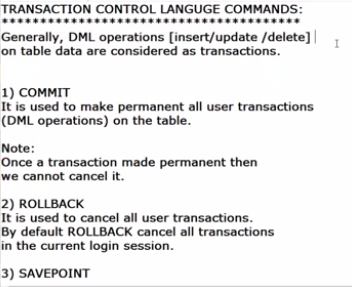
--Transaction control language commands :

--Grant and Revoke



SQL> spool Desktop\day9

SQL> --Insert , Update, Delete actions are DML operations.

SQL> --these operations can be cancelled or we can make it perminant by using TCL commands.

SQL> --Commit : to make any transaction perminant.

SQL> --Rollback : to cancell all transactions in the current user login session.

SQL> --when we do transaction in bank ATM , we get successfull transaction means internally commit command applied automatically.

SQL> -- we can roll back insert, delete, update actions only.

SQL> -- if the money from our account debited but not received.

SQL> --later we get the money, here automatically rollback action applied.

SQL> --Savepoint : saves the transactions uptp some point.

SQL> --when we withdraw money, bal. in account will be updated automatically.

SQL> -- here savepoint applied automatically.

SQL> -- consider we are doing 2 transactions in ATM.

SQL> -- 1st one is withdrawing money , 2nd action is changing PIN number.

SQL> --consider we have completed withdraw amount but failed changing the PIN number.

SQL> actually if Rollback action applied here, money already withdrawn and balance also updated in account.

SP2-0734: unknown command beginning "actually i..." - rest of line ignored.

SQL> --so wherever we have multtiple operations, after every successful transaction, we should use savepoint.

SQL> --then only failed transactions can be rollback.

SQL> select \* from emp;

EMPNO ENAME JOB MGR HIREDATE SAL COMM

---------- ---------- --------- ---------- --------- ---------- ----------

DEPTNO

----------

7839 KING PRESIDENT 17-NOV-81 5000

10

7698 BLAKE MANAGER 7839 01-MAY-81 2850

30

7782 CLARK MANAGER 7839 09-JUN-81 2450

10

EMPNO ENAME JOB MGR HIREDATE SAL COMM

---------- ---------- --------- ---------- --------- ---------- ----------

DEPTNO

----------

7566 JONES MANAGER 7839 02-APR-81 2975

20

7788 SCOTT ANALYST 7566 19-APR-87 3000

20

7902 FORD ANALYST 7566 03-DEC-81 3000

20

EMPNO ENAME JOB MGR HIREDATE SAL COMM

---------- ---------- --------- ---------- --------- ---------- ----------

DEPTNO

----------

7369 SMITH CLERK 7902 17-DEC-80 800

20

7499 ALLEN SALESMAN 7698 20-FEB-81 1600 300

30

7521 WARD SALESMAN 7698 22-FEB-81 1250 500

30

EMPNO ENAME JOB MGR HIREDATE SAL COMM

---------- ---------- --------- ---------- --------- ---------- ----------

DEPTNO

----------

7654 MARTIN SALESMAN 7698 28-SEP-81 1250 1400

30

7844 TURNER SALESMAN 7698 08-SEP-81 1500 0

30

7876 ADAMS CLERK 7788 23-MAY-87 1100

20

EMPNO ENAME JOB MGR HIREDATE SAL COMM

---------- ---------- --------- ---------- --------- ---------- ----------

DEPTNO

----------

7900 JAMES CLERK 7698 03-DEC-81 950

30

7934 MILLER CLERK 7782 23-JAN-82 1300

10

14 rows selected.

SQL> delete from emp;

14 rows deleted.

SQL> select \* from emp;

no rows selected

SQL> desc emp;

Name Null? Type

----------------------------------------- -------- ----------------------------

EMPNO NOT NULL NUMBER(4)

ENAME VARCHAR2(10)

JOB VARCHAR2(9)

MGR NUMBER(4)

HIREDATE DATE

SAL NUMBER(7,2)

COMM NUMBER(7,2)

DEPTNO NUMBER(2)

SQL> -- we cannot delete table completly, its not possible to get back if we delete table.

SQL> rollback;

Rollback complete.

SQL> select \* from emp;

EMPNO ENAME JOB MGR HIREDATE SAL COMM

---------- ---------- --------- ---------- --------- ---------- ----------

DEPTNO

----------

7839 KING PRESIDENT 17-NOV-81 5000

10

7698 BLAKE MANAGER 7839 01-MAY-81 2850

30

7782 CLARK MANAGER 7839 09-JUN-81 2450

10

EMPNO ENAME JOB MGR HIREDATE SAL COMM

---------- ---------- --------- ---------- --------- ---------- ----------

DEPTNO

----------

7566 JONES MANAGER 7839 02-APR-81 2975

20

7788 SCOTT ANALYST 7566 19-APR-87 3000

20

7902 FORD ANALYST 7566 03-DEC-81 3000

20

EMPNO ENAME JOB MGR HIREDATE SAL COMM

---------- ---------- --------- ---------- --------- ---------- ----------

DEPTNO

----------

7369 SMITH CLERK 7902 17-DEC-80 800

20

7499 ALLEN SALESMAN 7698 20-FEB-81 1600 300

30

7521 WARD SALESMAN 7698 22-FEB-81 1250 500

30

EMPNO ENAME JOB MGR HIREDATE SAL COMM

---------- ---------- --------- ---------- --------- ---------- ----------

DEPTNO

----------

7654 MARTIN SALESMAN 7698 28-SEP-81 1250 1400

30

7844 TURNER SALESMAN 7698 08-SEP-81 1500 0

30

7876 ADAMS CLERK 7788 23-MAY-87 1100

20

EMPNO ENAME JOB MGR HIREDATE SAL COMM

---------- ---------- --------- ---------- --------- ---------- ----------

DEPTNO

----------

7900 JAMES CLERK 7698 03-DEC-81 950

30

7934 MILLER CLERK 7782 23-JAN-82 1300

10

14 rows selected.

SQL> -- we cannot delete table or column completly, its not possible to get back if we delete table.

SQL> select \* from dept;

DEPTNO DNAME LOC

---------- -------------- -------------

10 ACCOUNTING NEW YORK

20 RESEARCH DALLAS

30 SALES CHICAGO

40 OPERATIONS BOSTON

SQL> delete loc from dept where loc like '%'

2 ;

delete loc from dept where loc like '%'

\*

ERROR at line 1:

ORA-00933: SQL command not properly ended

SQL> select \* from dept;

DEPTNO DNAME LOC

---------- -------------- -------------

10 ACCOUNTING NEW YORK

20 RESEARCH DALLAS

30 SALES CHICAGO

40 OPERATIONS BOSTON

SQL> update dept set loc=null;

4 rows updated.

SQL> select \* from dept;

DEPTNO DNAME LOC

---------- -------------- -------------

10 ACCOUNTING

20 RESEARCH

30 SALES

40 OPERATIONS

SQL> rollback;

Rollback complete.

SQL> select \* from dept;

DEPTNO DNAME LOC

---------- -------------- -------------

10 ACCOUNTING NEW YORK

20 RESEARCH DALLAS

30 SALES CHICAGO

40 OPERATIONS BOSTON

SQL> select \* from dept;

DEPTNO DNAME LOC

---------- -------------- -------------

10 ACCOUNTING NEW YORK

20 RESEARCH DALLAS

30 SALES CHICAGO

40 OPERATIONS BOSTON

SQL> update dept set loc=null;

4 rows updated.

SQL> select \* from dept;

DEPTNO DNAME LOC

---------- -------------- -------------

10 ACCOUNTING

20 RESEARCH

30 SALES

40 OPERATIONS

SQL> rollback;

Rollback complete.

SQL> select \* from dept;

DEPTNO DNAME LOC

---------- -------------- -------------

10 ACCOUNTING NEW YORK

20 RESEARCH DALLAS

30 SALES CHICAGO

40 OPERATIONS BOSTON

SQL> alter table dept

2 add (

3 manager varchar2(10)

4 );

Table altered.

SQL> select \* from dept;

DEPTNO DNAME LOC MANAGER

---------- -------------- ------------- ----------

10 ACCOUNTING NEW YORK

20 RESEARCH DALLAS

30 SALES CHICAGO

40 OPERATIONS BOSTON

SQL> update dept set manager = 'suresh';

4 rows updated.

SQL> select \* from dept;

DEPTNO DNAME LOC MANAGER

---------- -------------- ------------- ----------

10 ACCOUNTING NEW YORK suresh

20 RESEARCH DALLAS suresh

30 SALES CHICAGO suresh

40 OPERATIONS BOSTON suresh

SQL> alter table dept

2 delete column manager;

delete column manager

\*

ERROR at line 2:

ORA-01735: invalid ALTER TABLE option

SQL> ed

Wrote file afiedt.buf

1 alter table dept

2\* delete manager

SQL> /

delete manager

\*

ERROR at line 2:

ORA-01735: invalid ALTER TABLE option

SQL> alter table dept

2 drop column manager;

Table altered.

SQL> select \* from dept;

DEPTNO DNAME LOC

---------- -------------- -------------

10 ACCOUNTING NEW YORK

20 RESEARCH DALLAS

30 SALES CHICAGO

40 OPERATIONS BOSTON

SQL> rollback;

Rollback complete.

SQL> select \* from dept;

DEPTNO DNAME LOC

---------- -------------- -------------

10 ACCOUNTING NEW YORK

20 RESEARCH DALLAS

30 SALES CHICAGO

40 OPERATIONS BOSTON

SQL> --hence we can not get back the deleted column, but we can get back the data in the column if we delete only data in column acc. to above example.

SQL> create table cust

2 (

3 cname varchar2(10)

4 city varchar2(10)

5 );

city varchar2(10)

\*

ERROR at line 4:

ORA-00907: missing right parenthesis

SQL> ed

Wrote file afiedt.buf

1 create table cust

2 (

3 cname varchar2(10),

4 city varchar2(10)

5\* )

SQL>

SQL>

SQL>

SQL>

SQL> /

Table created.

SQL> insert into cust values('&name', '&city');

Enter value for name: ram

Enter value for city: guntur

old 1: insert into cust values('&name', '&city')

new 1: insert into cust values('ram', 'guntur')

1 row created.

SQL> /

Enter value for name: suresh

Enter value for city: nrt

old 1: insert into cust values('&name', '&city')

new 1: insert into cust values('suresh', 'nrt')

1 row created.

SQL> /

Enter value for name: sai

Enter value for city: hyd

old 1: insert into cust values('&name', '&city')

new 1: insert into cust values('sai', 'hyd')

1 row created.

SQL> update cust set city='hyd' where cname='suresh';

1 row updated.

SQL> delete from cust where cname='ram';

1 row deleted.

SQL> insert into cust values('seetharam', 'amaravathi');

1 row created.

SQL> select \* from cust;

CNAME CITY

---------- ----------

suresh hyd

sai hyd

seetharam amaravathi

SQL> here 1st action updated, 2nd action deleted, 3rd action inserted.

SP2-0734: unknown command beginning "here 1st a..." - rest of line ignored.

SQL> --by mistake i have deleted ram record but i dont want to cancel update action and insert action.

SQL> -- if we use rollback, all actions will be cancelled , so we should not use rollback. in this cases we can use savepoint.

SQL>

SQL> select \* from cust;

CNAME CITY

---------- ----------

suresh hyd

sai hyd

seetharam amaravathi

SQL> --let us do the same actions by using savepoint and get back to last action only.

SQL> --updating seetharam

SQL> update cust set city='bza' where cname = 'seetharam';

1 row updated.

SQL> -- inserting spsr details

SQL> insert into cust values('spsr', 'hyd');

1 row created.

SQL> delete from cust where cname='suresh';

1 row deleted.

SQL> --by mistake i have deleted suresh details. if i want to cancel only this action

SQL> select \* from cust;

CNAME CITY

---------- ----------

sai hyd

seetharam bza

spsr hyd

SQL> rollback;

Rollback complete.

SQL> select \* from cust;

no rows selected

SQL> select \* from cust;

no rows selected

SQL>

SQL>

SQL>

SQL>

SQL>

SQL> select \* from dept;

DEPTNO DNAME LOC

---------- -------------- -------------

10 ACCOUNTING NEW YORK

20 RESEARCH DALLAS

30 SALES CHICAGO

40 OPERATIONS BOSTON

SQL> alter table dept

2 add (

3 manager varchar2(10)

4 );

Table altered.

SQL> savepoint s1

2 ;

Savepoint created.

SQL> alter table cust

2 ;

\*

ERROR at line 2:

ORA-02210: no options specified for ALTER TABLE

SQL> modify cust set manager='suresh';

SP2-0734: unknown command beginning "modify cus..." - rest of line ignored.

SQL> update cust set manager='suresh';

update cust set manager='suresh'

\*

ERROR at line 1:

ORA-00904: "MANAGER": invalid identifier

SQL> update cust set manager='suresh';

update cust set manager='suresh'

\*

ERROR at line 1:

ORA-00904: "MANAGER": invalid identifier

SQL> select \* from cust;

no rows selected

SQL> update dept set manager='suresh';

4 rows updated.

SQL> select \* from dept;

DEPTNO DNAME LOC MANAGER

---------- -------------- ------------- ----------

10 ACCOUNTING NEW YORK suresh

20 RESEARCH DALLAS suresh

30 SALES CHICAGO suresh

40 OPERATIONS BOSTON suresh

SQL> savepoint b;

Savepoint created.

SQL> alter table dept

2 ;

\*

ERROR at line 2:

ORA-02210: no options specified for ALTER TABLE

SQL> delete from dept where manager='suresh';

delete from dept where manager='suresh'

\*

ERROR at line 1:

ORA-02292: integrity constraint (SYSTEM.FK\_DEPTNO) violated - child record

found

SQL> select \* from dept;

DEPTNO DNAME LOC MANAGER

---------- -------------- ------------- ----------

10 ACCOUNTING NEW YORK suresh

20 RESEARCH DALLAS suresh

30 SALES CHICAGO suresh

40 OPERATIONS BOSTON suresh

SQL> rollback savepoint a;

rollback savepoint a

\*

ERROR at line 1:

ORA-02181: invalid option to ROLLBACK WORK

SQL> rollback a;

rollback a

\*

ERROR at line 1:

ORA-02181: invalid option to ROLLBACK WORK

SQL> rollback to a;

rollback to a

\*

ERROR at line 1:

ORA-01086: savepoint 'A' never established in this session or is invalid

SQL> rollback to a;

rollback to a

\*

ERROR at line 1:

ORA-01086: savepoint 'A' never established in this session or is invalid

SQL> rollback to s1;

Rollback complete.

SQL> select \* from dept;

DEPTNO DNAME LOC MANAGER

---------- -------------- ------------- ----------

10 ACCOUNTING NEW YORK

20 RESEARCH DALLAS

30 SALES CHICAGO

40 OPERATIONS BOSTON

SQL> -- when we exit from our user, commit command will be applied automatically.

SQL> -- so our data will be saved automatically.

SQL>