```
SQL> cl scr

SQL> SELECT ROWNUM, Empno, Ename, Job
  2  FROm Emp;

    ROWNUM     EMPNO ENAME      JOB
---------- ---------- ---------- ---------
         1      7839 KING       PRESIDENT
         2      7698 BLAKE      MANAGER
         3      7782 CLARK      MANAGER
         4      7566 JONES      MANAGER
         5      7654 MARTIN     SALESMAN
         6      7499 ALLEN      SALESMAN
         7      7844 TURNER     SALESMAN
         8      7900 JAMES      CLERK
         9      7521 WARD       SALESMAN
        10      7902 FORD       ANALYST
        11      7369 SMITH      CLERK
        12      7788 SCOTT      ANALYST
        13      7876 ADAMS      CLERK
        14      7934 MILLER     CLERK

14 rows selected.

SQL> ED
Wrote file afiedt.buf

  1  SELECT ROWNUM, Empno, Ename, Job
  2  FROm Emp
  3* WHERE Deptno = 10
SQL> /

    ROWNUM     EMPNO ENAME      JOB
---------- ---------- ---------- ---------
         1      7839 KING       PRESIDENT
         2      7782 CLARK      MANAGER
         3      7934 MILLER     CLERK

SQL> ED
Wrote file afiedt.buf

  1  SELECT ROWNUM, Empno, Ename, Job
  2  FROm Emp
  3* WHERE Job = 'CLERK'
SQL> /

    ROWNUM     EMPNO ENAME      JOB
```

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```
---------- ---------- ---------- ---------
         1       7900 JAMES      CLERK
         2       7369 SMITH      CLERK
         3       7876 ADAMS      CLERK
         4       7934 MILLER     CLERK

SQL> cl scr

SQL> ED
Wrote file afiedt.buf

  1  SELECT ROWNUM, Empno, Ename, Job
  2* FROM Emp
SQL> /

    ROWNUM      EMPNO ENAME      JOB
---------- ---------- ---------- ---------
         1       7839 KING       PRESIDENT
         2       7698 BLAKE      MANAGER
         3       7782 CLARK      MANAGER
         4       7566 JONES      MANAGER
         5       7654 MARTIN     SALESMAN
         6       7499 ALLEN      SALESMAN
         7       7844 TURNER     SALESMAN
         8       7900 JAMES      CLERK
         9       7521 WARD       SALESMAN
        10       7902 FORD       ANALYST
        11       7369 SMITH      CLERK
        12       7788 SCOTT      ANALYST
        13       7876 ADAMS      CLERK
        14       7934 MILLER     CLERK

14 rows selected.

SQL> ED
Wrote file afiedt.buf

  1  SELECT ROWNUM, Empno, Ename, Job, Sal
  2  FROM Emp
  3* ORDER BY Sal
SQL> /

    ROWNUM      EMPNO ENAME      JOB             SAL
---------- ---------- ---------- --------- ----------
        11       7369 SMITH      CLERK           800
         8       7900 JAMES      CLERK           950
        13       7876 ADAMS      CLERK          1100
```

```
         9       7521 WARD       SALESMAN        1250
         5       7654 MARTIN     SALESMAN        1250
        14       7934 MILLER     CLERK           1300
         7       7844 TURNER     SALESMAN        1500
         6       7499 ALLEN      SALESMAN        1600
         3       7782 CLARK      MANAGER         2450
         2       7698 BLAKE      MANAGER         2850
         4       7566 JONES      MANAGER         2975
        10       7902 FORD       ANALYST         3000
        12       7788 SCOTT      ANALYST         3000
         1       7839 KING       PRESIDENT       5000

14 rows selected.

SQL> ED
Wrote file afiedt.buf

  1   SELECT ROWNUM, E1.*
  2   FROM
  3   (
  4   SELECT Empno, Ename, Job, Sal
  5   FROM Emp
  6   ORDER BY Sal
  7*  ) E1
SQL> /

    ROWNUM     EMPNO ENAME      JOB              SAL
---------- ---------- ---------- --------- ----------
         1      7369 SMITH      CLERK            800
         2      7900 JAMES      CLERK            950
         3      7876 ADAMS      CLERK           1100
         4      7521 WARD       SALESMAN        1250
         5      7654 MARTIN     SALESMAN        1250
         6      7934 MILLER     CLERK           1300
         7      7844 TURNER     SALESMAN        1500
         8      7499 ALLEN      SALESMAN        1600
         9      7782 CLARK      MANAGER         2450
        10      7698 BLAKE      MANAGER         2850
        11      7566 JONES      MANAGER         2975
        12      7902 FORD       ANALYST         3000
        13      7788 SCOTT      ANALYST         3000
        14      7839 KING       PRESIDENT       5000

14 rows selected.

SQL> cl scr
```

```
SQL> ED
Wrote file afiedt.buf

  1   SELECT ROWNUM, Empno, Ename, Deptno, Sal
  2   FROM Emp
  3*  WHERE ROWNUM = 1
SQL> /

    ROWNUM        EMPNO ENAME          DEPTNO        SAL
---------- ---------- ---------- ---------- ----------
         1         7839 KING              10       5000

SQL> ED
Wrote file afiedt.buf

  1   SELECT ROWNUM, Empno, Ename, Deptno, Sal
  2   FROM Emp
  3*  WHERE ROWNUM = 4
SQL> /

no rows selected

SQL> ED
Wrote file afiedt.buf

  1   SELECT ROWNUM, Empno, Ename, Deptno, Sal
  2   FROM Emp
  3*  WHERE ROWNUM < 4
SQL> /

    ROWNUM        EMPNO ENAME          DEPTNO        SAL
---------- ---------- ---------- ---------- ----------
         1         7839 KING              10       5000
         2         7698 BLAKE             30       2850
         3         7782 CLARK             10       2450

SQL> ED
Wrote file afiedt.buf

  1   SELECT ROWNUM, Empno, Ename, Deptno, Sal
  2   FROM Emp
  3*  WHERE ROWNUM > 4
SQL> /

no rows selected

SQL> cl scr
```

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```
SQL> COLUMN SelectGraph FORMAT A16
SQL> SELECT
  2  Ename,
  3  LPAD('*', ROWNUM, '*') SelectGraph
  4  FROM Emp;

ENAME      SELECTGRAPH
---------- ----------------
KING       *
BLAKE      **
CLARK      ***
JONES      ****
MARTIN     *****
ALLEN      ******
TURNER     *******
JAMES      ********
WARD       *********
FORD       **********
SMITH      ***********
SCOTT      ************
ADAMS      *************
MILLER     **************

14 rows selected.

SQL> ED
Wrote file afiedt.buf

  1  SELECT
  2  ROWNUM Seqno,
  3  LPAD('*', ROWNUM, '*') SelectGraph
  4  FROM Emp
  5* WHERE ROWNUM <= 5
SQL> /

     SEQNO SELECTGRAPH
---------- ----------------
         1 *
         2 **
         3 ***
         4 ****
         5 *****

SQL> cl scr

SQL> SELECT ROWNUM, Ename, Sal
```

```
  2   FROM Emp
  3   WHERE ROWNUM < 6
  4   ORDER BY Sal DESC;

     ROWNUM ENAME            SAL
 ---------- ---------- ----------
          1 KING            5000
          4 JONES           2975
          2 BLAKE           2850
          3 CLARK           2450
          5 MARTIN          1250

SQL> SELECT ROWNUM, Ename, Sal
  2   FROM Emp
  3   WHERE ROWNUM < 6;

     ROWNUM ENAME            SAL
 ---------- ---------- ----------
          1 KING            5000
          2 BLAKE           2850
          3 CLARK           2450
          4 JONES           2975
          5 MARTIN          1250

SQL> cl scr

SQL> SELECT *
  2   FROM
  3    (
  4    SELECT Ename, Sal, Deptno, Job
  5    FROM Emp
  6    ORDER BY Sal DESC
  7    )
  8   WHERE ROWNUM < 6;

ENAME            SAL     DEPTNO JOB
---------- ---------- ---------- ---------
KING            5000         10 PRESIDENT
FORD            3000         20 ANALYST
SCOTT           3000         20 ANALYST
JONES           2975         20 MANAGER
BLAKE           2850         30 MANAGER

SQL> cl scr

SQL> SELECT LEVEL, ROWNUM, Ename, Sal
  2   FROM Emp
```

```
  3  WHERE ROWNUM < 6
  4  START WITH Ename = 'KING'
  5  CONNECT BY PRIOR Empno = MGR
  6  ORDER BY Sal DESC;

     LEVEL     ROWNUM ENAME             SAL
---------- ---------- ---------- ----------
         1          1 KING             5000
         3          3 SCOTT            3000
         3          5 FORD             3000
         2          2 JONES            2975
         4          4 ADAMS            1100

SQL> SELECT ROWNUM, E1.*
  2  FROM
  3  (
  4  SELECT ROWNUM, Ename, Sal, Deptno, Job
  5  FROM Emp
  6  ORDER BY Sal DESC
  7  ) E1
  8  WHERE ROWNUM < 6;

    ROWNUM     ROWNUM ENAME             SAL     DEPTNO JOB
---------- ---------- ---------- ---------- ---------- ---------
         1          1 KING             5000         10 PRESIDENT
         2         10 FORD             3000         20 ANALYST
         3         12 SCOTT            3000         20 ANALYST
         4          4 JONES            2975         20 MANAGER
         5          2 BLAKE            2850         30 MANAGER

SQL> cl scr

SQL> SELECT RN, Ename, Sal
  2  FROM
  3  (
  4  SELECT ROWNUM RN, Ename, Sal
  5  FROM Emp
  6  )
  7  WHERE MOD(RN, 2) = 0;

        RN ENAME             SAL
---------- ---------- ----------
         2 BLAKE            2850
         4 JONES            2975
         6 ALLEN            1600
         8 JAMES             950
        10 FORD             3000
```

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```
        12 SCOTT               3000
        14 MILLER              1300

7 rows selected.

SQL> ED
Wrote file afiedt.buf

  1   SELECT RN, Ename, Sal
  2   FROM
  3   (
  4   SELECT ROWNUM RN, Ename, Sal
  5   FROM Emp
  6   )
  7* WHERE MOD(RN, 2) = 1
SQL> /

        RN ENAME           SAL
---------- ---------- ----------
         1 KING            5000
         3 CLARK           2450
         5 MARTIN          1250
         7 TURNER          1500
         9 WARD            1250
        11 SMITH            800
        13 ADAMS           1100

7 rows selected.

SQL> cl scr

SQL> SELECT ROWNUM, Ename, Deptno, Sal
  2   FROM Emp;

    ROWNUM ENAME          DEPTNO        SAL
---------- ---------- ---------- ----------
         1 KING            10       5000
         2 BLAKE           30       2850
         3 CLARK           10       2450
         4 JONES           20       2975
         5 MARTIN          30       1250
         6 ALLEN           30       1600
         7 TURNER          30       1500
         8 JAMES           30        950
         9 WARD            30       1250
        10 FORD            20       3000
        11 SMITH           20        800
```

```
        12 SCOTT                  20        3000
        13 ADAMS                  20        1100
        14 MILLER                 10        1300

14 rows selected.

SQL> ED
Wrote file afiedt.buf

  1   SELECT ROWNUM, Ename, Deptno, Sal
  2   FROM Emp
  3*  WHERE ROWNUM = 1
SQL> /

    ROWNUM ENAME          DEPTNO        SAL
---------- ---------- ---------- ----------
         1 KING               10       5000

SQL> ED
Wrote file afiedt.buf

  1   SELECT ROWNUM, Ename, Deptno, Sal
  2   FROM Emp
  3*  WHERE ROWNUM = 5
SQL> /

no rows selected

SQL> ED
Wrote file afiedt.buf

  1   SELECT RN, Ename, Deptno, Sal
  2   FROM
  3   (
  4    SELECT ROWNUM RN, Ename, Deptno, Sal
  5    FROM Emp
  6   ) E1
  7*  WHERE E1.RN = 5
SQL> /

        RN ENAME          DEPTNO        SAL
---------- ---------- ---------- ----------
         5 MARTIN             30       1250

SQL> ED
Wrote file afiedt.buf
```

```
  1   SELECT RN, Ename, Deptno, Sal
  2   FROM
  3   (
  4    SELECT ROWNUM RN, Ename, Deptno, Sal
  5    FROM Emp
  6   ) E1
  7*  WHERE E1.RN &GiveRowLimit
SQL> /
Enter value for giverowlimit: = 1

        RN ENAME          DEPTNO        SAL
---------- ---------- ---------- ----------
         1 KING               10       5000

SQL> /
Enter value for giverowlimit: = 2

        RN ENAME          DEPTNO        SAL
---------- ---------- ---------- ----------
         2 BLAKE              30       2850

SQL> /
Enter value for giverowlimit: = 5

        RN ENAME          DEPTNO        SAL
---------- ---------- ---------- ----------
         5 MARTIN             30       1250

SQL> /
Enter value for giverowlimit: BETWEEN 1 AND 5

        RN ENAME          DEPTNO        SAL
---------- ---------- ---------- ----------
         1 KING               10       5000
         2 BLAKE              30       2850
         3 CLARK              10       2450
         4 JONES              20       2975
         5 MARTIN             30       1250

SQL> /
Enter value for giverowlimit: BETWEEN 6 AND 10

        RN ENAME          DEPTNO        SAL
---------- ---------- ---------- ----------
         6 ALLEN              30       1600
         7 TURNER             30       1500
         8 JAMES              30        950
```

```
         9 WARD                   30         1250
        10 FORD                   20         3000

SQL> /
Enter value for giverowlimit: BETWEEN 11 AND 15

        RN ENAME             DEPTNO        SAL
---------- ---------- ---------- ----------
        11 SMITH                  20          800
        12 SCOTT                  20         3000
        13 ADAMS                  20         1100
        14 MILLER                 10         1300

SQL> /
Enter value for giverowlimit: >= 5

        RN ENAME             DEPTNO        SAL
---------- ---------- ---------- ----------
         5 MARTIN                 30         1250
         6 ALLEN                  30         1600
         7 TURNER                 30         1500
         8 JAMES                  30          950
         9 WARD                   30         1250
        10 FORD                   20         3000
        11 SMITH                  20          800
        12 SCOTT                  20         3000
        13 ADAMS                  20         1100
        14 MILLER                 10         1300

10 rows selected.

SQL> /
Enter value for giverowlimit: <= 6

        RN ENAME             DEPTNO        SAL
---------- ---------- ---------- ----------
         1 KING                   10         5000
         2 BLAKE                  30         2850
         3 CLARK                  10         2450
         4 JONES                  20         2975
         5 MARTIN                 30         1250
         6 ALLEN                  30         1600

6 rows selected.

SQL> /
Enter value for giverowlimit: >= 8
```

```
           RN ENAME          DEPTNO        SAL
---------- ---------- ---------- ----------
            8 JAMES              30        950
            9 WARD               30       1250
           10 FORD               20       3000
           11 SMITH              20        800
           12 SCOTT              20       3000
           13 ADAMS              20       1100
           14 MILLER             10       1300

7 rows selected.

SQL> cl scr

SQL> SELECT ROWID, Ename, Job
  2  FROM Emp;

ROWID              ENAME      JOB
------------------ ---------- ---------
AAASW3AAEAAAADMAAA KING       PRESIDENT
AAASW3AAEAAAADMAAB BLAKE      MANAGER
AAASW3AAEAAAADMAAC CLARK      MANAGER
AAASW3AAEAAAADMAAD JONES      MANAGER
AAASW3AAEAAAADMAAE MARTIN     SALESMAN
AAASW3AAEAAAADMAAF ALLEN      SALESMAN
AAASW3AAEAAAADMAAG TURNER     SALESMAN
AAASW3AAEAAAADMAAH JAMES      CLERK
AAASW3AAEAAAADMAAI WARD       SALESMAN
AAASW3AAEAAAADMAAJ FORD       ANALYST
AAASW3AAEAAAADMAAK SMITH      CLERK
AAASW3AAEAAAADMAAL SCOTT      ANALYST
AAASW3AAEAAAADMAAM ADAMS      CLERK
AAASW3AAEAAAADMAAN MILLER     CLERK

14 rows selected.

SQL> ED
Wrote file afiedt.buf

  1  SELECT ROWID, Ename, Job
  2  FROM Emp
  3* WHERE ROWID = 'AAASW3AAEAAAADMAAG'
SQL> /

ROWID              ENAME      JOB
------------------ ---------- ---------
```

```
AAASW3AAEAAAADMAAG TURNER      SALESMAN

SQL> ED
Wrote file afiedt.buf

  1  SELECT ROWID, Ename, Job
  2  FROM Emp
  3* WHERE ROWID < 'AAASW3AAEAAAADMAAG'
SQL> /

ROWID              ENAME      JOB
------------------ ---------- ---------
AAASW3AAEAAAADMAAA KING       PRESIDENT
AAASW3AAEAAAADMAAB BLAKE      MANAGER
AAASW3AAEAAAADMAAC CLARK      MANAGER
AAASW3AAEAAAADMAAD JONES      MANAGER
AAASW3AAEAAAADMAAE MARTIN     SALESMAN
AAASW3AAEAAAADMAAF ALLEN      SALESMAN

6 rows selected.

SQL> ED
Wrote file afiedt.buf

  1  SELECT ROWID, Ename, Job
  2  FROM Emp
  3* WHERE ROWID > 'AAASW3AAEAAAADMAAG'
SQL> /

ROWID              ENAME      JOB
------------------ ---------- ---------
AAASW3AAEAAAADMAAH JAMES      CLERK
AAASW3AAEAAAADMAAI WARD       SALESMAN
AAASW3AAEAAAADMAAJ FORD       ANALYST
AAASW3AAEAAAADMAAK SMITH      CLERK
AAASW3AAEAAAADMAAL SCOTT      ANALYST
AAASW3AAEAAAADMAAM ADAMS      CLERK
AAASW3AAEAAAADMAAN MILLER     CLERK

7 rows selected.

SQL> ED
Wrote file afiedt.buf

  1  SELECT ROWID, Ename, Job
  2  FROM Emp
```

```
   3* WHERE ROWID BETWEEN 'AAASW3AAEAAAADMAA'||'&GiveStartRowid' AND
'AAASW3AAEAAAADMAA''||'&GiveEndRowid'
SQL> /
Enter value for givestartrowid: A
Enter value for giveendrowid: E
ERROR:
ORA-01756: quoted string not properly terminated


SQL> ED
Wrote file afiedt.buf

   1  SELECT ROWID, Ename, Job
   2  FROM Emp
   3* WHERE ROWID BETWEEN 'AAASW3AAEAAAADMAA'||'&GiveStartRowid' AND
'AAASW3AAEAAAADMAA'||'&GiveEndRowid'
SQL> /
Enter value for givestartrowid: A
Enter value for giveendrowid: E

ROWID               ENAME       JOB
------------------  ----------  ---------
AAASW3AAEAAAADMAAA  KING        PRESIDENT
AAASW3AAEAAAADMAAB  BLAKE       MANAGER
AAASW3AAEAAAADMAAC  CLARK       MANAGER
AAASW3AAEAAAADMAAD  JONES       MANAGER
AAASW3AAEAAAADMAAE  MARTIN      SALESMAN

SQL> /
Enter value for givestartrowid: F
Enter value for giveendrowid: K

ROWID               ENAME       JOB
------------------  ----------  ---------
AAASW3AAEAAAADMAAF  ALLEN       SALESMAN
AAASW3AAEAAAADMAAG  TURNER      SALESMAN
AAASW3AAEAAAADMAAH  JAMES       CLERK
AAASW3AAEAAAADMAAI  WARD        SALESMAN
AAASW3AAEAAAADMAAJ  FORD        ANALYST
AAASW3AAEAAAADMAAK  SMITH       CLERK

6 rows selected.

SQL> /
Enter value for givestartrowid: L
Enter value for giveendrowid: O
```

....

```
ROWID                  ENAME        JOB
------------------ ---------- ---------
AAASW3AAEAAAADMAAL SCOTT        ANALYST
AAASW3AAEAAAADMAAM ADAMS        CLERK
AAASW3AAEAAAADMAAN MILLER       CLERK

SQL> SELECT Ename, Sal, Job
  2  FROM Emp
  3  WHERE ROWID = 'AAAMoOAAEAAAAzXAAJ';
FROM Emp
     *
ERROR at line 2:
ORA-01410: invalid ROWID


SQL> cl scr

SQL> SELECT
  2  B.Sal,
  3  SUM(A.Sal) "Cum Sal"
  4  FROM Emp A, Emp B
  5  WHERE A.ROWID < = B.ROWID
  6  GROUP BY B.ROWID, B.Sal
  7  ORDER BY "Cum Sal";

       SAL    Cum Sal
---------- ----------
      5000       5000
      2850       7850
      2450      10300
      2975      13275
      1250      14525
      1600      16125
      1500      17625
       950      18575
      1250      19825
      3000      22825
       800      23625
      3000      26625
      1100      27725
      1300      29025

14 rows selected.

SQL> ED
Wrote file afiedt.buf
```

```
  1  SELECT
  2  B.Sal,
  3  SUM(A.Sal) "Cum Sal",
  4  AVG(A.Sal) "Avg Sal"
  5  FROM Emp A, Emp B
  6  WHERE A.ROWID < = B.ROWID
  7  GROUP BY B.ROWID, B.Sal
  8* ORDER BY "Cum Sal"
SQL> /

       SAL    Cum Sal    Avg Sal
---------- ---------- ----------
      5000       5000       5000
      2850       7850       3925
      2450      10300 3433.33333
      2975      13275    3318.75
      1250      14525       2905
      1600      16125     2687.5
      1500      17625 2517.85714
       950      18575   2321.875
      1250      19825 2202.77778
      3000      22825     2282.5
       800      23625 2147.72727
      3000      26625    2218.75
      1100      27725 2132.69231
      1300      29025 2073.21429

14 rows selected.

SQL> cl scr

SQL> SELECT Empno, Ename, MGR
  2  FROM Emp;

     EMPNO ENAME             MGR
---------- ---------- ----------
      7839 KING
      7698 BLAKE            7839
      7782 CLARK            7839
      7566 JONES            7839
      7654 MARTIN           7698
      7499 ALLEN            7698
      7844 TURNER           7698
      7900 JAMES            7698
      7521 WARD             7698
      7902 FORD             7566
      7369 SMITH            7902
```

```
       7788 SCOTT             7566
       7876 ADAMS             7788
       7934 MILLER            7782

14 rows selected.

SQL> ED
Wrote file afiedt.buf

  1   SELECT Empno, Ename, MGR
  2   FROM Emp
  3   START WITH Empno = 7839
  4*  CONNECT BY PRIOR Empno = MGR
SQL> /

     EMPNO ENAME            MGR
---------- ---------- ----------
      7839 KING
      7566 JONES           7839
      7788 SCOTT           7566
      7876 ADAMS           7788
      7902 FORD            7566
      7369 SMITH           7902
      7698 BLAKE           7839
      7499 ALLEN           7698
      7521 WARD            7698
      7654 MARTIN          7698
      7844 TURNER          7698
      7900 JAMES           7698
      7782 CLARK           7839
      7934 MILLER          7782

14 rows selected.

SQL> UPDATE Emp SET MGR = 7566 WHERE Ename = 'KING';

1 row updated.

SQL> SELECT Empno, Ename, MGR
  2   FROM Emp;

     EMPNO ENAME            MGR
---------- ---------- ----------
      7839 KING            7566
      7698 BLAKE           7839
      7782 CLARK           7839
      7566 JONES           7839
```

```
       7654 MARTIN             7698
       7499 ALLEN              7698
       7844 TURNER             7698
       7900 JAMES              7698
       7521 WARD               7698
       7902 FORD               7566
       7369 SMITH              7902
       7788 SCOTT              7566
       7876 ADAMS              7788
       7934 MILLER             7782

14 rows selected.

SQL> SELECT Empno, Ename, MGR
  2  FROM Emp
  3  START WITH Empno = 7839
  4  CONNECT BY PRIOR Empno = MGR;
ERROR:
ORA-01436: CONNECT BY loop in user data



no rows selected

SQL> ED
Wrote file afiedt.buf

  1  SELECT Empno, Ename, MGR
  2  FROM Emp
  3  START WITH Empno = 7839
  4* CONNECT BY NOCYCLE PRIOR Empno = MGR
SQL> /

    EMPNO ENAME             MGR
---------- ---------- ----------
      7839 KING             7566
      7566 JONES            7839
      7788 SCOTT            7566
      7876 ADAMS            7788
      7902 FORD             7566
      7369 SMITH            7902
      7698 BLAKE            7839
      7499 ALLEN            7698
      7521 WARD             7698
      7654 MARTIN           7698
      7844 TURNER           7698
      7900 JAMES            7698
```

```
     7782 CLARK                7839
     7934 MILLER               7782

14 rows selected.

SQL> ED
Wrote file afiedt.buf

  1   SELECT Empno, CONNECT_BY_ISCYCLE "Cycle", Ename, MGR
  2   FROM Emp
  3   START WITH Empno = 7839
  4*  CONNECT BY NOCYCLE PRIOR Empno = MGR
SQL> /

     EMPNO      Cycle ENAME            MGR
---------- ---------- ---------- ----------
     7839          0 KING            7566
     7566          1 JONES           7839
     7788          0 SCOTT           7566
     7876          0 ADAMS           7788
     7902          0 FORD            7566
     7369          0 SMITH           7902
     7698          0 BLAKE           7839
     7499          0 ALLEN           7698
     7521          0 WARD            7698
     7654          0 MARTIN          7698
     7844          0 TURNER          7698
     7900          0 JAMES           7698
     7782          0 CLARK           7839
     7934          0 MILLER          7782

14 rows selected.

SQL> ED
Wrote file afiedt.buf

  1   SELECT Empno, CONNECT_BY_ISCYCLE "Cycle", Ename, MGR
  2   FROM Emp
  3   WHERE CONNECT_BY_ISCYCLE = 0
  4   START WITH Empno = 7839
  5*  CONNECT BY NOCYCLE PRIOR Empno = MGR
SQL> /

     EMPNO      Cycle ENAME            MGR
---------- ---------- ---------- ----------
     7839          0 KING            7566
     7788          0 SCOTT           7566
```

```
        7876            0 ADAMS             7788
        7902            0 FORD              7566
        7369            0 SMITH             7902
        7698            0 BLAKE             7839
        7499            0 ALLEN             7698
        7521            0 WARD              7698
        7654            0 MARTIN            7698
        7844            0 TURNER            7698
        7900            0 JAMES             7698
        7782            0 CLARK             7839
        7934            0 MILLER            7782

13 rows selected.

SQL> cl scr

SQL> ROLLBACK;

Rollback complete.

SQL> cl scr

SQL> SELECT Empno, Ename, MGR
  2  FROM Emp;

     EMPNO ENAME             MGR
---------- ---------- ----------
      7839 KING
      7698 BLAKE            7839
      7782 CLARK            7839
      7566 JONES            7839
      7654 MARTIN           7698
      7499 ALLEN            7698
      7844 TURNER           7698
      7900 JAMES            7698
      7521 WARD             7698
      7902 FORD             7566
      7369 SMITH            7902
      7788 SCOTT            7566
      7876 ADAMS            7788
      7934 MILLER           7782

14 rows selected.

SQL> ED
Wrote file afiedt.buf
```

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http://yellankisathish.com/

```
  1   SELECT Empno, Ename, MGR
  2   FROM Emp
  3   START WITH Ename = 'KING'
  4*  CONNECT BY PRIOR Empno = MGR
SQL> /

     EMPNO ENAME              MGR
---------- ---------- ----------
      7839 KING
      7566 JONES             7839
      7788 SCOTT             7566
      7876 ADAMS             7788
      7902 FORD              7566
      7369 SMITH             7902
      7698 BLAKE             7839
      7499 ALLEN             7698
      7521 WARD              7698
      7654 MARTIN            7698
      7844 TURNER            7698
      7900 JAMES             7698
      7782 CLARK             7839
      7934 MILLER            7782

14 rows selected.

SQL> ED
Wrote file afiedt.buf

  1   SELECT Empno, CONNECT_BY_ISLEAF "IsLeaf", Ename, MGR
  2   FROM Emp
  3   START WITH Ename = 'KING'
  4*  CONNECT BY PRIOR Empno = MGR
SQL> /

     EMPNO     IsLeaf ENAME              MGR
---------- ---------- ---------- ----------
      7839          0 KING
      7566          0 JONES             7839
      7788          0 SCOTT             7566
      7876          1 ADAMS             7788
      7902          0 FORD              7566
      7369          1 SMITH             7902
      7698          0 BLAKE             7839
      7499          1 ALLEN             7698
      7521          1 WARD              7698
      7654          1 MARTIN            7698
      7844          1 TURNER            7698
```

```
     7900            1 JAMES               7698
     7782            0 CLARK               7839
     7934            1 MILLER              7782

14 rows selected.

SQL> ED
Wrote file afiedt.buf

  1   SELECT Empno, CONNECT_BY_ISLEAF "IsLeaf", Ename, MGR
  2   FROM Emp
  3   WHERE CONNECT_BY_ISLEAF = 0
  4   START WITH Ename = 'KING'
  5*  CONNECT BY PRIOR Empno = MGR
SQL> /

     EMPNO      IsLeaf ENAME              MGR
---------- ---------- ---------- ----------
     7839            0 KING
     7566            0 JONES               7839
     7788            0 SCOTT               7566
     7902            0 FORD                7566
     7698            0 BLAKE               7839
     7782            0 CLARK               7839

6 rows selected.

SQL> ED
Wrote file afiedt.buf

  1   SELECT Empno, CONNECT_BY_ISLEAF "IsLeaf", Ename, MGR
  2   FROM Emp
  3   WHERE CONNECT_BY_ISLEAF = 1
  4   START WITH Ename = 'KING'
  5*  CONNECT BY PRIOR Empno = MGR
SQL> /

     EMPNO      IsLeaf ENAME              MGR
---------- ---------- ---------- ----------
     7876            1 ADAMS               7788
     7369            1 SMITH               7902
     7499            1 ALLEN               7698
     7521            1 WARD                7698
     7654            1 MARTIN              7698
     7844            1 TURNER              7698
     7900            1 JAMES               7698
     7934            1 MILLER              7782
```

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```
8 rows selected.

SQL> SPOOL OFF
```