```
SQL> cl scr

SQL> SELECT Ename, Deptno, Sal,
2  (
3   SELECT SUM(Sal)
4   FROM Emp
5  ) OrgSalSum
6  FROM Emp;
```

ENAME	DEPTNO	SAL	ORGSALSUM
KING	10	5000	29025
BLAKE	30	2850	29025
CLARK	10	2450	29025
JONES	20	2975	29025
MARTIN	30	1250	29025
ALLEN	30	1600	29025
TURNER	30	1500	29025
JAMES	30	950	29025
WARD	30	1250	29025
FORD	20	3000	29025
SMITH	20	800	29025
ENTAME	DEDUMO	CAT	ODCGAT CHM

ENAME	DEPINO	SAL	ORGSALSOM
SCOTT	20	3000	29025
ADAMS	20	1100	29025
MILLER	10	1300	29025

14 rows selected.

```
SQL> ED
```

Wrote file afiedt.buf

```
1 SELECT SUM(Sal), AVG(Sal)
2* FROM Emp
```

SQL> /

```
SUM(SAL) AVG(SAL)
-----
29025 2073.21429
```

SOL> FD

Wrote file afiedt.buf

```
1 SELECT Ename, Deptno, Sal,
2 (
3 SELECT SUM(Sal), AVG(Sal)
4 FROM Emp
5 ) OrgSalSum
6* FROM Emp;
```

# **SkyEss Techno Solutions Pvt. Ltd.**

```
SQL> /
FROM Emp;
ERROR at line 6:
ORA-00911: invalid character
SQL> ED
Wrote file afiedt.buf
   SELECT Ename, Deptno, Sal,
  2
  3
        SELECT SUM(Sal), AVG(Sal)
  4
        FROM Emp
       ) OrgSalSum
  6* FROM Emp
SQL> /
   SELECT SUM(Sal), AVG(Sal)
ERROR at line 3:
ORA-00913: too many values
SQL> ED
Wrote file afiedt.buf
  1 SELECT SUM(Sal), AVG(Sal)
  2 FROM Emp
  3* GROUP BY Deptno
SQL> /
  SUM(SAL)
      8750 2916.6666
     10875
      9400 1566.66667
SQL> ED
Wrote file afiedt.buf
     SELECT Ename, Deptno, Sal,
        SELECT SUM(Sal)
        FROM Emp
        GROUP BY Deptno
        ) OrgSalSum
  7* FROM Emp
SOL> /
   SELECT SUM(Sal)
ERROR at line 3:
```

**SkyEss Techno Solutions Pvt. Ltd.** 

```
ORA-01427: single-row subquery returns more than one row
```

```
SOL> cl scr
SOL> ED
Wrote file afiedt.buf
     SELECT Ename, Deptno, Sal,
  2
  3
        SELECT SUM(Sal)
  4
        FROM Emp
  5
        ) OrgSalSum,
  6
  7
       SELECT AVG(Sal)
       FROM Emp
     ) OrgSalAvg
  9
 10* FROM Emp
SQL> /
```

ENAME	DEPTNO	SAL	ORGSALSUM	ORGSALAVG
KING	10	5000	29025	2073.21429
BLAKE	30	2850	29025	2073.21429
CLARK	10	2450	29025	2073.21429
JONES	20	2975	29025	2073.21429
MARTIN	30	1250	29025	2073.21429
ALLEN	30	1600	29025	2073.21429
TURNER	30	1500	29025	2073.21429
JAMES	30	950	29025	2073.21429
WARD	30	1250	29025	2073.21429
FORD	20	3000	29025	2073.21429
SMITH	20	800	29025	2073.21429
		- V		
ENAME	DEPTNO	SAL	ORGSALSUM	ORGSALAVG
SCOTT	20	3000	29025	2073.21429
ADAMS	20	1100	29025	2073.21429
MILLER	10	1300	29025	2073.21429
	All Parkets			

14 rows selected

SQL> cl scr

SQL SELECT Deptno, AVG(Sal) SalAvg

2 FROM Emp

3 GROUP BY Deptno;

DEPTNO SALAVG ----- 10 2916.66667

------

# **SkyEss Techno Solutions Pvt. Ltd.**

..... 2175 30 1566.66667 SQL> SELECT Ename, OE.Deptno, Sal 2 FROM Emp OE 3 WHERE OE.Sal > 4 ( 5 SELECT AVG(Sal) 6 FROM Emp IE 7 WHERE IE.Deptno = OE.Deptno 8 ) 9 SQL> SELECT Ename, OE.Deptno, Sal 2 FROM Emp OE; DEPTNO ENAME SAL 10 5000 KING 30 BLAKE 2850 CLARK 10 2450 20 2975 JONES MARTIN 30 1250 ALLEN 30 1600 30 1500 TURNER JAMES 30 950 WARD 30 1250 20 FORD 3000 SMITH 20 ENAME DEPTNO 3000 SCOTT 1100 ADAMS 1300 MILLER 14 rows selected SQL> cl scr SQL> SELECT Ename, OE.Deptno, Sal FROM Emp OE WHERE OE.Sal > SELECT AVG(Sal) FROM Emp IE WHERE IE.Deptno = OE.Deptno ENAME DEPTNO SAL

------

5000

10

KING

## **SkyEss Techno Solutions Pvt. Ltd.**

30 2850 BLAKE JONES 20 2975 ALLEN 30 1600 20 FORD 3000 SCOTT 20 3000

6 rows selected.

SQL> ED

Wrote file afiedt.buf

- 1 SELECT Ename, OE.Deptno, Sal 2 FROM Emp OE, 3 4 SELECT Deptno, AVG(Sal) SalAvg 5 FROM Emp 6 GROUP BY Deptno ) IE 8\* WHERE OE.Sal > IE.SalAvg

9	/	
_	/	

ENAME	DEPTNO	SAL
KING	10	5000
KING	10	5000
KING	10	5000
FORD	20	3000
FORD	20	3000
FORD	20	3000
SCOTT	20	3000
SCOTT	20	3000
SCOTT	20	3000
JONES	20	2975
JONES	20	2975
ENAME	DEPTNO	SAL
JONES 🔨	20	2975
BLAKE	30	2850
BLAKE	30	2850
CLARK	10	2450
CLARK	10	2450
ALLEN	30	1600

ws selected.

Wrote file afiedt.buf

- 1 SELECT Ename, OE.Deptno, Sal
- 2 FROM Emp OE,

# **SkyEss Techno Solutions Pvt. Ltd.**

```
.....
  3
  4
     SELECT Deptno, AVG(Sal) SalAvg
 5
   FROM Emp
 6 GROUP BY Deptno
  7
    ) IE
 8 WHERE OE.Deptno = IE.Deptno AND
 9* OE.Sal > IE.SalAvg
SQL> /
ENAME
             DEPTNO
                 10
KING
                 20
SCOTT
                         3000
FORD
                 20
                         3000
                 20
JONES
                         2975
ALLEN
                 30
                         1600
BLAKE
                 30
                         2850
6 rows selected.
SQL> SELECT Ename, OE.Deptno, Sal
 2 FROM Emp OE
 3 WHERE OE.Sal >
 5 SELECT AVG(Sal)
 6 FROM Emp IE
 7 WHERE IE.Deptno = OE.Deptno
ENAME
             DEPTNO
KING
BLAKE
                         2850
JONES
                         2975
ALLEN
                         1600
FORD
                         3000
SCOTT
                         3000
6 rows selec
SOL> ED
Wrote file afiedt.buf
    SELECT Ename, OE.Deptno, Sal
   FROM Emp OE
    WHERE OE.Sal >
   SELECT AVG(Sal) SalAvg
   FROM Emp IE
   WHERE IE.Deptno = OE.Deptno
```

**SkyEss Techno Solutions Pvt. Ltd.** 

.....

```
SQL> /
ENAME
              DEPTNO
                           5000
KING
                  10
BLAKE
                  30
                           2850
                  20
JONES
                          2975
ALLEN
                 30
                  20
FORD
                          3000
                     3000
SCOTT
                  20
6 rows selected.
SQL> ED
Wrote file afiedt.buf
  1 SELECT Ename, OE.Deptno, Sal, IE.SalAvg
  2 FROM Emp OE
  3 WHERE OE.Sal >
  5 SELECT AVG(Sal) SalAvg
  6 FROM Emp IE
  7 WHERE IE.Deptno = OE.Deptno
  8* )
SQL> /
SELECT Ename, OE.Deptno, Sal, IE.SalAvg
ERROR at line 1:
ORA-00904: "IE". "SALAVG": invalid identifier
SQL> ED
Wrote file afiedt.buf
  1 SELECT Ename, OE.Deptno, Sal, IE.SalAvg
  2 FROM Emp OE
  3
  4
              Deptno, AVG(Sal) SalAvg
       FROM Emp
  5
       GROUP BY Deptno
  6
    WHERE OE.Deptno = IE.Deptno AND
    OE Sal > IE.SalAvg
            DEPTNO SAL SALAVG
KING
                  10
                           5000 2916.66667
                  20
                           3000
SCOTT
FORD
                  20
                           3000
                                     2175
                 20
                          2975
JONES
```

SkyEss Techno Solutions Pvt. Ltd.

Flat No. 201, II Floor, Abhilash Towers, BK Guda, Hyderabad – 500 038 Ph No. +9140 23710047, 64640047, Mobile: 9985798869

**Contact For Courses And Training in** 

```
ALLEN 30 1600 1566.66667
BLAKE 30 2850 1566.66667
```

#### 6 rows selected.

```
SQL> SET AUTOTRACE ON EXPLAIN
SQL> SELECT Ename, OE.Deptno, Sal
2 FROM Emp OE,
3 (
4 SELECT Deptno, AVG(Sal) SalAvg
5 FROM Emp
6 GROUP BY Deptno
7 ) IE
8 WHERE OE.Deptno = IE.Deptno AND
9 OE.Sal > IE.SalAvg;
```

ENAME	DEPTNO	SAL
KING	10	5000
SCOTT	20	3000
FORD	20	3000
JONES	20	2975
ALLEN	30	1600
BLAKE	30	2850

6 rows selected.

#### Execution Plan

```
SQL> SELECT Ename, OE.Deptno, Sal

2 FROM Emp OE

3 WHERE OE.Sal >

4 (

5 SELECT AVG(Sal) SalAvg
```

6 FROM Emp. TE

6 FROM Emp IE

# **SkyEss Techno Solutions Pvt. Ltd.**

```
7 WHERE IE.Deptno = OE.Deptno
```

3);

ENAME	DEPTNO	SAL
KING	10	5000
BLAKE	30	2850
JONES	20	2975
ALLEN	30	1600
FORD	20	3000
SCOTT	20	3000

6 rows selected.

#### Execution Plan

\_\_\_\_\_

- O SELECT STATEMENT Optimizer=ALL\_ROWS (Cost=6 Card=3 Bytes=99)
- 1 0 FILTER
- 2 1 TABLE ACCESS (FULL) OF 'EMP' (TABLE) (Cost=3 Card=1 Byte s=33)
- 3 1 SORT (AGGREGATE)
- 4 3 TABLE ACCESS (FULL) OF 'EMP' (TABLE) (Cost=3 Card=1 By tes=26)

#### SQL> ED

Wrote file afiedt.buf

- 1 SELECT Ename, OE.Job, Sal
- 2 FROM Emp OE
- 3 WHERE OE.Sal >
- 4 (
- 5 SELECT AVG(Sal) SalAvg
- 6 FROM Emp IE
- 7 WHERE IE.Job = OE.Job
- 8\*
- SQL>

ENAME	JOB	SAL
BLAKE	MANAGER	 2850
JONES	MANAGER	2975
ALLEN	SALESMAN	1600
TURNER	SALESMAN	1500
ADAMS	CLERK	1100
MILLER	CLERK	1300

------

# **SkyEss Techno Solutions Pvt. Ltd.**

```
6 rows selected.
```

```
Execution Plan
          SELECT STATEMENT Optimizer=ALL_ROWS (Cost=6 Card=2 Bytes=52)
   1
          FILTER
              TABLE ACCESS (FULL) OF 'EMP' (TABLE) (Cost=3 Card=1 BV
          s = 26)
   3
              SORT (AGGREGATE)
                TABLE ACCESS (FULL) OF 'EMP' (TABLE) (Cost=3
          tes=19)
SOL> ED
Wrote file afiedt.buf
  1 SELECT Ename, OE.Job, Sal
  2 FROM Emp OE
  3 WHERE OE.Sal <</pre>
  5 SELECT AVG(Sal) SalAvg
  6 FROM Emp IE
  7 WHERE IE.Job = OE.Job
  8*)
SQL> /
ENAME
           JOB
CLARK
           MANAGER
                             450
                            1250
MARTIN
           SALESMAN
           CLERK
                            950
JAMES
           SALESMAN
                            1250
WARD
           CLERK
                            800
SMITH
Execution Plan
          SELECT STATEMENT Optimizer=ALL_ROWS (Cost=6 Card=2 Bytes=52)
            FILTER
              TABLE ACCESS (FULL) OF 'EMP' (TABLE) (Cost=3 Card=1 Byte
          s = 26)
              SORT (AGGREGATE)
                TABLE ACCESS (FULL) OF 'EMP' (TABLE) (Cost=3 Card=1 By
          tes=19)
```

------

# **SkyEss Techno Solutions Pvt. Ltd.**

```
SOL> ED
Wrote file afiedt.buf
  1 SELECT Ename, OE.Job, Sal
  2 FROM Emp OE
  3 WHERE OE.Sal =
  5 SELECT AVG(Sal) SalAvg
  6 FROM Emp IE
  7 WHERE IE.Job = OE.Job
 8*)
SQL> /
       JOB
ENAME
        PRESIDENT
                          5000
KING
                          3000
FORD
        ANALYST
SCOTT
         ANALYST
                          3000
Execution Plan
        SELECT STATEMENT Optimizer=ALL ROWS (Cost=6 Card=6 Bytes=156
           TABLE ACCESS (FULL
                                 OF 'EMP' (TABLE) (Cost=3 Card=1 Byte
         s=26)
             SORT (AGGREGATE)
               TABLE ACCESS (FULL) OF 'EMP' (TABLE) (Cost=3 Card=1 By
         tes=19)
SOL> cl scr
SQL> SELECT Empno, Ename, E.Deptno, Sal, MGR
    FROM Emp E
    WHERE E.Sal >
     SELECT M.Sal
     FROM Emp M
     WHERE M.Empno = E.MGR
     );
    EMPNO ENAME
                                       SAL
                         DEPTNO
```

**SkyEss Techno Solutions Pvt. Ltd.** 

7902 FORD 20 3000 7566	
7788 SCOTT 20 3000 7566	

#### Execution Plan

-----SELECT STATEMENT Optimizer=ALL\_ROWS (Cost=4 Card=0 Bytes=3)

- TABLE ACCESS (FULL) OF 'EMP' (TABLE) (Cost=3 Card=1 Byte s = 59)
- TABLE ACCESS (BY INDEX ROWID) OF 'EMP' (TABLE) ard=1 Bytes=26)
- (INDEX (UNIQU INDEX (UNIQUE SCAN) OF 'EMP PRIMARY KEY' 4 E)) (Cost=1 Card=1)

SQL> SELECT Ename, Sal

- 2 FROM Emp
- 3 WHERE Empno = 7566;

ENAME	SAL
JONES	2975

#### Execution Plan

- SELECT STATEMENT Optimizer=ALL\_ROWS (Cost=1 Card=1 Bytes=33)
- (BY INDEX ROWID) OF 'EMP' (TABLE) (Cost=1 Car O TABLE ACCESS d=1 Bytes=33)
- INDEX (UNIQUE SCAN) OF 'EMP\_PRIMARY\_KEY' (INDEX (UNIQUE) (Cost=1 Card=1)

SET AUTOTRACE OFF EXPLAIN

SQL> --Get The Details of Departments in Which Employees Are Recruited SQL> SELECT DISTINCT Deptno, Dname, Loc

- 2 FROM Dept
- 3 WHERE Deptno IN

# **SkyEss Techno Solutions Pvt. Ltd.**

```
.....
    SELECT DISTINCT Deptno
 6
   FROM Emp
   );
                     LOC
   DEPTNO DNAME
      10 ACCOUNTING NEW YORK
      20 RESEARCH
                    DALLAS
      30 SALES
                     CHICAGO
SOL> ED
Wrote file afiedt.buf
 1 SELECT Deptno, Dname, Loc
 2 FROM Dept
 3 WHERE Deptno IN
 5 SELECT DISTINCT Deptno
 6 FROM Emp
 7* )
SQL> /
                      LOC
   DEPTNO DNAME
      10 ACCOUNTING
                      NEW YORK
      30 SALES
                      CHICAGO
      20 RESEARCH
SQL> ED
Wrote file afiedt.buf
 1 SELECT Deptno, Dname
 2 FROM Dept
 3 WHERE Deptno IN
 4 (
 5 SELECT Deptino
 б
    FROM Emp
    GROUP BY
 7
 8*
SQL>
         DNAME
                      LOC
       10 ACCOUNTING
                     NEW YORK
       20 RESEARCH
                     DALLAS
       30 SALES
                     CHICAGO
SOL> ED
Wrote file afiedt.buf
 1 SELECT Deptno, Dname, Loc
```

**SkyEss Techno Solutions Pvt. Ltd.** 

```
.....
 2 FROM Dept
 3 WHERE Deptno IN
 4 (
 5 SELECT UNIQUE Deptno
 6 FROM Emp
 7*
    )
SQL> /
   DEPTNO DNAME LOC
 ----- -----
      10 ACCOUNTING NEW YORK
      30 SALES
                   CHICAGO
      20 RESEARCH
                   DALLAS
SQL> ED
Wrote file afiedt.buf
 1 SELECT Deptno, Dname, Loc
 2 FROM Dept
 3 WHERE Deptno IN
 4
 5
   SELECT Deptno
 6 FROM Emp
 7* )
SQL> /
   DEPTNO DNAME
                     LOC
 _____
      10 ACCOUNTING
      30 SALES
                     CHICAGO
      20 RESEARCH
SOL> ED
Wrote file afiedt.buf
 1 SELECT DISTINCT D.Deptno, Dname, Loc
 2 FROM Dept D, Emp E
 3* WHERE D.Deptno = E.Deptno
SOL> /
                     LOC
      10 ACCOUNTING NEW YORK
      20 RESEARCH
                   DALLAS
      30 SALES
                    CHICAGO
SOL> ED
Wrote file afiedt.buf
 1 SELECT UNIQUE D.Deptno, Dname, Loc
 2 FROM Dept D, Emp E
```

**SkyEss Techno Solutions Pvt. Ltd.** 

```
.....
 3* WHERE D.Deptno = E.Deptno
SOL> /
   DEPTNO DNAME
                      LOC
       10 ACCOUNTING NEW YORK
20 RESEARCH DALLAS
       30 SALES
                      CHICAGO
SOL> ED
Wrote file afiedt.buf
 1 SELECT D.Deptno, Dname, Loc
 2 FROM Dept D, Emp E
 3 WHERE D.Deptno = E.Deptno
 4* GROUP BY D.Deptno, Dname, Loc
SQL> /
   DEPTNO DNAME
                       LOC
       10 ACCOUNTING
                      NEW YORK
                      DALLAS
       20 RESEARCH
       30 SALES
                      CHICAGO
SQL> ED
Wrote file afiedt.buf
 1 SELECT D.Deptno, Dname, Loc
 2 FROM Dept D
 3 WHERE D.Deptno =
  5 SELECT E.Deptno
 6 FROM Emp E
   WHERE E.Deptno
 7
                    D.Deptno
 8* )
SQL> /
ERROR at line 5:
ORA-01427 single-row subquery returns more than one row
Wrote file afiedt.buf
    SELECT D.Deptno, Dname, Loc
    FROM Dept D
  3
    WHERE D.Deptno =
  4
 5
    SELECT DISTINCT E.Deptno
   FROM Emp E
```

**SkyEss Techno Solutions Pvt. Ltd.** 

```
.....
 7 WHERE E.Deptno = D.Deptno
 8* )
SQL> /
                     LOC
   DEPTNO DNAME
      10 ACCOUNTING NEW YORK
20 RESEARCH DALLAS
       30 SALES
                     CHICAGO
SOL> ED
Wrote file afiedt.buf
 1 SELECT D.Deptno, Dname, Loc
 2 FROM Dept D
 3 WHERE D.Deptno =
   (
 5 SELECT UNIQUE E.Deptno
 6 FROM Emp E
 7 WHERE E.Deptno = D.Deptno
 8* )
SOL> /
   DEPTNO DNAME
      10 ACCOUNTING NEW YORK
       20 RESEARCH
                     DALLAS
      30 SALES
                      CHICAGO
SOL> ED
Wrote file afiedt.buf
 1 SELECT D.Deptno, Dname, Loc
 2 FROM Dept D
 3 WHERE D.Deptno
   SELECT E. Deptno
 5
 6
   FROM Emp E
 7
    WHERE E.Deptno = D.Deptno
     GROUP BY E.Deptno
 9 * `
SQL>
   DEPTNO DNAME
                     LOC
       10 ACCOUNTING NEW YORK
       20 RESEARCH
                     DALLAS
       30 SALES
                     CHICAGO
SOL> ED
Wrote file afiedt.buf
```

**SkyEss Techno Solutions Pvt. Ltd.** 

```
1 SELECT D.Deptno, Dname, Loc
  2 FROM Dept D
  3 WHERE D.Deptno IN
  4
  5
    SELECT E.Deptno
  6 FROM Emp E
  7 WHERE E.Deptno = D.Deptno
  8* )
SOL> /
   DEPTNO DNAME
                        LOC
       10 ACCOUNTING NEW YORK 30 SALES CHICAGO
        20 RESEARCH DALLAS
SOL> ED
Wrote file afiedt.buf
  1 SELECT D.Deptno, Dname, Loc
  2 FROM Dept D
  3 WHERE D.Deptno =ANY
  5 SELECT E.Deptno
  6 FROM Emp E
  7 WHERE E.Deptno = D.Deptno
  8* )
SQL> /
   DEPTNO DNAME
       10 ACCOUNTING
                          NEW YORK
        30 SALES
                          CHICAGO
                         DALLAS
        20 RESEARCH
SQL> ED
Wrote file afiedt.buf
   SELECT D.Deptno, Dname, Loc
    FROM Dept D
    WHERE D.Deptno =SOME
     SELECT E.Deptno
     FROM Emp E
     WHERE E.Deptno = D.Deptno
SOL> /
                         LOC
    DEPTNO DNAME
```

SkyEss Techno Solutions Pvt. Ltd.

Flat No. 201, II Floor, Abhilash Towers, BK Guda, Hyderabad – 500 038 Ph No. +9140 23710047, 64640047, Mobile: 9985798869

**Contact For Courses And Training in** 

```
.....
       10 ACCOUNTING
                      NEW YORK
       30 SALES CHICAGO
20 RESEARCH DALLAS
SQL> cl scr
SQL> SELECT Deptno, Dname
  2 FROM Dept D
 3 WHERE EXISTS
    (
 4
 5 SELECT *
 6 FROM Emp E
 7 WHERE E.Deptno = D.Deptno
   DEPTNO DNAME
       10 ACCOUNTING
       30 SALES
       20 RESEARCH
SOL> ED
Wrote file afiedt.buf
 1 SELECT Deptno, Dname
 2 FROM Dept D
 3 WHERE NOT EXISTS
 5 SELECT *
 6 FROM Emp E
 7 WHERE E.Deptno = D.Der
 8* )
SOL> /
   DEPTNO DNAME
       40 OPERATIONS
SQL> SET AUTOTRACE ON EXPLAIN
SQL> SELECT Deptno, Dname
    FROM Dept D
WHERE EXISTS
       SELECT *
       FROM Emp E
       WHERE E.Deptno = D.Deptno
   DEPTNO DNAME
       10 ACCOUNTING
```

**SkyEss Techno Solutions Pvt. Ltd.** 

30 SALES

```
20 RESEARCH
Execution Plan
          SELECT STATEMENT Optimizer=ALL_ROWS (Cost=7 Card=3 Bytes=109
           HASH JOIN (SEMI) (Cost=7 Card=3 Bytes=105)
              TABLE ACCESS (FULL) OF 'DEPT' (TABLE) (Cost=3 Card=4
          es=88)
              TABLE ACCESS (FULL) OF 'EMP' (TABLE) (Cost=3
          es=182)
SOL> ED
Wrote file afiedt.buf
  1 SELECT Deptno, Dname
  2 FROM Dept D
  3 WHERE EXISTS
       (
  5
       SELECT 125
        FROM Emp E
        WHERE E.Deptno = D.Dept
  7
  8*
SQL> /
    DEPTNO DNAME
        10 ACCOUNTING
        30 SALES
        20 RESEARCH
Execution Plan
          SELECT STATEMENT Optimizer=ALL_ROWS (Cost=7 Card=3 Bytes=105
           HASH JOIN (SEMI) (Cost=7 Card=3 Bytes=105)
              TABLE ACCESS (FULL) OF 'DEPT' (TABLE) (Cost=3 Card=4 Byt
          es=88)
              TABLE ACCESS (FULL) OF 'EMP' (TABLE) (Cost=3 Card=14 Byt
   3
          es=182)
```

**SkyEss Techno Solutions Pvt. Ltd.** 

SOL> SET AUTOTRACE OFF EXPLAIN SQL> cl scr SQL> SELECT E.Ename 2 FROM Emp E 3 WHERE EXISTS 4 ( 5 SELECT \* б FROM Emp E1 WHERE E1.Empno = E.Mgr 7 ENAME BLAKE CLARK JONES MARTIN ALLEN TURNER **JAMES** WARD FORD SMITH SCOTT **ENAME ADAMS** MILLER 13 rows selected. SQL> ED Wrote file afiedt.buf SELECT E.Ename FROM Emp E WHERE MGR IS NOT NULL CLARK JONES MARTIN ALLEN

-----

## **SkyEss Techno Solutions Pvt. Ltd.**

```
TURNER
JAMES
WARD
FORD
SMITH
SCOTT
ENAME
ADAMS
MILLER
13 rows selected.
SQL> ED
Wrote file afiedt.buf
  1 SELECT E.Ename
  2 FROM Emp E
  3 WHERE MGR IN
  4
  5
     SELECT MGR
  6
    FROM Emp
  7* )
SQL> /
ENAME
JONES
CLARK
BLAKE
WARD
JAMES
TURNER
ALLEN
MARTIN
SCOTT
FORD
SMITH
13 rows selected.
SQL> SELECT E.Ename
     FROM Emp E
     WHERE NOT EXISTS
```

**SkyEss Techno Solutions Pvt. Ltd.** 

```
.....
 5
     SELECT *
 6
    FROM Emp E1
 7
     WHERE E1.Empno = E.Mgr
ENAME
KING
SOL> SELECT E.Ename
 2 FROM Emp E
  3 WHERE EXISTS
  4
 5
    SELECT *
 6
   FROM Emp E1
 7
    WHERE E1.Mgr = E.Empno
 8
ENAME
KING
BLAKE
JONES
FORD
SCOTT
CLARK
6 rows selected.
SQL> ED
Wrote file afiedt.buf
 1 SELECT E.Ename
 2 FROM Emp E
 3 WHERE NOT EXISTS
 5
  6
     FROM Emp
     WHERE E1
             Mgr = E.Empno
 8*
SQL>
MARTIN
ALLEN
MILLER
SMITH
ADAMS
```

SkyEss Techno Solutions Pvt. Ltd.

•

```
JAMES
8 rows selected.
SQL> ED
Wrote file afiedt.buf
  1 SELECT E.Ename, Sal, Comm
  2 FROM Emp E
  3 WHERE EXISTS
  4 (
  5 SELECT *
  6 FROM Emp E1
  7
    WHERE E1.Comm = E.Comm
  8* )
SQL> /
                  SAL
                            COMM
ENAME
MARTIN
                 1250
                            1400
                             300
                 1600
ALLEN
TURNER
                 1500
                               0
WARD
                 1250
                              500
SQL> ED
Wrote file afiedt.buf
  1 SELECT E.Ename, Sal, Comm
  2 FROM Emp E
  3 WHERE NOT EXISTS
  4
  5
    SELECT *
  6
     FROM Emp E1
     WHERE E1.Comm
  7
  8*
     )
SQL> /
ENAME
                            COMM
                 1300
MILLER
ADAMS
                 1100
SCOTT
                 3000
SMITH
                  800
                 3000
                  950
                 2975
JONES
CLARK
                 2450
```

10 rows selected.

2850

5000

BLAKE

KING

# **SkyEss Techno Solutions Pvt. Ltd.**

SQL> SPOOL OFF

\_\_\_\_\_

# **SkyEss Techno Solutions Pvt. Ltd.**

Flat No. 201, II Floor, Abhilash Towers, BK Guda, Hyderabad – 500 038 Ph No. +9140 23710047, 64640047, Mobile: 9985798869

**Contact For Courses And Training in**