delete_employee(): 1 usage
59     emp_id = input("Enter employee ID to delete: ")
60
61     cursor.execute( operation: "SELECT * FROM employees WHERE emp_id=%s", params: (emp_id,))
62     result = cursor.fetchone()
63
64     if not result:
65         print("\n⚠ Employee not found!\n")
66         return
67
68     cursor.execute( operation: "DELETE FROM employees WHERE emp_id=%s", params: (emp_id,))
69     conn.commit()
70     print("\n✓ Employee deleted successfully!\n")
71
72 def search_employee(): 1 usage
73     print("\nSearch by:")
74     print("1 - Name")
75     print("2 - Employee ID")
76     choice = input("Choose search type: ")

```

```

77
78     if choice == "1":
79         name = input("Enter name to search: ")
80         cursor.execute(operation: "SELECT * FROM employees WHERE name LIKE %s", params: (f"%{name}%",))
81     elif choice == "2":
82         emp_id = input("Enter employee ID: ")
83         cursor.execute(operation: "SELECT * FROM employees WHERE emp_id=%s", params: (emp_id,))
84     else:
85         print("Invalid option!\n")
86         return
87
88     results = cursor.fetchall()
89
90     print('\n=== SEARCH RESULT ===')
91     if results:
92         for r in results:
93             print(r)
94     else:
95         print("No matching records found.")
96     print()
97
98 def main():
99     usage
100     while True:
101         print("\n===== EMPLOYEE DATABASE MENU =====")
102         print("1 - Add New Employee")
103         print("2 - Display All Employees")
104         print("3 - Update Employee")
105         print("4 - Delete Employee")
106         print("5 - Search Employee")
107         print("6 - Exit")
108
109         option = input("Choose an option: ")

```

```

110     if option == "1":
111         add_employee()
112     elif option == "2":
113         view_employees()
114     elif option == "3":
115         update_employee()
116     elif option == "4":
117         delete_employee()
118     elif option == "5":
119         search_employee()
120     elif option == "6":
121         print("\nExiting program...")
122         break
123     else:
124         print("\nInvalid option. Try again.\n")
125
126 if __name__ == "__main__":
127     main()
128

```

**SAMPLE OUTPUTS:**

### testrun1(Display):

```
===== EMPLOYEE DATABASE MENU =====
1 - Add New Employee
2 - Display All Employees
3 - Update Employee
4 - Delete Employee
5 - Search Employee
6 - Exit
Choose an option: 2

=== EMPLOYEES LIST ===
('Bradd Pitt', 101, 3000.0)
('Tom Cruise', 102, 15000.0)
('Patchak', 103, 3000.0)
('Angeee', 107, 5000.0)
('Trish', 108, 600.0)
```

### testrun2(Search):

```
===== EMPLOYEE DATABASE MENU =====
1 - Add New Employee
2 - Display All Employees
3 - Update Employee
4 - Delete Employee
5 - Search Employee
6 - Exit
Choose an option: 5

Search by:
1 - Name
2 - Employee ID
Choose search type: 2
Enter employee ID: 108

=== SEARCH RESULT ===
('Trish', 108, 600.0)
```

### testrun3(Add):

```

===== EMPLOYEE DATABASE MENU =====
1 - Add New Employee
2 - Display All Employees
3 - Update Employee
4 - Delete Employee
5 - Search Employee
6 - Exit
Choose an option: 1
Enter name: Gold Ship
Enter employee ID: 999
Enter salary: 9999999999999999
✓ Employee added successfully!

```

(Evidence)

				name	emp_id	salary
<input type="checkbox"/>		Edit		Copy		Delete
				Bradd Pitt	101	3000
<input type="checkbox"/>		Edit		Copy		Delete
				Tom Cruise	102	15000
<input type="checkbox"/>		Edit		Copy		Delete
				Patchak	103	3000
<input type="checkbox"/>		Edit		Copy		Delete
				Angeee	107	5000
<input type="checkbox"/>		Edit		Copy		Delete
				Trish	108	600
<input type="checkbox"/>		Edit		Copy		Delete
				Gold Ship	999	1e16


☐ Check all
 With selected:
  Edit
  Copy
  Delete
  Export

testrun4(Update):

```

===== EMPLOYEE DATABASE MENU =====
1 - Add New Employee
2 - Display All Employees
3 - Update Employee
4 - Delete Employee
5 - Search Employee
6 - Exit
Choose an option: 3
Enter employee ID to update: 999

Current Info: ('Gold Ship', 999, 1e+16)
Enter new name: Golshi
Enter new salary: 99

✓ Employee updated successfully!

```

(Evidence)

			name	emp_id	salary				
<input type="checkbox"/>		Edit		Copy		Delete	Bradd Pitt	101	3000
<input type="checkbox"/>		Edit		Copy		Delete	Tom Cruise	102	15000
<input type="checkbox"/>		Edit		Copy		Delete	Patchak	103	3000
<input type="checkbox"/>		Edit		Copy		Delete	Angeee	107	5000
<input type="checkbox"/>		Edit		Copy		Delete	Trish	108	600
<input type="checkbox"/>		Edit		Copy		Delete	Golshi	999	99













☐ Check all    With selected: Edit    Copy    Delete    Export





testrun5(Delete):

```
===== EMPLOYEE DATABASE MENU =====
1 - Add New Employee
2 - Display All Employees
3 - Update Employee
4 - Delete Employee
5 - Search Employee
6 - Exit
Choose an option: 4
Enter employee ID to delete: 999

✓ Employee deleted successfully!
```

(Evidence)

				name	emp_id	salary			
<input type="checkbox"/>		Edit		Copy		Delete	Bradd Pitt	101	3000
<input type="checkbox"/>		Edit		Copy		Delete	Tom Cruise	102	15000
<input type="checkbox"/>		Edit		Copy		Delete	Patchak	103	3000
<input type="checkbox"/>		Edit		Copy		Delete	Angeee	107	5000
<input type="checkbox"/>		Edit		Copy		Delete	Trish	108	600

☐ Check all    With selected:  Edit     Copy     Delete     Export