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Department of Computer Engineerin

Experiment No. 13
Program to demonstrate CRUD (create, read, delete) operations on database (SQLite/ MySQL/ python)
Date of Performance:



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## Experiment No

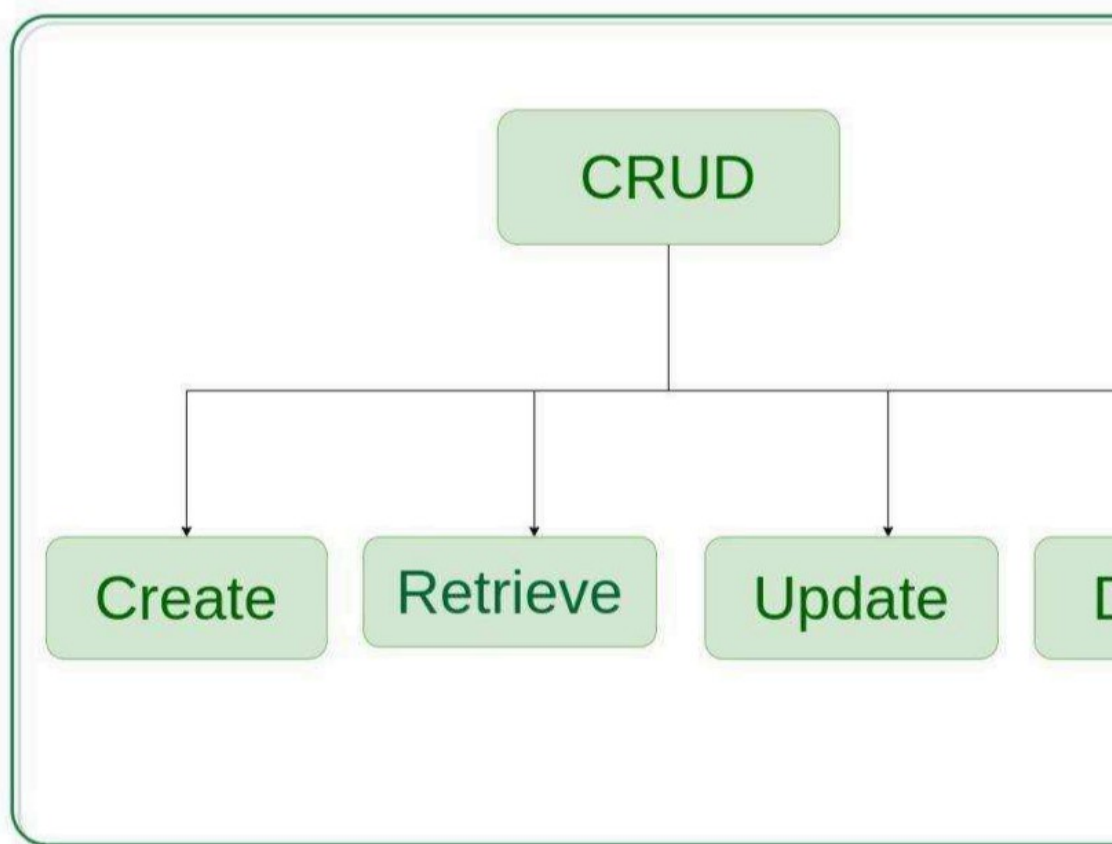
**Title:** Program to demonstrate CRUD (create, read, update and delete) operations (SQLite/ MySQL) using Python

**Aim:** To study and implement CRUD (create, read, update and delete) operations (SQLite/ MySQL) using Python

**Objective:** To introduce database connectivity

### 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,





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### Code:

```
import sqlite3

conn = sqlite3.connect('database.db')

cursor = conn.cursor()

cursor.execute("CREATE TABLE IF NOT EXISTS employees (
    id INTEGER PRIMARY KEY, name TEXT, age INTEGER, position TEXT)

cursor.execute("INSERT INTO employees (name, age, position) VALUES ('Manager', 35, 'Manager')")
cursor.execute("INSERT INTO employees (name, age, position) VALUES ('Developer', 28, 'Developer')")
cursor.execute("INSERT INTO employees (name, age, position) VALUES ('Analyst', 30, 'Analyst')")
cursor.execute("INSERT INTO employees (name, age, position) VALUES ('Designer', 25, 'Designer')")
cursor.execute("INSERT INTO employees (name, age, position) VALUES ('Engineer', 32, 'Engineer')")

conn.commit()

cursor.execute("SELECT * FROM employees")

rows = cursor.fetchall()

print("Records in the employees table:")

for row in rows:
    print(row)
```



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```
cursor.execute("UPDATE employees SET age = 18 WHERE name = 'Siddhi'")
```

```
conn.commit()
```

```
print("\nAfter updating Siddhi's age to 18")
```

```
cursor.execute("SELECT * FROM employees")
```

```
rows = cursor.fetchall()
```

```
for row in rows:
```

```
    print(row)
```

```
cursor.execute("DELETE FROM employees WHERE name = 'Revansh'")
```

```
conn.commit()
```

```
print("\nAfter deleting Revansh's record")
```

```
cursor.execute("SELECT * FROM employees")
```

```
rows = cursor.fetchall()
```

```
for row in rows:
```

```
    print(row)
```

```
conn.close()
```

**Output:**



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Records in the employees table:

```
(1, 'Siddhi', 20, 'Manager')  
(2, 'Kashif', 20, 'Developer')  
(3, 'Deepak', 20, 'Analyst')  
(4, 'Reyansh', 14, 'Designer')  
(5, 'Omkar', 19, 'Engineer')
```

After updating Siddhi's age:

```
(1, 'Siddhi', 18, 'Manager')  
(2, 'Kashif', 20, 'Developer')  
(3, 'Deepak', 20, 'Analyst')  
(4, 'Reyansh', 14, 'Designer')  
(5, 'Omkar', 19, 'Engineer')
```

## Conclusion:

we have demonstrated how to perform CRUD operations (Create, Read, Update, Delete) on a database using Python and SQLite. We started by creating a SQLite database and a table named 'employees'. Then, we inserted data into the table, read the data, updated a record, and deleted a record. Throughout the process, we utilized SQLite commands through Python's sqlite3 module.