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**Stored procedure:**

Stored procedure of some pre-written queries / database command. Benefits of stored procedure is it provides code-reusability and security to the database operation.

Syntax to create a stored procedure:

Create procedure\_name AS

Begin

//SQL statements

End

You can create procedure in 2 ways:

1. Stored procedure with parameter
2. Stored procedure without parameter

**TCL: -**

TCL stands for transaction control language. It is used to control operation of database.

Commit

Rollback

Save transaction

Are some commands of TCL: -

1. Commit – user inter=based application: -

**Commit: -**

commit is a command used to save transaction of db permanently.

Insert. Update, delete are some auto commit type commands.

That means you do not need to save it secretly after execution.

**Atomicity:**

All or none: All transactions should be successful or not.

Consistency: after transaction and before transaction database should be same.

**Isolation:**

one transaction of database should not affect to another transaction of db.

**Durability:**

each database should have a backup system in case any accident occurs with database.

**Rollback:** Rollback sets database to the initial position.

**Syntax:**

Bagin transaction

Rollback

You can rollback those transaction which are in buffer memory those transaction which are written with ‘begin transaction’ and did commit those can be rollback.

begin transaction

insert into employee (empid,Emp\_name) values(9,'suraj')

delete from employee where empid=1

commit

begin transaction

rollback

select \*from employee

To remove auto-commit system of db, transaction is written within Begin transaction.

**Syntax:**

Begin transaction

//SQL statement

Commit;

Implicit control – controlling of transaction is done via database.

Explicit control- controlling of transaction is done via user.

**Save Transaction: -**

Save transaction is used to set pointer to the particular location of data saved in buffer memory. And create separate memory for transactions executes after pointer.

It is used so that you can rollback to the specific number of transactions.

**Syntax:**

Begin transaction

Save transaction <pointer\_name>

//SQL statements

**Ex:**

begin transaction

Insert into employee(empid,emp\_name) values(12,’ram’)

Save transaction t1

Insert into employee(empid,emp\_name) values(13,’mahesh’)

Begin transaction

Rollback transaction t1