

```
SQL> UPDATE Emp
  2  SET
  3  Comm = NULL
  4  WHERE Job = 'CLERK';
```

4 rows updated.

```
SQL> ED
Wrote file afiedt.buf
```

```
  1  UPDATE Emp
  2  SET
  3* Sal = NULL
  4  /
```

14 rows updated.

```
SQL> SELECT Ename, Sal FROM Emp;
```

ENAME	SAL
KING	
BLAKE	
CLARK	
JONES	
MARTIN	
ALLEN	
TURNER	
JAMES	
WARD	
FORD	
SMITH	

ENAME	SAL
SCOTT	
ADAMS	
MILLER	

14 rows selected.

```
SQL> ROLLBACK;
```

Rollback complete.

```
SQL> SELECT Ename, Sal FROM Emp;
```

ENAME	SAL
KING	5000
BLAKE	2850
CLARK	2450
JONES	2975
MARTIN	1250
ALLEN	1600
TURNER	1500
JAMES	950

```
WARD          1250
FORD          3000
SMITH         800
```

```
ENAME          SAL
-----
SCOTT          3000
ADAMS          1100
MILLER         1300
```

14 rows selected.

```
SQL> ROLLBACK;
```

Rollback complete.

```
SQL> cl scr
```

```
SQL> SELECT Ename, Job, Sal, Deptno
 2  FROM Emp
 3  WHERE Ename = 'ALLEN';
```

```
ENAME          JOB          SAL          DEPTNO
-----
ALLEN          SALESMAN      1600          30
```

```
SQL> UPDATE Emp
 2  SET
 3  Job = 'MANAGER',
 4  Sal = 2500,
 5  Deptno = 10
 6  WHERE Ename = 'ALLEN';
```

1 row updated.

```
SQL> SELECT Ename, Job, Sal, Deptno
 2  FROM Emp
 3  WHERE Ename = 'ALLEN';
```

```
ENAME          JOB          SAL          DEPTNO
-----
ALLEN          MANAGER      2500          10
```

```
SQL> ROLLBACK;
```

Rollback complete.

```
SQL> SELECT Ename, Job, Sal, Deptno
 2  FROM Emp
 3  WHERE Ename = 'BLAKE';
```

```
ENAME          JOB          SAL          DEPTNO
-----
BLAKE          MANAGER      2850          30
```

```
SQL> UPDATE Emp
 2  SET
```

```
3 Job = 'ANALYST',
4 Sal = Sal + 1000
5 WHERE Ename = 'BLAKE';
```

1 row updated.

```
SQL> SELECT Ename, Job, Sal, Deptno
2 FROM Emp
3 WHERE Ename = 'BLAKE';
```

ENAME	JOB	SAL	DEPTNO
BLAKE	ANALYST	3850	30

```
SQL> ED
```

Wrote file afiedt.buf

```
1 SELECT Ename, Job, Sal, Deptno
2 FROM Emp
3* WHERE Ename = 'BLAKE'
```

```
SQL> ED
```

Wrote file afiedt.buf

```
1 UPDATE Emp
2 SET
3 Job = 'ANALYST',
4 Sal = 1000 + Sal
5* WHERE Ename = 'BLAKE'
```

```
SQL> /
```

1 row updated.

```
SQL> SELECT Ename, Job, Sal, Deptno
2 FROM Emp
3 WHERE Ename = 'BLAKE';
```

ENAME	JOB	SAL	DEPTNO
BLAKE	ANALYST	4850	30

```
SQL> ED
```

Wrote file afiedt.buf

```
1 UPDATE Emp
2 SET
3 Job = 'ANALYST',
4 Sal = 1000 + (
5 SELECT Sal
6 FROM Emp
7 WHERE Ename = 'BLAKE'
8 )
9* WHERE Ename = 'BLAKE'
```

```
SQL> /
```

1 row updated.

```
SQL> ED
```

Wrote file afiedt.buf

```
1 UPDATE Emp
2 SET
3     Job = 'ANALYST',
4     Sal = (
5     SELECT Sal
6     FROM Emp
7     WHERE Ename = 'BLAKE'
8     ) + 1000
9* WHERE Ename = 'BLAKE'
SQL> /
```

```
        ) + 1000
        *
```

ERROR at line 8:
ORA-00933: SQL command not properly ended

SQL> ED

Wrote file afiedt.buf

```
1 UPDATE Emp
2 SET
3     Job = 'ANALYST',
4     Sal = (
5     (
6     SELECT Sal
7     FROM Emp
8     WHERE Ename = 'BLAKE') + 1000
9     )
10* WHERE Ename = 'BLAKE'
SQL> /
```

```
        WHERE Ename = 'BLAKE') + 1000
        *
```

ERROR at line 8:
ORA-00907: missing right parenthesis

SQL> ED

Wrote file afiedt.buf

```
1 UPDATE Emp
2 SET
3     Job = 'ANALYST',
4     Sal = Sal + 1000
5* WHERE Ename = 'BLAKE'
SQL> cl scr
```

SQL> ROLLBACK;

Rollback complete.

SQL> cl scr

```
SQL> SELECT Ename, Job, Sal
2 FROM Emp;
```

ENAME	JOB	SAL
KING	PRESIDENT	5000
BLAKE	MANAGER	2850
CLARK	MANAGER	2450
JONES	MANAGER	2975
MARTIN	SALESMAN	1250
ALLEN	SALESMAN	1600
TURNER	SALESMAN	1500
JAMES	CLERK	950
WARD	SALESMAN	1250
FORD	ANALYST	3000
SMITH	CLERK	800

ENAME	JOB	SAL
SCOTT	ANALYST	3000
ADAMS	CLERK	1100
MILLER	CLERK	1300

14 rows selected.

```
SQL> UPDATE Emp
  2 SET
  3   Job = 'ANALYST',
  4   Sal = 1000 + (
  5               SELECT Sal
  6               FROM Emp
  7               WHERE Ename = 'JONES'
  8           )
  9 WHERE Ename = 'BLAKE';
```

1 row updated.

```
SQL> ED
Wrote file afiedt.buf
```

```
  1 UPDATE Emp
  2 SET
  3   Job = (
  4   SELECT Job
  5   FROM Emp
  6   WHERE Ename = 'SMITH'
  7   ),
  8   Sal = 1000 + (
  9       SELECT Sal
 10       FROM Emp
 11       WHERE Ename = 'JONES'
 12   )
 13* WHERE Ename = 'BLAKE'
SQL> /
```

1 row updated.

```
SQL> cl scr
```

```
SQL> ROLLBACK;
```

Rollback complete.

```
SQL> UPDATE Emp
  2 SET Sal = Sal * 1.10
  3 WHERE Deptno = (SELECT Deptno
  4                   FROM Dept
  5                   WHERE Loc = 'CHICAGO');
```

6 rows updated.

```
SQL> ROLLBACK;
```

Rollback complete.

```
SQL> cl scr
```

```
SQL> SELECT Empno, Ename, Deptno, Job
  2 FROM Emp
  3 WHERE Empno = 7788;
```

EMPNO	ENAME	DEPTNO	JOB
7788	SCOTT	20	ANALYST

```
SQL> UPDATE Emp
  2 SET
  3   Deptno = (SELECT Deptno
  4               FROM Emp
  5               WHERE Empno = 7788)
  6 WHERE
  7   Job = (SELECT Job
  8           FROM Emp
  9           WHERE Empno = 7788);
```

2 rows updated.

```
SQL> ROLLBACK;
```

Rollback complete.

```
SQL> cl scr
```

```
SQL> UPDATE Emp
  2 SET
  3   (Job, Deptno) = (SELECT Job, Deptno
  4                     FROM Emp
  5                     WHERE Empno = 7499)
  6 WHERE Empno = 7698;
```

1 row updated.

```
SQL> ED
Wrote file afiedt.buf
```

```
  1 UPDATE Emp
  2 SET
```

```

3 Job = (SELECT Job
4 FROM Emp
5 WHERE Empno = 7499),
6 Deptno = (SELECT Deptno
7 FROM Emp
8 WHERE Empno = 7499)
9* WHERE Empno = 7698
SQL> /

```

1 row updated.

```
SQL> ROLLBACK;
```

Rollback complete.

```
SQL> cl scr
```

```

SQL> UPDATE Emp E1
2 SET Deptno = (SELECT Deptno
3 FROM Dept
4 WHERE Loc = 'DALLAS'),
5 (Sal, Comm) = (SELECT 1.1 * AVG (Sal),
6 1.5 * AVG ( Comm )
7 FROM Emp E2
8 WHERE E1.Deptno = E2.Deptno)
9 WHERE Deptno IN (SELECT Deptno
10 FROM Dept
11 WHERE Loc = 'NEW YORK' OR
12 Loc = 'BOSTON');

```

3 rows updated.

```
SQL> SPOOL OFF
```

```
SQL> cl scr
```

```

SQL> SELECT Ename, Sal, Deptno
2 FROM Emp
3 WHERE Deptno = 20;

```

ENAME	SAL	DEPTNO
JONES	2975	20
FORD	3000	20
SMITH	800	20
SCOTT	3000	20
ADAMS	1100	20

```

SQL> UPDATE Emp
2 SET Sal = Sal + 1000
3 WHERE Deptno = 20;

```

5 rows updated.

```

SQL> SELECT Ename, Sal, Deptno
2 FROM Emp
3 WHERE Deptno = 20;

```

ENAME	SAL	DEPTNO
JONES	3975	20
FORD	4000	20
SMITH	1800	20
SCOTT	4000	20
ADAMS	2100	20

```
SQL> SELECT Deptno, SUM(Sal)
2 FROM Emp
3 WHERE Deptno = 20
4 GROUP BY Deptno;
```

DEPTNO	SUM(SAL)
20	15875

```
SQL> ROLLBACK;
```

Rollback complete.

```
SQL> VARIABLE Dept20SalSum NUMBER
SQL> UPDATE Emp
2 SET Sal = Sal + 1000
3 WHERE Deptno = 20
4 RETURNING SUM(Sal) INTO :Dept20SalSum;
```

5 rows updated.

```
SQL> PRINT Dept20SalSum;
```

```
DEPT20SALSUM
-----
15875
```

```
SQL> cl scr
```

```
SQL> ROLLBACK;
```

Rollback complete.

```
SQL> SELECT Ename, Sal, Deptno
2 FROM Emp
3 WHERE Deptno = 20;
```

ENAME	SAL	DEPTNO
JONES	2975	20
FORD	3000	20
SMITH	800	20
SCOTT	3000	20
ADAMS	1100	20

```
SQL> cl scr
```

```
SQL> CREATE TABLE MyBonus
2 (
```



```
3   Empno NUMBER,
4   Bonus NUMBER DEFAULT 100
5 );
CREATE TABLE MyBonus
      *
ERROR at line 1:
ORA-00955: name is already used by an existing object
```

```
SQL> DROP PRCEEDURE MyBonus;
DROP PRCEEDURE MyBonus
      *
ERROR at line 1:
ORA-00950: invalid DROP option
```

```
SQL> DROP PROCEDURE MyBonus;

Procedure dropped.
```

```
SQL> PURGE RECYCLEBIN;

Recyclebin purged.
```

```
SQL> cl scr
```

```
SQL> CREATE TABLE MyBonus
2  (
3   Empno NUMBER,
4   Bonus NUMBER DEFAULT 100
5  );
```

```
Table created.
```

```
SQL> SELECT * FROM MyBonus;

no rows selected
```

```
SQL> INSERT INTO MyBonus(Empno)
2  (SELECT E.Empno
3   FROM Emp E
4   WHERE Job = 'SALESMAN');
```

```
4 rows created.
```

```
SQL> SELECT * FROM MyBonus;
```

EMPNO	BONUS
7654	100
7499	100
7844	100
7521	100

```
SQL> SELECT Empno, Sal, Deptno
2  FROM Emp
3  WHERE Deptno = 30;
```

EMPNO	SAL	DEPTNO
7698	2850	30
7654	1250	30
7499	1600	30
7844	1500	30
7900	950	30
7521	1250	30

6 rows selected.

```
SQL> MERGE INTO MyBonus B
  2 USING (SELECT Empno, Sal, Deptno
  3         FROM Emp
  4         WHERE Deptno = 30) S
  5 ON (B.Empno = S.Empno)
  6 WHEN MATCHED THEN
  7 UPDATE
  8   SET B.Bonus = B.Bonus + S.Sal * 0.1
  9 DELETE
 10 WHERE (S.Sal > 4000)
 11 WHEN NOT MATCHED THEN
 12 INSERT(B.Empno, B.Bonus)
 13 VALUES(S.Empno, S.Sal * 0.1)
 14 WHERE(S.Sal <= 4000)
 15 /
```

6 rows merged.

```
SQL> SELECT * FROM MyBonus;
```

EMPNO	BONUS
7654	225
7499	260
7844	250
7521	225
7698	285
7900	95

6 rows selected.

```
SQL> INSERT INTO Emp(Empno, Ename, Deptno, Sal)
  2 VALUES(1234, 'SAMPLE01', 30, 3750);
```

1 row created.

```
SQL> INSERT INTO Emp(Empno, Ename, Deptno, Sal)
  2 VALUES(1235, 'SAMPLE02', 30, 4050);
```

1 row created.

```
SQL> INSERT INTO Emp(Empno, Ename, Deptno, Sal)
  2 VALUES(1236, 'SAMPLE03', 30, 3550);
```

1 row created.

```
SQL> INSERT INTO Emp(Empno, Ename, Deptno, Sal)
  2  VALUES(1237, 'SAMPLE04', 30, 4250);
```

1 row created.

```
SQL> UPDATE Emp
  2  SET
  3  Sal = Sal + 2000
  4  WHERE Empno = 7698;
```

1 row updated.

```
SQL> UPDATE Emp
  2  SET
  3  Sal = Sal + 2700
  4  WHERE Empno = 7499;
```

1 row updated.

```
SQL> MERGE INTO MyBonus B
  2  USING (SELECT Empno, Sal, Deptno
  3          FROM Emp
  4          WHERE Deptno = 30) S
  5  ON (B.Empno = S.Empno)
  6  WHEN MATCHED THEN
  7  UPDATE
  8    SET B.Bonus = B.Bonus + S.Sal * 0.1
  9  DELETE
 10  WHERE (S.Sal > 4000)
 11  WHEN NOT MATCHED THEN
 12  INSERT(B.Empno, B.Bonus)
 13  VALUES(S.Empno, S.Sal * 0.1)
 14  WHERE(S.Sal <= 4000)
 15  /
```

8 rows merged.

```
SQL> SELECT * FROM MyBonus;
```

EMPNO	BONUS
7654	350
7844	400
7521	350
7900	190
1236	355
1234	375

6 rows selected.

```
SQL> cl scr
```

```
SQL> DELETE FROM Emp;
```

18 rows deleted.

SQL> SELECT * FROM Emp;

no rows selected

SQL> ROLLBACK;

Rollback complete.

SQL> SELECT * FROM Emp;

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM
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
7566	JONES	MANAGER	7839	02-APR-81	2975	
20						
7654	MARTIN	SALESMAN	7698	28-SEP-81	1250	1400
30						
7499	ALLEN	SALESMAN	7698	20-FEB-81	1600	300
30						

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM
7844	TURNER	SALESMAN	7698	08-SEP-81	1500	0
30						
7900	JAMES	CLERK	7698	03-DEC-81	950	
30						
7521	WARD	SALESMAN	7698	22-FEB-81	1250	500
30						

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM
7902	FORD	ANALYST	7566	03-DEC-81	3000	

20

7369 SMITH CLERK 7902 17-DEC-80 800
20

7788 SCOTT ANALYST 7566 09-DEC-82 3000
20

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM

DEPTNO						

7876	ADAMS	CLERK	7788	12-JAN-83	1100	
20						
7934	MILLER	CLERK	7782	23-JAN-82	1300	
10						

14 rows selected.

SQL> cl scr

SQL> DELETE Emp;

14 rows deleted.

SQL> ROLLBACK;

Rollback complete.

SQL> DELETE FROM Emp
2 WHERE Deptno = 30;

6 rows deleted.

SQL> ROLLBACK;

Rollback complete.

SQL> DELETE FROM Emp
2 WHERE Deptno = (
3 SELECT Deptno
4 FROM Dept
5 WHERE Dname = 'SALES'
6);

6 rows deleted.

SQL> DELETE FROM Emp
2 WHERE Deptno = 10;

DELETE FROM Emp

*

ERROR at line 1:

ORA-02292: integrity constraint (SCOTT.EMP_SELF_KEY) violated - child record found

SQL> SPOOL OFF

SQL> cl scr

```
SQL> CREATE TABLE ExamTimeTable
 2 (
 3   ExamName VARCHAR2(30),
 4   ExamTime  VARCHAR2(12),
 5   CONSTRAINT ExamNamePK PRIMARY KEY(ExamName)
 6 );
```

Table created.

SQL> SELECT * FROM ExamTimeTable;

no rows selected

```
SQL> INSERT INTO ExamTimeTable
 2 VALUES ('PHYSICAL SCIENCES' , '9:00 AM');
```

1 row created.

```
SQL> MERGE INTO ExamTimeTable E1
 2 USING ExamTimeTable E2
 3 ON
 4 (E2.ExamName = E1.ExamName AND
 5  E1.ExamName = 'PHYSICAL SCIENCES')
 6 WHEN MATCHED THEN
 7   UPDATE
 8   SET E1.ExamTime = '10:30 AM'
 9   WHEN NOT MATCHED THEN
10   INSERT(E1.ExamName, E1.ExamTime)
11   VALUES('PHYSICAL SCIENCES' , '10:30 AM')
12 /
```

1 row merged.

SQL> SELECT * FROM ExamTimeTable;

EXAMNAME	EXAMTIME
PHYSICAL SCIENCES	10:30 AM

```
SQL> MERGE INTO ExamTimeTable E1
 2 USING ExamTimeTable E2
 3 ON
 4 (E2.ExamName = E1.ExamName AND
 5  E1.ExamName = 'CHEMICAL SCIENCES')
 6 WHEN MATCHED THEN
 7   UPDATE SET E1.ExamTime = '12:30 PM'
 8   WHEN NOT MATCHED THEN
 9   INSERT(E1.ExamName, E1.ExamTime )
10   VALUES('CHEMICAL SCIENCES' , '12:30 PM');
```

1 row merged.

```
SQL> SELECT * FROM ExamTimeTable;
```

EXAMNAME	EXAMTIME
PHYSICAL SCIENCES	10:30 AM
CHEMICAL SCIENCES	12:30 PM

```
SQL> SPOOL OFF
```

```
SQL> cl scr
```

```
SQL> SELECT Ename, Sal, Deptno, Job  
2 FROM Emp;
```

ENAME	SAL	DEPTNO	JOB
KING	5000	10	PRESIDENT
BLAKE	2850	30	MANAGER
CLARK	2450	10	MANAGER
JONES	2975	20	MANAGER
MARTIN	1250	30	SALESMAN
ALLEN	1600	30	SALESMAN
TURNER	1500	30	SALESMAN
JAMES	950	30	CLERK
WARD	1250	30	SALESMAN
FORD	3000	20	ANALYST
SMITH	800	20	CLERK

ENAME	SAL	DEPTNO	JOB
SCOTT	3000	20	ANALYST
ADAMS	1100	20	CLERK
MILLER	1300	10	CLERK

```
14 rows selected.
```

```
SQL> SELECT * FROM Dept;
```

DEPTNO	DNAME	LOC
10	ACCOUNTING	NEW YORK
20	RESEARCH	DALLAS
30	SALES	CHICAGO
40	OPERATIONS	BOSTON

```
SQL> INSERT INTO Dept  
2 VALUES(50, 'SHIPPING', 'CHENNAI');
```

```
1 row created.
```

```
SQL> INSERT INTO Dept  
2 VALUES(60, 'CARGO', 'MUMBAI');
```

```
1 row created.
```

```
SQL> SELECT * FROM Dept;
```

DEPTNO	DNAME	LOC
10	ACCOUNTING	NEW YORK
20	RESEARCH	DALLAS
30	SALES	CHICAGO
40	OPERATIONS	BOSTON
50	SHIPPING	CHENNAI
60	CARGO	MUMBAI

6 rows selected.

```
SQL> DELETE FROM Dept
      2 WHERE Deptno = 60;
```

1 row deleted.

```
SQL> DELETE FROM Emp
      2 WHERE Ename = 'SMITH';
```

1 row deleted.

```
SQL> ROLLBACK;
```

Rollback complete.

```
SQL> cl scr
```

```
SQL> SELECT * FROM Dept;
```

DEPTNO	DNAME	LOC
10	ACCOUNTING	NEW YORK
20	RESEARCH	DALLAS
30	SALES	CHICAGO
40	OPERATIONS	BOSTON

```
SQL> COLUMN Empno FORMAT 9999
```

```
SQL> COLUMN MGR FORMAT 9999
```

```
SQL> COLUMN Deptno FORMAT 99
```

```
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
7566	JONES	MANAGER	7839	02-APR-81	2975		20
7654	MARTIN	SALESMAN	7698	28-SEP-81	1250	1400	30
7499	ALLEN	SALESMAN	7698	20-FEB-81	1600	300	30
7844	TURNER	SALESMAN	7698	08-SEP-81	1500	0	30
7900	JAMES	CLERK	7698	03-DEC-81	950		30
7521	WARD	SALESMAN	7698	22-FEB-81	1250	500	30
7902	FORD	ANALYST	7566	03-DEC-81	3000		20
7369	SMITH	CLERK	7902	17-DEC-80	800		20

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO
-------	-------	-----	-----	----------	-----	------	--------

7788	SCOTT	ANALYST	7566	09-DEC-82	3000	20
7876	ADAMS	CLERK	7788	12-JAN-83	1100	20
7934	MILLER	CLERK	7782	23-JAN-82	1300	10

14 rows selected.

SQL> cl scr

SQL> SHOW USER

USER is "SCOTT"

SQL> GRANT SELECT, INSERT, UPDATE, DELETE
2 ON Dept TO SampTR;

Grant succeeded.

SQL> SELECT * FROM Dept;

DEPTNO	DNAME	LOC
10	ACCOUNTING	NEW YORK
20	RESEARCH	DALLAS
30	SALES	CHICAGO
40	OPERATIONS	BOSTON

SQL> INSERT INTO Dept

2 VALUES(50, 'SHIPPING', 'CHENNAI');

1 row created.

SQL> SELECT * FROM Dept;

DEPTNO	DNAME	LOC
10	ACCOUNTING	NEW YORK
20	RESEARCH	DALLAS
30	SALES	CHICAGO
40	OPERATIONS	BOSTON
50	SHIPPING	CHENNAI

SQL> /

DEPTNO	DNAME	LOC
10	ACCOUNTING	NEW YORK
20	RESEARCH	DALLAS
30	SALES	CHICAGO
40	OPERATIONS	BOSTON
50	SHIPPING	CHENNAI

SQL> SELECT * FROM Dept;

DEPTNO	DNAME	LOC
10	ACCOUNTING	NEW YORK
20	RESEARCH	DALLAS
30	SALES	CHICAGO
40	OPERATIONS	BOSTON

50 SHIPPING CHENNAI

```
SQL> INSERT INTO Dept
  2 VALUES(60, 'CARGO', 'MUMBAI');
INSERT INTO Dept
*
ERROR at line 1:
ORA-00001: unique constraint (SCOTT.DEPT_PRIMARY_KEY) violated
```

```
SQL> SELECT * FROM Dept;
```

DEPTNO	DNAME	LOC
10	ACCOUNTING	NEW YORK
20	RESEARCH	DALLAS
30	SALES	CHICAGO
40	OPERATIONS	BOSTON
60	CARGO	MUMBAI
50	SHIPPING	CHENNAI

6 rows selected.

```
SQL> ROLLBACK;
```

Rollback complete.

```
SQL> SELECT * FROM Dept;
```

DEPTNO	DNAME	LOC
10	ACCOUNTING	NEW YORK
20	RESEARCH	DALLAS
30	SALES	CHICAGO
40	OPERATIONS	BOSTON
60	CARGO	MUMBAI

```
SQL> cl scr
```

```
SQL> COMMIT;
```

Commit complete.

```
SQL> cl scr
```

```
SQL> SELECT * FROM Dept;
```

DEPTNO	DNAME	LOC
10	ACCOUNTING	NEW YORK
20	RESEARCH	DALLAS
30	SALES	CHICAGO
40	OPERATIONS	BOSTON
60	CARGO	MUMBAI
50	SHIPPING	CHENNAI

6 rows selected.

```
SQL> SAVEPOINT DeptDel01;
```

```
Savepoint created.
```

```
SQL> DELETE FROM Dept  
2 WHERE Deptno = 60;
```

```
1 row deleted.
```

```
SQL> SAVEPOINT DeptDel02;
```

```
Savepoint created.
```

```
SQL> DELETE FROM Dept  
2 WHERE Deptno = 50;
```

```
1 row deleted.
```

```
SQL> SAVEPOINT EmpIns01;
```

```
Savepoint created.
```

```
SQL> INSERT INTO Emp(Empno, Ename, Deptno, Sal)  
2 VALUES(1234, 'SAMPLE01', 30, 2000);
```

```
1 row created.
```

```
SQL> SAVEPOINT EmpDel02;
```

```
Savepoint created.
```

```
SQL> DELETE FROM Emp  
2 WHERE Ename = 'SMITH';
```

```
1 row deleted.
```

```
SQL> ROLLBACK TO SAVEPOINT EmpDel02;
```

```
Rollback complete.
```

```
SQL> ROLLBACK TO SAVEPOINT DeptDel02;
```

```
Rollback complete.
```

```
SQL> cl scr
```

```
SQL> CREATE TABLE SampleALT  
2 (  
3 SampID NUMBER(2)  
4 CONSTRAINT SampleALT-SampID-PK PRIMARY KEY  
5
```

```
SQL> ED
```

```
Wrote file afiedt.buf
```

```
1 CREATE TABLE SampleALT  
2 (  
3
```

```

3 SampID NUMBER(2)
4* CONSTRAINT SampleALT_SampID_PK PRIMARY KEY
SQL> ED
Wrote file afiedt.buf

```

```

1 CREATE TABLE SampleALT
2 (
3 SampID NUMBER(2)
4 CONSTRAINT SampleALT_SampID_PK PRIMARY KEY
5* )
SQL> /

```

Table created.

```

SQL> ALTER TABLE SampleALT
2 ADD
3 (
4 SampName VARCHAR2(10)
5 CONSTRAINT SampleALT_SampName_NN NOT NULL,
6 SampDate DATE
7 );

```

Table altered.

```
SQL> cl scr
```

```
SQL> DROP TABLE SampleALT;
```

Table dropped.

```
SQL> SELECT * FROM TAB;
```

TNAME	TABTYPE	CLUSTERID
EMP_SUM	TABLE	
MYSUBTOT	TABLE	
MYBONUS	TABLE	
MYMASTERDF	TABLE	
DEPT10	TABLE	
INSERTDEPT	VIEW	
EDEPT30	VIEW	
EXAMTIMETABLE	TABLE	
BIN\$VxL2g13AQcO02YkDCYGTyw==\$0	TABLE	
SAMPF	TABLE	
DEPT	TABLE	

TNAME	TABTYPE	CLUSTERID
EMP	TABLE	
BONUS	TABLE	
SALGRADE	TABLE	
DUMMY	TABLE	
CUSTOMER	TABLE	
ORD	TABLE	
ITEM	TABLE	
PRODUCT	TABLE	
PRICE	TABLE	

SALES VIEW

21 rows selected.

SQL> PURGE RECYCLEBIN;

Recyclebin purged.

SQL> SELECT * FROM TAB;

TNAME	TABTYPE	CLUSTERID
EMP_SUM	TABLE	
MYSUBTOT	TABLE	
MYBONUS	TABLE	
MYMASTERDF	TABLE	
DEPT10	TABLE	
INSERTDEPT	VIEW	
EDEPT30	VIEW	
EXAMTIMETABLE	TABLE	
SAMPF	TABLE	
DEPT	TABLE	
EMP	TABLE	

TNAME	TABTYPE	CLUSTERID
BONUS	TABLE	
SALGRADE	TABLE	
DUMMY	TABLE	
CUSTOMER	TABLE	
ORD	TABLE	
ITEM	TABLE	
PRODUCT	TABLE	
PRICE	TABLE	
SALES	VIEW	

20 rows selected.

SQL> cl scr

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
7566	JONES	MANAGER	7839	02-APR-81	2975		20
7654	MARTIN	SALESMAN	7698	28-SEP-81	1250	1400	30
7499	ALLEN	SALESMAN	7698	20-FEB-81	1600	300	30
7844	TURNER	SALESMAN	7698	08-SEP-81	1500	0	30
7900	JAMES	CLERK	7698	03-DEC-81	950		30
7521	WARD	SALESMAN	7698	22-FEB-81	1250	500	30
7902	FORD	ANALYST	7566	03-DEC-81	3000		20
7369	SMITH	CLERK	7902	17-DEC-80	800		20

```

-----
7788 SCOTT      ANALYST      7566 09-DEC-82      3000      20
7876 ADAMS      CLERK        7788 12-JAN-83      1100      20
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> 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
7566 JONES        MANAGER      7839 02-APR-81      2975          20
7654 MARTIN      SALESMAN     7698 28-SEP-81      1250          1400 30
7499 ALLEN      SALESMAN     7698 20-FEB-81      1600          300 30
7844 TURNER     SALESMAN     7698 08-SEP-81      1500          0 30
7900 JAMES       CLERK        7698 03-DEC-81      950          30
7521 WARD        SALESMAN     7698 22-FEB-81      1250          500 30
7902 FORD        ANALYST      7566 03-DEC-81      3000          20
7369 SMITH      CLERK        7902 17-DEC-80      800          20

```

```

EMPNO ENAME      JOB          MGR HIREDATE          SAL          COMM DEPTNO
-----
7788 SCOTT      ANALYST      7566 09-DEC-82      3000          20
7876 ADAMS      CLERK        7788 12-JAN-83      1100          20
7934 MILLER     CLERK        7782 23-JAN-82      1300          10

```

14 rows selected.

SQL> TRUNCATE TABLE Emp;

Table truncated.

SQL> SELECT * FROM Emp;

no rows selected

SQL> ROLLBACK;

Rollback complete.

SQL> SELECT * FROM Emp;

no rows selected

SQL> cl scr

SQL> cl scr

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	NOT NULL	NUMBER(2)

SQL> COMMENT ON TABLE Emp

2 IS 'This Table Stores Employees Information';

Comment created.

SQL> COMMNET ON COLUMN Emp.Ename

SP2-0734: unknown command beginning "COMMNET ON..." - rest of line ignored.

SQL> COMMENT ON COLUMN Emp.Ename

2 IS 'This Column Stores The Information for Employee Names';

Comment created.

SQL> COMMENT ON COLUMN Emp.Ename

2 IS '';

Comment created.

SQL> SPOOL OFF

SQL> cl scr