Lab Exercise 6

Aim:

Write a program to demonstrate the execution of a Transaction in PL/SQL.

Objective:

Transaction is a logical unit of work. This is used to understand the concepts of administrative commands.

Procedure:

Step 1: Create a new table.
Step 2: Insert values into the table.
Step 3: Apply the commit command – is used to end the transaction only with the help of the commit command transaction changes can be made permanent to the database.

Syntax: SQL> COMMIT;
Example: SQL> COMMIT;

Step 4: save point are like marks to divide a very lengthy transaction to smaller once. It used to identify a point in a transaction to which can latter role back.

Syntax: SQL> SAVE POINT ID;
Example: SQL> SAVE POINT T1;

Step 5: A role back command is used to undo the current transactions. This can roll back the entire transaction so that all changes made by SQL query are undo (or) roll back.

Syntax: ROLLBACK (current transaction can be roll back) ROLLBACK to save point ID;
Example: SQL> ROLLBACK;
SQL> ROLLBACK TO SAVE POINT T1;

Queries:

Create a New Table:

```
CREATE TABLE trans_stud2 ( rollno NUMBER(4), name VARCHAR2(20), address VARCHAR2(20), phone NUMBER(10), age NUMBER(2) );
```

Insert Values in the Table:

```
INSERT INTO trans_stud2 VALUES (1, 'Anand', 'Pudukottai', 9898767810, 18);

INSERT INTO trans_stud2 VALUES (2, 'Nandhini', 'Trichy', 9898767813, 20);

INSERT INTO trans_stud2 VALUES (3, 'Pooja', 'Chennai', 9898767710, 30);

INSERT INTO trans_stud2 VALUES (4, 'Indhu', 'Thanjavur', 9898767813, 18);
```

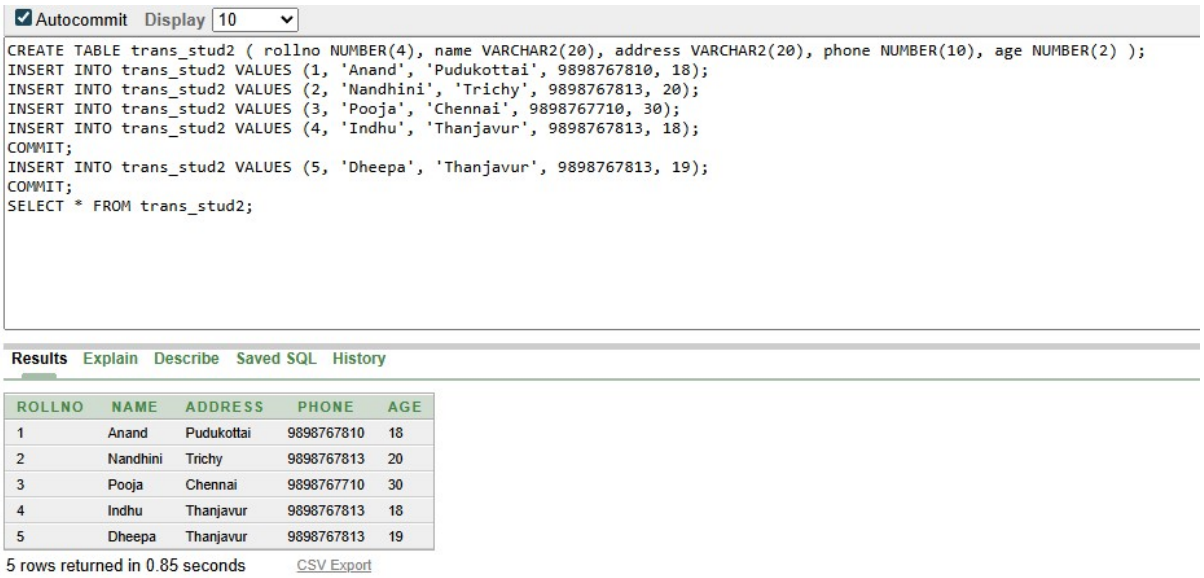
Commit the Transaction:

```
INSERT INTO trans_stud2 VALUES (5, 'Dheepa', 'Thanjavur', 9898767813, 19);
COMMIT;
```

Display the Data:

```
SELECT * FROM trans_stud2;
```

Output:



```
CREATE TABLE trans_stud2 ( rollno NUMBER(4), name VARCHAR2(20), address VARCHAR2(20), phone NUMBER(10), age NUMBER(2) );
INSERT INTO trans_stud2 VALUES (1, 'Anand', 'Pudukottai', 9898767810, 18);
INSERT INTO trans_stud2 VALUES (2, 'Nandhini', 'Trichy', 9898767813, 20);
INSERT INTO trans_stud2 VALUES (3, 'Pooja', 'Chennai', 9898767710, 30);
INSERT INTO trans_stud2 VALUES (4, 'Indhu', 'Thanjavur', 9898767813, 18);
COMMIT;
INSERT INTO trans_stud2 VALUES (5, 'Dheepa', 'Thanjavur', 9898767813, 19);
COMMIT;
SELECT * FROM trans_stud2;
```

Results Explain Describe Saved SQL History

ROLLNO	NAME	ADDRESS	PHONE	AGE
1	Anand	Pudukottai	9898767810	18
2	Nandhini	Trichy	9898767813	20
3	Pooja	Chennai	9898767710	30
4	Indhu	Thanjavur	9898767813	18
5	Dheepa	Thanjavur	9898767813	19

5 rows returned in 0.85 seconds CSV Export

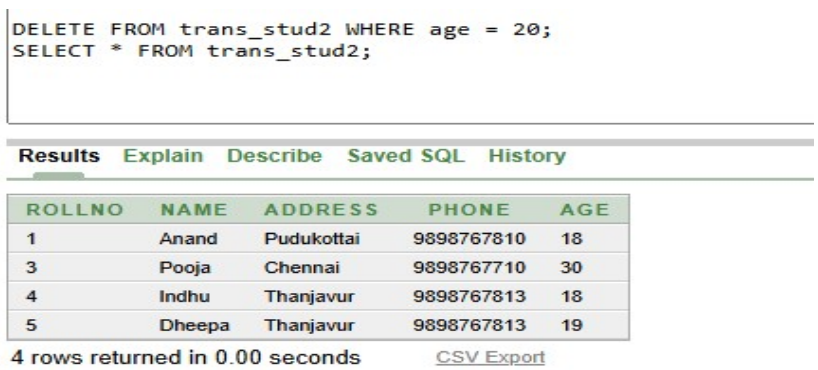
Perform a Delete Operation:

```
DELETE FROM trans_stud2 WHERE age = 20;
```

Display the Data:

```
SELECT * FROM trans_stud2;
```

Output:



```
DELETE FROM trans_stud2 WHERE age = 20;
SELECT * FROM trans_stud2;
```

Results Explain Describe Saved SQL History

ROLLNO	NAME	ADDRESS	PHONE	AGE
1	Anand	Pudukottai	9898767810	18
3	Pooja	Chennai	9898767710	30
4	Indhu	Thanjavur	9898767813	18
5	Dheepa	Thanjavur	9898767813	19

4 rows returned in 0.00 seconds CSV Export

Rollback the Delete Operation:

```
ROLLBACK;
```

Display the Data:

```
SELECT * FROM trans_stud2;
```

Output:

```
DELETE FROM trans_stud2 WHERE age = 20;
SELECT * FROM trans_stud2;
ROLLBACK;
```

Results Explain Describe Saved SQL History

```
Statement processed.
```

0.19 seconds

```
DELETE FROM trans_stud2 WHERE age = 20;
SELECT * FROM trans_stud2;
ROLLBACK;
SELECT * FROM trans_stud2;
```

Results Explain Describe Saved SQL History

ROLLNO	NAME	ADDRESS	PHONE	AGE
1	Anand	Pudukottai	9898767810	18
2	Nandhini	Trichy	9898767813	20
3	Pooja	Chennai	9898767710	30
4	Indhu	Thanjavur	9898767813	18
5	Dheepa	Thanjavur	9898767813	19

5 rows returned in 0.00 seconds

Result:

Thus the transactions in PL/SQL queries were executed successfully.