

of study and implementation of

- Roll back
- commit
- save point
- database Backup
- Recovery

A transaction is a logical unit of work.

All changes made to the database can be referred to as a transaction.

Transaction changes can be made permanent to database only if they are committed transaction begins with an executable SQL statement and ends with either roll back or commit statement.

commit:

This command is used to end a transaction only with the help of the commit command, transaction changes can be made permanent to the database.

syntax : commit;

e.g : commit;

save point :

save point are like marks to divide a very lengthy transaction to smaller ones. They are used to identify a point in a transaction to which we can later roll back. Thus, it is used in conjunction with rollback.

Syntax : save point ID;

Ex : save point xyz;

Roll back :

It is used to undo the current transactions. We can rollback the entire transaction so that all changes made by SQL statements are undone.

or

Roll back a transaction to a save point so that the SQL statements after the save point are rollback.

Syntax : ① Roll back;

② Roll back to save point ID;

Ex: ① Roll back;

② Roll back to save point xyz;

Database backup:

It is used in SQL Server to create a full back up of an existing SQL database.

Syntax: Backup database database-name
to disk = 'filepath';

Ex: Backup database testDB to disk
= 'D:\backups\testDB.bak';

* write the queries for the following

1) write a query to implement the commit
commit;

2) write a query to implement the rollback
create table employee (emp-no int(5),
emp-name varchar(20), emp-address varchar(20));

insert into employee values (11, "sumit", "abc"),
(12, "satvik", "xyz"), (13, "Grod", "everywhere");

- select * from employee;

Emp-no	Emp-name	Emp-address
11	Sumeet	abc
12	Satvik	xyz
13	Grool	everywhere

- commit;
- set autocommit=0;
- delete from employee where emp-no = 12;
- select * from employee;

Emp-no	Emp-name	EMP-varchar
11	Sumeet	abc
13	Grool	everywhere

- rollback;
- select * from employee;

Emp-no	Emp-name	Emp-addresses
11	Sumeet	abc
12	Satvik	xyz
13	Grool	everywhere

3) write a query to implement the save point

create table employee (emp-no int(5), emp-name varchar(20), emp-address varchar(20));

insert into employee values (11, "sumeet", "abc"),
 (12, "satvik", "xyz"), (13, "Grool", "everywhere");
 select * from employee;

Emp-no	Emp-name	Emp-address
11	sumeet	abc
12	satvik	xyz
13	Grool	everywhere

start transaction;

savepoint ini;

insert into employee values (14, "Devil",
 "everywhere");

select * from employee;

Emp-no	Emp-name	Emp-address
11	sumeet	abc
12	satvik	xyz
13	Grool	everywhere
14	Devil	everywhere

- rollback to ini;
- select * from employee;

Emp-no	Emp-name	EMP-address
11	Sumeet	abc
12	Satvik	xyz
13	Crool	everywhere