Experiment No. 8
Program to demonstrate CRUD (create, read, update and delete) operations on database (SQLite/ MySQL) using python
Date of Performance:
Date of Submission:

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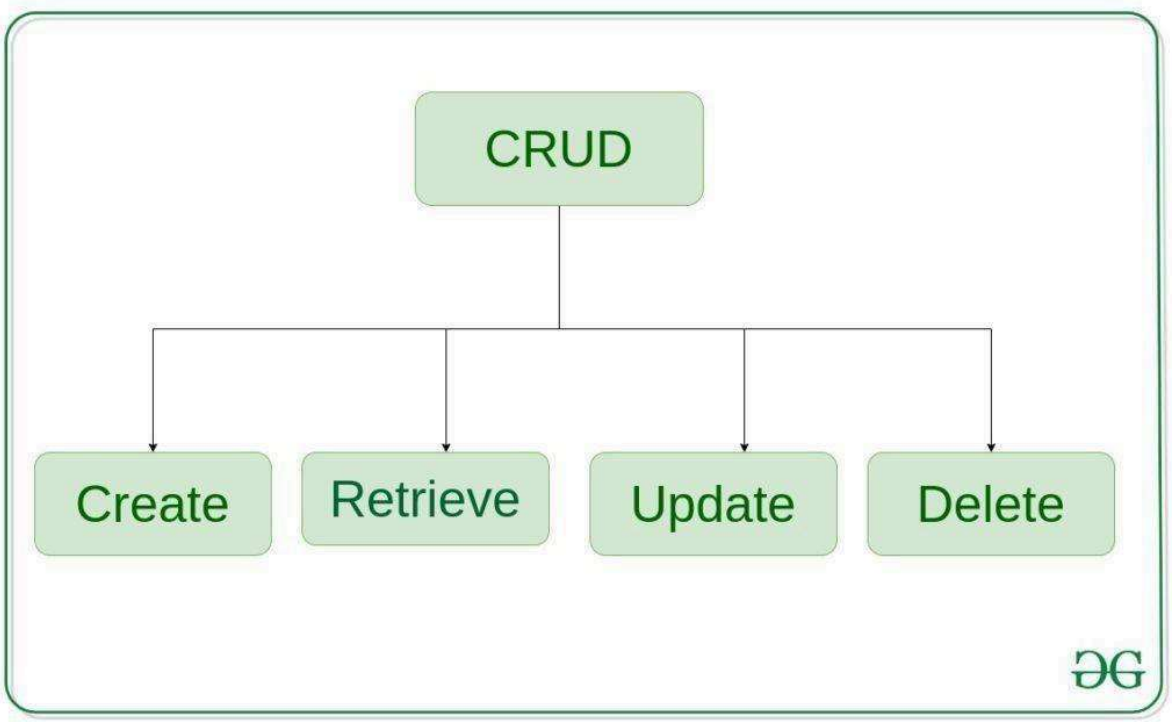
Title: Program to demonstrate CRUD (create, read, update and delete) operations on database (SQLite/ MySQL) using python

Aim: To study and implement CRUD (create, read, update and delete) operations on database (SQLite/ MySQL) using python

Objective: To introduce database connectivity with python

Theory:

In general CRUD means performing Create, Retrieve, Update and Delete operations on a table in a database. Let's discuss what actually CRUD means,



Create – create or add new entries in a table in the database.
Retrieve – read, retrieve, search, or view existing entries as a list(List View) or retrieve a particular entry in detail (Detail View)
Update – update or edit existing entries in a table in the database
Delete – delete, deactivate, or remove existing entries in a table in the database

Code -

```
import sqlite3

conn = sqlite3.connect('example.db')
cursor = conn.cursor()
cursor.execute('''
    CREATE TABLE IF NOT EXISTS users (
        id INTEGER PRIMARY KEY,
        name TEXT NOT NULL,
        age INTEGER
    )
''')
conn.commit()
```

```
def create_user(name, age):
    cursor.execute('INSERT INTO users (name, age) VALUES (?, ?)', (name, age))
    conn.commit()

def read_users():
    cursor.execute('SELECT * FROM users')
    users = cursor.fetchall()
    for user in users:
        print(f"ID: {user[0]}, Name: {user[1]}, Age: {user[2]}")

def update_user_age(user_id, new_age):
    cursor.execute('UPDATE users SET age = ? WHERE id = ?', (new_age, user_id))
    conn.commit()

def delete_user(user_id):
    cursor.execute('DELETE FROM users WHERE id = ?', (user_id,))
    conn.commit()

create_user('John', 27)
create_user('Emma', 35)

print("All users:")
read_users()

update_user_age(1, 28)

print("All users after the update:")
read_users()

delete_user(2)

print("All users after the deletion:")
read_users()

conn.close()
```

Output -

Conclusion: CRUD operations has been studied and implemented.