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Section: BSCS 203

Finals Lab Task 7. MySQL CRUD Operations in Python Using GUI Tkinter

Step 1. Make sure you install the necessary prerequisites:

- a. MySQL-Connector in Pycharm
- b. Activate xampp (Apache and Mysql)
- c. Create a database named: cars
- d. Import the sql file (cars.sql) to load the tables and records

Step 2. See the GUI Design of the Demo interface

ID	Model	Year	Color	EngineCapacity	EnginePower	EngineType	Transmission	Price
1	BMW X3	2022	Black	3000	250	Petrol	A	50000.00
2	BMW 3 Series	2021	White	2800	250	Diesel	M	48000.00
3	BMW M5	2023	Blue	4000	600	Petrol	A	80000.00
4	BMW 5 Series	2022	Silver	2500	300	Diesel	A	45000.00
5	BMW X3	2023	Black	2800	240	Petrol	A	38000.00
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	250	Petrol	A	48000.00
9	BMW X8	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	2800	230	Diesel	A	36000.00
13	BMW 8 Series	2023	Black	4400	600	Petrol	A	95000.00
14	BMW X7	2022	Silver	4500	550	Diesel	A	85000.00
15	BMW 2 Series	2023	Black	1800	200	Petrol	M	32000.00
16	BMW M2	2021	White	3000	385	Petrol	A	54000.00
17	BMW X4	2022	Blue	2800	240	Diesel	A	41000.00
18	BMW 6 Series	2023	Red	3500	420	Petrol	M	68000.00
19	BMW i8	2022	Black	1500	170	Electric	A	75000.00
20	BMW X6	2022	White	3800	480	Diesel	M	68000.00
21	BMW 4 Series	2023	Black	2500	320	Petrol	A	48000.00
22	BMW X3	2022	Blue	2800	240	Petrol	A	38000.00
23	BMW M6	2021	Red	3800	450	Petrol	M	62000.00
24	BMW X2	2022	White	2800	230	Diesel	A	36000.00
25	BMW T Series	2023	Black	4000	500	Diesel	M	77000.00
26	BMW i3	2022	Silver	1500	170	Electric	A	35000.00
27	BMW X3	2021	Blue	3000	350	Petrol	A	52000.00
28	BMW 3 Series	2023	Red	2800	290	Diesel	M	47000.00

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_I8GKh70elW6jAxJj?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 below the reload button that will display the ff:

infos: a. *the total Number of Records*,

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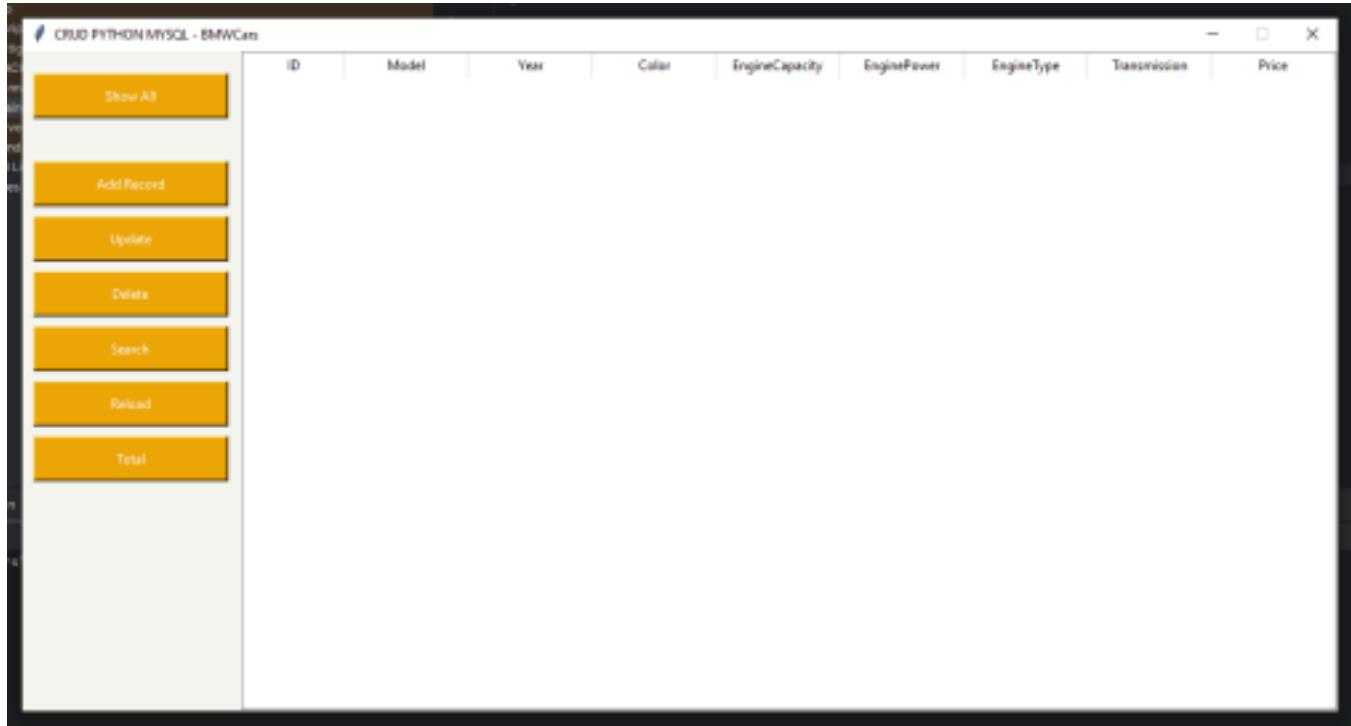
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b. *Car Model with the Highest Price*,

c. *Total Number of Manual*

d. *Total number of and Automatic Cars*

RUNNING GUI



SHOW ALL BUTTON

CRUD PYTHON MYSQL - BMW Cars									
ID	Model	Year	Color	EngineCapacity	EnginePower	EngineType	Transmission	Price	
1	BMW X5	2022	Black	3000	350	Petrol	A	50000.00	
2	BMW 3 Series	2021	White	2000	250	Diesel	M	40000.00	
3	BMW M5	2023	Blue	4000	600	Petrol	A	80000.00	
4	BMW 5 Series	2022	Silver	2500	300	Diesel	A	45000.00	
5	BMW X3	2023	Black	2000	240	Petrol	A	38000.00	
6	BMW 7 Series	2021	White	3500	400	Diesel	M	95000.00	
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 X6	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	36000.00	
13	BMW 8 Series	2023	Black	4400	600	Petrol	A	95000.00	
14	BMW X7	2022	Silver	4500	550	Diesel	A	85000.00	
15	BMW 2 Series	2023	Black	1800	200	Petrol	M	32000.00	
16	BMW M2	2021	White	2000	385	Petrol	A	54000.00	
17	BMW X4	2022	Blue	2000	240	Diesel	A	41000.00	
18	BMW 6 Series	2023	Red	3500	420	Petrol	M	69000.00	
19	BMW i8	2022	Black	1500	170	Electric	A	75000.00	
20	BMW X6	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	39000.00	
23	BMW M1	2021	Red	3000	450	Petrol	M	62000.00	
24	BMW X2	2022	White	2000	230	Diesel	A	36000.00	
25	BMW 7 Series	2023	Black	4000	500	Diesel	M	77000.00	
26	BMW i3	2022	Silver	1500	170	Electric	A	25000.00	
27	BMW X5	2021	Blue	3000	350	Petrol	A	52000.00	
28	BMW 3 Series	2023	Red	2500	300	Diesel	M	41000.00	
29	BMW M5	2022	White	4000	500	Petrol	A	82000.00	
30	BMW M3	2023	Black	3500	420	Petrol	A	78000.00	

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ADD RECORD

BMW Cars

Model	2023
Year	2023
Color	Yellow
EngineCapacity	2000
EnginePower	200
EngineType	Petrol
TransmissionType	A
Price	50000.00

BMW Cars

Model	2023
Year	2023
Color	Yellow
EngineCapacity	2000
EnginePower	200
EngineType	Petrol
TransmissionType	A
Price	50000.00

Successfully

1 New record successfully inserted.

UPDATE

CRUD PYTHON MYSQL - BMWcars									
	ID	Model	Year	Color	EngineCapacity	EnginePower	EngineType	Transmission	Price
Show All	36	Kingster	2025	black	2000	200	Diesel	A	20.00
Add Record									
Update									
Delete									
Search									
Reload									
Total									
Save									
Cancel									

	36	Kingster	2025	black	2000	200	Diesel	A	20.00
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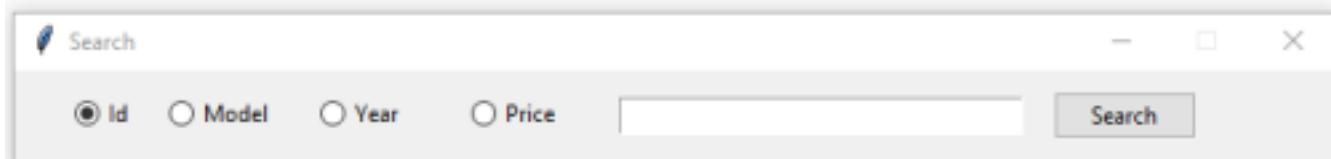
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DELETE

CRUD PYTHON MYSQL - BMWcars									
	ID	Model	Year	Color	EngineCapacity	EnginePower	EngineType	Transmission	Price
Show All	7	BMW X1	2022	Blue	1800	280	Petrol	A	32000.00
Add Record	8	BMW 4 Series	2023	Red	3000	350	Petrol	A	45000.00
Update	9	BMW X5	2022	Black	4000	500	Diesel	M	75000.00
Delete	10	BMW i3	2021	Silver	1500	170	Electric	A	35000.00
Search	11	BMW M4	2023	Blue	3000	450	Petrol	M	62000.00
Reload	12	BMW X2	2022	White	2000	230	Diesel	A	36000.00
Total	13	BMW 8 Series	2023	Black	4400	600	Petrol	A	95000.00
Save	14	BMW X7	2022	Silver	4500	550	Diesel	A	83000.00
Cancel	15	BMW 2 Series	2023	Black	1800	280	Petrol	M	32000.00
Show All	16	BMW M2	2021	White	3000	365	Petrol	A	54000.00
Add Record	17	BMW X4	2022	Blue	2800	240	Diesel	A	41000.00
Update	18	BMW 6 Series	2023	Red	2500	420	Petrol	M	69000.00
Delete	19	BMW i8	2022	Black	1500	170	Electric	A	75000.00
Search	20	BMW X8	2022	White	3000	400	Diesel	M	68000.00
Reload	21	BMW 4 Series	2023	Black	2500	320	Petrol	A	49000.00
Total	22	BMW i3	2021	Blue	2800	240	Petrol	A	39000.00
Save	23	BMW X3	2022	Blue	2000	230	Petrol	M	41000.00
Cancel	24	BMW M4	2021	Red	3000	450	Petrol	M	62000.00
Show All	25	BMW X2	2022	White	2000	230	Diesel	A	36000.00
Add Record	26	BMW 7 Series	2023	Black	4000	580	Diesel	M	77000.00
Update	27	BMW i3	2022	Silver	1500	170	Electric	A	33000.00
Delete	28	BMW X5	2021	Blue	3000	350	Petrol	A	52000.00
Search	29	BMW 3 Series	2023	Red	2800	250	Diesel	M	41000.00
Reload	30	BMW M5	2022	White	4000	600	Petrol	A	82000.00
Total	31	BMW X1	2023	Black	1800	280	Petrol	A	32000.00
Save	32	BMW 5 Series	2021	Silver	2500	380	Diesel	A	47000.00
Cancel	33	BMW X7	2022	Black	4500	550	Diesel	A	87000.00
Show All	34	BMW 2 Series	2023	Blue	1800	280	Petrol	M	34000.00
Add Record	35	BMW M2	2022	Red	3000	365	Petrol	A	55000.00

SEARCH



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CRUD PYTHON MYSQL - BMWCars									
	ID	Model	Year	Color	EngineCapacity	EnginePower	EngineType	Transmission	Price
Show All	1	BMW X5	2022	Black	3000	350	Petrol	A	50000.00

RELOAD

CRUD PYTHON MYSQL - BMWCars									
	ID	Model	Year	Color	EngineCapacity	EnginePower	EngineType	Transmission	Price
Show All	1	BMW X5	2022	Black	3000	350	Petrol	A	50000.00
Add Record	2	BMW 3 Series	2021	White	2000	250	Diesel	M	40000.00
Delete	3	BMW M5	2023	Blue	4000	600	Petrol	A	80000.00
Search	4	BMW 5 Series	2022	Silver	2500	300	Diesel	A	45000.00
Reload	5	BMW X3	2023	Black	2000	240	Petrol	A	38000.00
Total	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 X6	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	36000.00
	13	BMW 8 Series	2023	Black	4400	600	Petrol	A	95000.00
	14	BMW XT	2022	Silver	4500	550	Diesel	A	85000.00
	15	BMW 2 Series	2023	Black	1800	200	Petrol	M	32000.00
	16	BMW M2	2021	White	3000	365	Petrol	A	54000.00
	17	BMW X4	2022	Blue	2000	240	Diesel	A	41000.00
	18	BMW i5 Series	2023	Red	3500	420	Petrol	M	69000.00
	19	BMW i8	2022	Black	1500	170	Electric	A	75000.00
	20	BMW X8	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	39000.00
	23	BMW M4	2021	Red	3000	450	Petrol	M	62000.00
	24	BMW X2	2022	White	2000	230	Diesel	A	36000.00
	25	BMW 7 Series	2023	Black	4000	500	Diesel	M	77000.00
	26	BMW i3	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	2000	250	Diesel	M	41000.00
	29	BMW M5	2022	White	4000	600	Petrol	A	83000.00

TOTAL

```
self.buttonTotal = tk.Button(frame1, text="Total", command=self.totsRec,
                             width=24, height=2, background="#eba607", foreground="white")
self.buttonTotal.place(x=10, y=350)
```

```
def count_records(self, table):
    sql = f"SELECT COUNT(*) FROM {table}"
```

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```
cursor = self.connectDB.cursor()
try:
    cursor.execute(sql)
    result = cursor.fetchone()
    return result[0]
except mysql.connector.Error as error:
    print("Error executing count query:", error)
```

```
def totsRec(self):
    self.cnn.connect()
    total = self.cnn.count_records("car")
    self.cnn.disconnect()
    messagebox.showinfo("Total Records", f"Total number of records: {total}")
```

