

MySQL

Connector

Write a Menu Based Python database connectivity script that performs the following operations on the table named PRODUCT in SHOP Database. Observe the data given and set suitable primary key for the table and appropriate datatypes for the fields.

Table: PRODUCT			
P_ ID	ProductName	Manufacturer	Price
TP01	Talcum Powder	LAK	40
FW05	Face Wash	ABC	45
BS01	Bath Soap	ABC	55
SH06	Shampoo	XYZ	120
FW12	Face Wash	XYZ	

The Menu should be

- 1) Add a record
- 2) Display All Records

- 3) Display records of a particular manufacturer.
- 4) Modify the Price of a given P_ID entered by user.
- 5) Delete a Record of given ProductName
- 6) Exit.

Source Code:

```
import mysql.connector

# Connect to the MySQL database
db = mysql.connector.connect(
    host="localhost",
    user="your_username",
    password="your_password",
    database="shop"
)

cursor = db.cursor()

# Create the PRODUCT table if not exists
cursor.execute('''
    CREATE TABLE IF NOT EXISTS PRODUCT (
        P_ID VARCHAR(10) PRIMARY KEY,
        ProductName VARCHAR(50),
        Manufacturer VARCHAR(50),
        Price FLOAT
    )
```

```
''' )
```

```
def add_record():
    p_id = input("Enter P_ID: ")
    product_name = input("Enter ProductName: ")
    manufacturer = input("Enter Manufacturer: ")
    price = float(input("Enter Price: "))

    query = "INSERT INTO PRODUCT (P_ID, ProductName, Manufacturer, Price) VALUES (%s, %s, %s, %s)"
    values = (p_id, product_name, manufacturer, price)

    cursor.execute(query, values)
    db.commit()
    print("Record added successfully.")

def display_all_records():
    cursor.execute("SELECT * FROM PRODUCT")
    records = cursor.fetchall()
    if records:
        for record in records:
            print(record)
    else:
```

```

        print("No records found.")

def display_records_by_manufacturer():
    manufacturer = input("Enter
Manufacturer: ")
    query = "SELECT * FROM PRODUCT WHERE
Manufacturer=%s"
    cursor.execute(query, (manufacturer,))
    records = cursor.fetchall()
    if records:
        for record in records:
            print(record)
    else:
        print("No records found for the
given manufacturer.")

def modify_price():
    p_id = input("Enter P_ID for which you
want to modify the price: ")
    new_price = float(input("Enter new
Price: "))
    query = "UPDATE PRODUCT SET Price=%s
WHERE P_ID=%s"
    cursor.execute(query, (new_price, p_id))
    db.commit()
    print("Price modified successfully.")

```

```

def delete_record():
    product_name = input("Enter ProductName
of the record you want to delete: ")
    query = "DELETE FROM PRODUCT WHERE
ProductName=%s"
    cursor.execute(query, (product_name,))
    db.commit()
    print("Record deleted successfully.")

# Main program loop
while True:
    print("\nMenu:")
    print("1) Add a record")
    print("2) Display All Records")
    print("3) Display records of a
particular manufacturer")
    print("4) Modify the Price of a given
P_ID")
    print("5) Delete a Record of given
ProductName")
    print("6) Exit")

    choice = input("Enter your choice: ")

    if choice == '1':
        add_record()
    elif choice == '2':

```

```
        display_all_records()
    elif choice == '3':
        display_records_by_manufacturer()
    elif choice == '4':
        modify_price()
    elif choice == '5':
        delete_record()
    elif choice == '6':
        print("Exiting...")
        break
    else:
        print("Invalid choice. Please select
a valid option.")

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

Output:

Menu:

- 1) Add a record
- 2) Display All Records
- 3) Display records of a particular manufacturer
- 4) Modify the Price of a given P_ID
- 5) Delete a Record of given ProductName
- 6) Exit

Enter your choice: 1

Enter P_ID: 101
Enter ProductName: Hello
Enter Manufacturer: Hi
Enter Price: 1000
Record added successfully.

Menu:

- 1) Add a record
- 2) Display All Records
- 3) Display records of a particular manufacturer
- 4) Modify the Price of a given P_ID
- 5) Delete a Record of given ProductName
- 6) Exit

Enter your choice: 2
('101', 'Hello', 'Hi', 1000.0)

Menu:

- 1) Add a record
- 2) Display All Records
- 3) Display records of a particular manufacturer
- 4) Modify the Price of a given P_ID
- 5) Delete a Record of given ProductName
- 6) Exit

Enter your choice: 3
Enter Manufacturer: Hi

('101', 'Hello', 'Hi', 1000.0)

Menu:

- 1) Add a record
- 2) Display All Records
- 3) Display records of a particular manufacturer
- 4) Modify the Price of a given P_ID
- 5) Delete a Record of given ProductName
- 6) Exit

Enter your choice: 4

Enter P_ID for which you want to modify the price: 101

Enter new Price: 1001

Price modified successfully.

Menu:

- 1) Add a record
- 2) Display All Records
- 3) Display records of a particular manufacturer
- 4) Modify the Price of a given P_ID
- 5) Delete a Record of given ProductName
- 6) Exit

Enter your choice: 5

Enter ProductName of the record you want to delete: Hello

Record deleted successfully.

Menu:

- 1) Add a record
- 2) Display All Records
- 3) Display records of a particular manufacturer
- 4) Modify the Price of a given P_ID
- 5) Delete a Record of given ProductName
- 6) Exit

Enter your choice: 6

Exiting...