

**Finals Lab Task 6.**  
**MySQL CRUD Operations in Python Using GUI Tkinter**

**Step 1. Make sure you install the necessary prerequisites:**

- a. **MySQL-Connector** in Pycharm
- b. Activatexampp (Apache and Mysql)
- c. Create a database named: cars DB
- d. Import the sql file (carsDB.sql) to load the tables and records
- E. Create a user named(cs204) with password (asdf123) and assign full access to the database - Use this credentials when connecting to the database

**Step 2. See the GUI Design of the Demo interface**



The screenshot shows a Python application window titled "CARS DB". On the left is a vertical menu bar with buttons for "Home", "Add Record", "Delete", "Update", "Search", and "Logout". The main area contains a table with the following data:

ID	Model	Year	Color	EngineCapacity	EnginePower	EnginType	Transmission	Price
1	BMW X5	2022	Black	3000	250	Petrol	A	58000.00
2	BMW 3 Series	2021	White	2000	250	Diesel	M	48000.00
3	BMW M5	2023	Blue	4000	600	Petrol	A	88000.00
4	BMW 5 Series	2022	Silver	2500	300	Diesel	A	49000.00
5	BMW X3	2023	Black	2000	240	Petrol	A	58000.00
6	BMW 7 Series	2021	White	3500	400	Diesel	M	65000.00
7	BMW X1	2022	Blue	1800	200	Petrol	A	32000.00
8	BMW 4 Series	2023	Red	3000	350	Petrol	A	48000.00
9	BMW XB	2022	Black	4000	500	Diesel	M	75000.00
10	BMW i3	2021	Silver	1500	170	Electric	A	35000.00
11	BMW M4	2023	Blue	3000	450	Petrol	M	62000.00
12	BMW X2	2022	White	2000	230	Diesel	A	38000.00
13	BMW 3 Series	2023	Black	4000	600	Petrol	A	59000.00
14	BMW iX7	2022	Silver	4500	550	Diesel	A	83000.00
15	BMW 2 Series	2023	Black	1800	200	Petrol	M	32000.00
16	BMW i4	2021	White	3000	380	Petrol	A	54000.00
17	BMW X4	2022	Blue	2000	240	Diesel	A	47000.00
18	BMW 6 Series	2023	Red	3500	420	Petrol	M	68000.00
19	BMW i6	2022	Black	1900	170	Electric	A	75000.00
20	BMW XB	2022	White	3000	400	Diesel	M	68000.00
21	BMW 4 Series	2023	Black	2500	320	Petrol	A	49000.00
22	BMW X3	2022	Blue	2000	240	Petrol	A	58000.00
23	BMW M6	2023	Red	3000	450	Petrol	M	62000.00
24	BMW X2	2022	White	2000	230	Diesel	A	38000.00
25	BMW 7 Series	2023	Black	4000	500	Diesel	M	77000.00
26	BMW i7	2022	Silver	1500	170	Electric	A	35000.00
27	BMW X5	2021	Blue	3000	350	Petrol	A	52000.00
28	BMW 3 Series	2023	Red	2800	290	Diesel	M	41000.00

**Step 3. Try the code below:**

**Get the copy of the following files and load in pycharm:**

**Link here:**

[https://drive.google.com/drive/folders/1e6Eh55qLAWepf0A\\_I8GKh70elW6jAxJ?usp=sharing](https://drive.google.com/drive/folders/1e6Eh55qLAWepf0A_I8GKh70elW6jAxJ?usp=sharing)

1. connectDb.py
2. main.py
3. window.py

**Step 4. Run the program main.py (and test all the functions (CRUD)) it should be free from errors.**

Make a screenshot of your output as proof that you were able to configure the program properly

**Step 5. Add the ff: Functions in the GUI . Choose 1 only**

**1. Insert a Label and Text widget that will display the ff: infos:**

- a. *the total Number of Records,*
- b. *Car Model with the Highest Price,*
- c. *Total Number of Manual Cars*
- d. *Total number of and Automatic Cars*