Parth Gajare AI&DS 15

Importing

```
import sqlite3
```

Connecting to Database

```
connection = sqlite3.connect ('./genericDatabase.db')
cursor = connection.cursor ()
```

Create Table

```
cursor.execute('''
    CREATE TABLE IF NOT EXISTS students (
        id INTEGER PRIMARY KEY AUTOINCREMENT,
        name TEXT NOT NULL,
        age INTEGER NOT NULL
    )
''')

connection.commit()
```

CRUD Operations

Create (Insertion)

```
def create_student(name, age):
    cursor.execute('''
        INSERT INTO students (name, age)
        VALUES (?, ?)
    ''', (name, age))
    connection.commit()
    print("Record added successfully!")

create_student("Griffith", 20)
create_student("Guts", 22)
```

```
Record added successfully!
Record added successfully!
```

Read (Retrieve)

```
def read_students():
    cursor.execute('SELECT * FROM students')
    rows = cursor.fetchall()
    print("Student Records:")
    for row in rows:
        print(row)

read_students()
```

```
Student Records:
(1, 'Griffith', 20)
(2, 'Guts', 22)
```

Update

```
def update_student_age(student_id, new_age):
    cursor.execute('''
    UPDATE students
    SET age = ?
    WHERE id = ?
    ''', (new_age, student_id))
    connection.commit()
    print("Student age updated successfully!")
```

```
update_student_age(1, 21)  # Updating Alice's age to 21
read_students()
```

```
Student age updated successfully!
Student Records:
(1, 'Griffith', 21)
(2, 'Guts', 22)
```

Delete

```
def delete_student(student_id):
    cursor.execute('''
    DELETE FROM students
    WHERE id = ?
    ''', (student_id,))
    connection.commit()
    print("Student deleted successfully!")

delete_student(2)  # Deleting Bob's record
read_students()
```

```
Student deleted successfully!
Student Records:
(1, 'Griffith', 21)
```

Closing the database connection

```
connection.close ()
```