Lab Task: 08

**Task 1: Inserting Rows**

1. Create a table named **Students** with the following columns: **StudentID**, **FirstName**, **LastName**, and **GPA**.
2. Use an INSERT statement to add a new student with the following details:
   * StudentID: 101
   * FirstName: John
   * LastName: Doe
   * GPA: 3.5

**Task 2: Updating Rows**

1. Update the GPA of the student with StudentID 101 to 3.7 using an UPDATE statement.

**Task 3: Deleting Rows**

1. Delete the student with StudentID 101 from the table using a DELETE statement.

**Task 4: Transaction Control**

1. Begin a transaction.
2. Insert a new student with the following details:
   * StudentID: 102
   * FirstName: Jane
   * LastName: Smith
   * GPA: 3.8
3. Use a SAVEPOINT to create a savepoint named **BeforeUpdate**.
4. Update the GPA of the student with StudentID 102 to 4.0.
5. Use a ROLLBACK to rollback to the savepoint **BeforeUpdate**.
6. Use a COMMIT to commit the transaction.

**Task 5: Inserting Multiple Rows**

1. Use a single INSERT statement to add the following students to the **Students** table:
   * StudentID: 103, FirstName: Sarah, LastName: Johnson, GPA: 3.9
   * StudentID: 104, FirstName: Michael, LastName: Brown, GPA: 3.6
   * StudentID: 105, FirstName: Emily, LastName: Davis, GPA: 3.4

**Task 6: Updating Multiple Rows**

1. Update the GPA of all students with a GPA less than 3.5 to 3.5.

**Task 7: Deleting Multiple Rows**

1. Delete all students with a GPA greater than 4.0 from the **Students** table.

**Task 8: Transaction Rollback**

1. Begin a transaction.
2. Insert a new student with StudentID 106, FirstName: Mark, LastName: Wilson, GPA: 4.1.
3. Use a SAVEPOINT to create a savepoint named **BeforeDelete**.
4. Delete all students from the **Students** table.
5. Use a ROLLBACK to rollback to the savepoint **BeforeDelete**.
6. Use a COMMIT to commit the transaction.

**Expected Output:**

* After Task 1: The **Students** table should have one row with StudentID 101.
* After Task 2: The GPA of the student with StudentID 101 should be updated to 3.7.
* After Task 3: The **Students** table should be empty.
* After Task 4: The **Students** table should have one row with StudentID 102 and a GPA of 3.8.
* After Task 5: The **Students** table should have 5 rows in total.
* After Task 6: All students with a GPA less than 3.5 should have a GPA of 3.5.
* After Task 7: All students with a GPA greater than 4.0 should be removed from the **Students** table.
* After Task 8: The **Students** table should have 1 row with StudentID 106, FirstName: Mark, LastName: Wilson, and GPA: 4.1.