```
SQL> SELECT Job
  2  FROM Emp
  3  WHERE Ename = UPPER('smith');

JOB
---------
CLERK

SQL> SELECT Ename, Job, Sal, Deptno
  2  FROM Emp
  3  WHERE Job = 'CLERK'    --Hard Coding
  4  /

ENAME      JOB              SAL     DEPTNO
---------- --------- ---------- ----------
SMITH      CLERK            800         20
ADAMS      CLERK           1100         20
JAMES      CLERK            950         30
MILLER     CLERK           1300         10

SQL> ED
Wrote file afiedt.buf

  1  SELECT Ename, Job, Sal, Deptno
  2  FROM Emp
  3  WHERE Job = (SELECT Job
  4               FROM Emp
  5               WHERE Ename = UPPER('smith')    --Soft Coding
  6*             )
SQL> /

ENAME      JOB              SAL     DEPTNO
---------- --------- ---------- ----------
SMITH      CLERK            800         20
ADAMS      CLERK           1100         20
JAMES      CLERK            950         30
MILLER     CLERK           1300         10

SQL> INSERT INTO EMP(EMPNO, ENAME, JOB, SAL, DEPTNO)
  2  VALUES(7935, 'SMITH', 'SALESMAN', 1200, 30);

1 row created.

SQL> SELECT Ename, Job, Sal, Deptno
  2  FROM Emp
  3  WHERE Job = (SELECT Job
  4               FROM Emp
  5               WHERE Ename = UPPER('smith')    --Soft Coding
  6             )
  7  /
WHERE Job = (SELECT Job
             *
ERROR at line 3:
ORA-01427: single-row subquery returns more than one row
```

```
SQL> ROLLBACK;

Rollback complete.

SQL> --Display The  Details of The Employees Who Are Juniors To TURNER.
SQL> SELECT HireDate
  2  FROM Emp
  3  WHERE Ename = 'TURNER';

HIREDATE
---------
08-SEP-81

SQL> SELECT Empno, Ename, Job, HireDate, Sal, Deptno
  2  FROM Emp
  3  WHERE HireDate > (
  4  SELECT HireDate
  5  FROM Emp
  6  WHERE Ename = 'TURNER'
  7  );

     EMPNO ENAME      JOB       HIREDATE         SAL     DEPTNO
---------- ---------- --------- --------- ---------- ----------
      7654 MARTIN     SALESMAN  28-SEP-81       1250         30
      7788 SCOTT      ANALYST   19-APR-87       3000         20
      7839 KING       PRESIDENT 17-NOV-81       5000         10
      7876 ADAMS      CLERK     23-MAY-87       1100         20
      7900 JAMES      CLERK     03-DEC-81        950         30
      7902 FORD       ANALYST   03-DEC-81       3000         20
      7934 MILLER     CLERK     23-JAN-82       1300         10

7 rows selected.

SQL> --Display The  Details of The Employees Who Are Seniors To TURNER
SQL> ED
Wrote file afiedt.buf

  1  SELECT Empno, Ename, Job, HireDate, Sal, Deptno
  2  FROM Emp
  3  WHERE HireDate < (
  4  SELECT HireDate
  5  FROM Emp
  6  WHERE Ename = 'TURNER'
  7* )
SQL> /

     EMPNO ENAME      JOB       HIREDATE         SAL     DEPTNO
---------- ---------- --------- --------- ---------- ----------
      7369 SMITH      CLERK     17-DEC-80        800         20
      7499 ALLEN      SALESMAN  20-FEB-81       1600         30
      7521 WARD       SALESMAN  22-FEB-81       1250         30
      7566 JONES      MANAGER   02-APR-81       2975         20
```

```
      7698 BLAKE      MANAGER    01-MAY-81        2850         30
      7782 CLARK      MANAGER    09-JUN-81        2450         10

6 rows selected.

SQL> --Display The  Details of The Employees Who Are Joined on the Same
Date Of TURNER.
SQL> ED
Wrote file afiedt.buf

  1  SELECT Empno, Ename, Job, HireDate, Sal, Deptno
  2  FROM Emp
  3  WHERE HireDate = (
  4  SELECT HireDate
  5  FROM Emp
  6  WHERE Ename = 'TURNER'
  7* )
SQL> /

     EMPNO ENAME      JOB       HIREDATE         SAL     DEPTNO
---------- ---------- --------- --------- ---------- ----------
      7844 TURNER     SALESMAN  08-SEP-81       1500         30

SQL> --Display The Details of All The Employees Who Are Working For SALES
Department.
SQL> SELECT Empno, Ename, Job, Sal, Deptn
  2
SQL> SELECT Empno, Ename, Job, Sal, Deptno
  2  FROM Emp
  3  WHERE Deptno =
  4  (
  5  SELECT Deptno
  6  FROM Dept
  7  WHERE Dname = 'SALES'
  8  );

     EMPNO ENAME      JOB              SAL     DEPTNO
---------- ---------- --------- ---------- ----------
      7499 ALLEN      SALESMAN        1600         30
      7521 WARD       SALESMAN        1250         30
      7654 MARTIN     SALESMAN        1250         30
      7698 BLAKE      MANAGER         2850         30
      7844 TURNER     SALESMAN        1500         30
      7900 JAMES      CLERK            950         30

6 rows selected.

SQL> SELECT Deptno
  2  FROM Dept
  3  WHERE Dname = 'SALES';

    DEPTNO
----------
        30
```

```
SQL> --Applying Aggregate Functions in The Sub-Queries--
SQL> --Display The Details of The Employees Whose Salaries Are Matching
with the Highest Salary of The Organisation.
SQL> SELECT Empno, Ename, Job, Deptno, Sal
  2  FROM Emp
  3  WHERE Sal =
  4  (
  5  SELECT MAX(Sal) FROM Emp
  6  );

     EMPNO ENAME      JOB           DEPTNO        SAL
---------- ---------- --------- ---------- ----------
      7839 KING       PRESIDENT         10       5000

SQL> --Display The Details of The Employees Whose Salaries Are Matching
with the Lowest Salary of The Organisation.
SQL> ED
Wrote file afiedt.buf

  1  SELECT Empno, Ename, Job, Deptno, Sal
  2  FROM Emp
  3  WHERE Sal =
  4  (
  5  SELECT MIN(Sal) FROM Emp
  6* )
SQL> /

     EMPNO ENAME      JOB           DEPTNO        SAL
---------- ---------- --------- ---------- ----------
      7369 SMITH      CLERK             20        800

SQL> --Display The Details of The Employees Whose Salaries Are Matching
with the Highest Salary of Department 20.
SQL> ED
Wrote file afiedt.buf

  1  SELECT Empno, Ename, Job, Deptno, Sal
  2  FROM Emp
  3  WHERE Sal =
  4  (
  5  SELECT MAX(Sal) FROM Emp
  6  WHERE DEPTNO = 20
  7* )
SQL> /

     EMPNO ENAME      JOB           DEPTNO        SAL
---------- ---------- --------- ---------- ----------
      7788 SCOTT      ANALYST           20       3000
      7902 FORD       ANALYST           20       3000

SQL> SELECT MAX(Sal) FROM Emp
  2  WHERE DEPTNO = 20;
```

```
  MAX(SAL)
----------
      3000

SQL> ED
Wrote file afiedt.buf

  1  SELECT Empno, Ename, Job, Deptno, Sal
  2  FROM Emp
  3  WHERE Sal =
  4  (
  5  SELECT MAX(Sal) FROM Emp
  6  WHERE DEPTNO = (
  7         SELECT Deptno
  8         FROM Dept
  9         WHERE Dname = 'RESEARCH'
 10         )
 11* )
SQL> /

     EMPNO ENAME      JOB           DEPTNO        SAL
---------- ---------- --------- ---------- ----------
      7788 SCOTT      ANALYST           20       3000
      7902 FORD       ANALYST           20       3000

SQL> SELECT Deptno
  2  FROM Dept
  3  WHERE Dname = 'RESEARCH';

    DEPTNO
----------
        20

SQL> --Display The Details of The Employees Whose Salaries Are Matching
with the Lowest Salary of Department 20.
SQL>
SQL> --Display The Details of The Employees Whose Salaries Are Above the
Mean Salary of The Organisation.
SQL> SELECT Empno, Ename, Job, Sal, Deptno
  2  FROM Emp
  3  WHERE Sal >
  4  (
  5  SELECT AVG(Sal) FROM Emp
  6  );

     EMPNO ENAME      JOB              SAL     DEPTNO
---------- ---------- --------- ---------- ----------
      7566 JONES      MANAGER         2975         20
      7698 BLAKE      MANAGER         2850         30
      7782 CLARK      MANAGER         2450         10
      7788 SCOTT      ANALYST         3000         20
      7839 KING       PRESIDENT       5000         10
      7902 FORD       ANALYST         3000         20
```

```
6 rows selected.

SQL> SELECT AVG(Sal) FROM Emp;

  AVG(SAL)
----------
2073.21429

SQL> --Display The Details of The Employees Whose Salaries Are Below the
Mean Salary of The Organisation.
SQL> ED
Wrote file afiedt.buf

  1  SELECT Empno, Ename, Job, Sal, Deptno
  2  FROM Emp
  3  WHERE Sal <
  4  (
  5  SELECT AVG(Sal) FROM Emp
  6* )
SQL> /

     EMPNO ENAME      JOB              SAL     DEPTNO
---------- ---------- --------- ---------- ----------
      7369 SMITH      CLERK            800         20
      7499 ALLEN      SALESMAN        1600         30
      7521 WARD       SALESMAN        1250         30
      7654 MARTIN     SALESMAN        1250         30
      7844 TURNER     SALESMAN        1500         30
      7876 ADAMS      CLERK           1100         20
      7900 JAMES      CLERK            950         30
      7934 MILLER     CLERK           1300         10

8 rows selected.

SQL> --Get The Details Of Departmentwise Least Salaries Only When A Dept
Least Investment Is Above The Dept 20 Least Investment.
SQL> SELECT Deptno, MIN(Sal) SalMin
  2  FROM Emp
  3  GROUP BY Deptno
  4  HAVING MIN(Sal) >
  5  (
  6  SELECT MIN(Sal) FROM Emp
  7  WHERE Deptno = 20
  8  );

    DEPTNO     SALMIN
---------- ----------
        30        950
        10       1300

SQL> --Display Designation Wise Avg Investments Only When The Avg
Investment is Matching To The Least AvgInvestments of The Jobs.
SQL> SELECT Job, AVG(Sal) SalAvg
  2  FROM Emp
```

```
  3  GROUP BY Job
  4  HAVING AVG(Sal) =
  5  (
  6  SELECT MIN(AVG(Sal))
  7  FROM Emp
  8  GROUP BY Job
  9  );

JOB           SALAVG
--------- ----------
CLERK         1037.5

SQL> SELECT MIN(AVG(Sal))
  2  FROM Emp
  3  GROUP BY Job;

MIN(AVG(SAL))
-------------
       1037.5

SQL> ED
Wrote file afiedt.buf

  1  SELECT Job, MIN(AVG(Sal)) SalAvgMin
  2  FROM Emp
  3* GROUP BY Job
SQL> /
SELECT Job, MIN(AVG(Sal)) SalAvgMin
       *
ERROR at line 1:
ORA-00937: not a single-group group function


SQL> SELECT Job, AVG(Sal) SalAvg
  2  FROM Emp
  3  GROUP BY Job;

JOB           SALAVG
--------- ----------
CLERK         1037.5
SALESMAN        1400
PRESIDENT       5000
MANAGER   2758.33333
ANALYST         3000

SQL> --Display Designation Wise Avg Investments Only When The Avg
Investment is Matching To The Highest AvgInvestments of The Jobs.
SQL> ED
Wrote file afiedt.buf

  1  SELECT Job, AVG(Sal) SalAvg
  2  FROM Emp
  3  GROUP BY Job
  4  HAVING AVG(Sal) =
```

```
  5  (
  6  SELECT MAX(AVG(Sal))
  7  FROM Emp
  8  GROUP BY Job
  9* );
SQL>
SQL> ED
Wrote file afiedt.buf

  1  SELECT Job, AVG(Sal) SalAvg
  2  FROM Emp
  3  GROUP BY Job
  4  HAVING AVG(Sal) =
  5  (
  6  SELECT MAX(AVG(Sal))
  7  FROM Emp
  8  GROUP BY Job
  9* )
SQL> /

JOB           SALAVG
--------- ----------
PRESIDENT       5000

SQL> SELECT MAX(AVG(Sal))
  2  FROM Emp
  3  GROUP BY Job;

MAX(AVG(SAL))
-------------
         5000

SQL> --Display Designation Wise Avg Investments Only When The Avg
Investment is More Than Highest AvgInvestments of The Jobs.
SQL> --Display Designation Wise Avg Investments Only When The Avg
Investment is Below The Highest AvgInvestments of The Jobs.
SQL> --Display Dept Wise Avg Investments Only When The Avg Investment is
More Than Highest AvgInvestments of The Departments.
SQL> SPOOL OFF
```