Parth Gajare AI&DS 15

0.0.1 Importing

[ ]:
```
import sqlite3
```

0.0.2 Connecting to Database

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

0.0.3 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()
```

1 CRUD Operations

1.0.1 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!
```

1.0.2 Read (Retrieve)

[ ]:
```python
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)
```

1.0.3 Update

[ ]:
```python
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)
```

1.0.4 Delete

[ ]:
```python
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)
```

1.0.5 Closing the database connection

[ ]:
```
connection.close ()
```