



SNS COLLEGE OF ENGINEERING
Kurumbapalayam (Po), Coimbatore – 641 107



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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING-IOT Including CS&BCT
UNIT-II

SAVEPOINT command

SAVEPOINT command is used to temporarily save a transaction so that you can rollback to that point whenever required.

Following is savepoint command's syntax,

```
SAVEPOINT savepoint_name;
```

In short, using this command we can name the different states of our data in any table and then rollback to that state using the ROLLBACK command whenever required.

Using Savepoint and Rollback

Following is the table class,

id	name
1	Abhi
2	Adam
4	Alex

Lets use some SQL queries on the above table and see the results.

```
INSERT INTO class VALUES(5, 'Rahul');
```

```
COMMIT;
```

```
UPDATE class SET name = 'Abhijit' WHERE id = '5';
```

```
SAVEPOINT A;
```

```
INSERT INTO class VALUES(6, 'Chris');
```

```
SAVEPOINT B;
```

```
INSERT INTO class VALUES(7, 'Bravo');
```

```
SAVEPOINT C;
```

```
SELECT * FROM class;
```

NOTE: SELECT statement is used to show the data stored in the table.

The resultant table will look like,

id	name
1	Abhi
2	Adam



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- 4 Alex
- 5 Abhijit
- 6 Chris
- 7 Bravo

Now let's use the ROLLBACK command to roll back the state of data to the savepoint B.

ROLLBACK TO B;

SELECT * FROM class;

Now our class table will look like,

id	name
1	Abhi
2	Adam
4	Alex
5	Abhijit
6	Chris

Now let's again use the ROLLBACK command to roll back the state of data to the savepoint A

ROLLBACK TO A;

SELECT * FROM class;

Now the table will look like,

id	name
1	Abhi
2	Adam
4	Alex
5	Abhijit

So now you know how the commands COMMIT, ROLLBACK and SAVEPOINT works.

CURSOR

Cursor is a Temporary Memory or Temporary Work Station. It is Allocated by Database Server at the Time of Performing DML(Data Manipulation Language) operations on Table by User.



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Cursors are used to store Database Tables. There are 2 types of Cursors: Implicit Cursors, and Explicit Cursors. These are explained as following below.

Implicit Cursors:

Implicit Cursors are also known as Default Cursors of SQL SERVER. These Cursors are allocated by SQL SERVER when the user performs DML operations.

Explicit Cursors :

Explicit Cursors are Created by Users whenever the user requires them. Explicit Cursors are used for Fetching data from Table in Row-By-Row Manner.

How to create Explicit Cursor:

Declare Cursor Object.

Syntax : DECLARE cursor_name CURSOR FOR SELECT * FROM table_name

DECLARE s1 CURSOR FOR SELECT * FROM studDetails

Open Cursor Connection.

Syntax : OPEN cursor_connection

OPEN s1

Fetch Data from cursor.

There are total 6 methods to access data from cursor. They are as follows :

FIRST is used to fetch only the first row from cursor table.

LAST is used to fetch only last row from cursor table.

NEXT is used to fetch data in forward direction from cursor table.

PRIOR is used to fetch data in backward direction from cursor table.

ABSOLUTE n is used to fetch the exact nth row from cursor table.

RELATIVE n is used to fetch the data in incremental way as well as decremental way.

Syntax : FETCH NEXT/FIRST/LAST/PRIOR/ABSOLUTE n/RELATIVE n FROM cursor_name

FETCH FIRST FROM s1

FETCH LAST FROM s1

FETCH NEXT FROM s1

FETCH PRIOR FROM s1



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FETCH ABSOLUTE 7 FROM s1

FETCH RELATIVE -2 FROM s1

Close cursor connection.

Syntax : CLOSE cursor_name

CLOSE s1

Deallocate cursor memory.

Syntax : DEALLOCATE cursor_name

DEALLOCATE s1

Cursor Functions

Active Set

