PRACTICAL 5 Study of various type of JOINS

1. Inner join

```
SQL> select ENAME,SAL,LOC from EMP inner join DEPT
  2  on EMP.DEPTNO=DEPT.DEPTNO;

ENAME                 SAL LOC
---------- ---------- -------------
KING                 5000 NEW YORK
BLAKE                2850 CHICAGO
CLARK                2450 NEW YORK
JONES                2975 DALLAS
SCOTT                3000 DALLAS
FORD                 3000 DALLAS
SMITH                 800 DALLAS
ALLEN                1600 CHICAGO
WARD                 1250 CHICAGO
MARTIN               1250 CHICAGO
TURNER               1500 CHICAGO
ADAMS                1100 DALLAS
JAMES                 950 CHICAGO
MILLER               1300 NEW YORK

14 rows selected.
```

2. Outer join
   right outer join:

```
SQL> select EMPNO, ENAME,SAL, imr.DEPTNO, DEPT.DEPTNO,LOC from imr right outer join DEPT
  2  on imr.DEPTNO=DEPT.DEPTNO;

    EMPNO ENAME        SAL    DEPTNO     DEPTNO LOC
--------- ---------- ---------- ---------- ---------- -------------
     7839 KING        5000        10         10 NEW YORK
     7698 BLAKE       2850        30         30 CHICAGO
     7782 CLARK       2450        10         10 NEW YORK
     7566 JONES       2975        20         20 DALLAS
     7788 SCOTT       3000        20         20 DALLAS
     7902 FORD        3000        20         20 DALLAS
     7369 SMITH        800        20         20 DALLAS
     7499 ALLEN       1600        30         30 CHICAGO
     7521 WARD        1250        30         30 CHICAGO
     7654 MARTIN      1250        30         30 CHICAGO
     7844 TURNER      1500        30         30 CHICAGO
     7876 ADAMS       1100        20         20 DALLAS
     7900 JAMES        950        30         30 CHICAGO
     7934 MILLER      1300        10         10 NEW YORK
                                             40 BOSTON

15 rows selected.
```

left outer join:

```
SQL> select EMPNO, ENAME,SAL, imr.DEPTNO, DEPT.DEPTNO,LOC from imr left outer join DEPT
  2  on imr.DEPTNO=DEPT.DEPTNO;

    EMPNO ENAME        SAL    DEPTNO     DEPTNO LOC
--------- ---------- ---------- ---------- ---------- -------------
     7839 KING        5000        10         10 NEW YORK
     7698 BLAKE       2850        30         30 CHICAGO
     7782 CLARK       2450        10         10 NEW YORK
     7566 JONES       2975        20         20 DALLAS
     7788 SCOTT       3000        20         20 DALLAS
     7902 FORD        3000        20         20 DALLAS
     7369 SMITH        800        20         20 DALLAS
     7499 ALLEN       1600        30         30 CHICAGO
     7521 WARD        1250        30         30 CHICAGO
     7654 MARTIN      1250        30         30 CHICAGO
     7844 TURNER      1500        30         30 CHICAGO
     7876 ADAMS       1100        20         20 DALLAS
     7900 JAMES        950        30         30 CHICAGO
     7934 MILLER      1300        10         10 NEW YORK

14 rows selected.
```

IMRAN RIZWAN SHAIKH 109 FYIT PRACTICAL 5 DBMS

Full outer join:

```
SQL> select EMPNO, ENAME,SAL, imr.DEPTNO, DEPT.DEPTNO,LOC from imr full outer join DEPT
  2  on imr.DEPTNO=DEPT.DEPTNO;

    EMPNO ENAME             SAL     DEPTNO     DEPTNO LOC
---------- ---------- ---------- ---------- ---------- -------------
     7839 KING             5000         10         10 NEW YORK
     7698 BLAKE            2850         30         30 CHICAGO
     7782 CLARK            2450         10         10 NEW YORK
     7566 JONES            2975         20         20 DALLAS
     7788 SCOTT            3000         20         20 DALLAS
     7902 FORD             3000         20         20 DALLAS
     7369 SMITH             800         20         20 DALLAS
     7499 ALLEN            1600         30         30 CHICAGO
     7521 WARD             1250         30         30 CHICAGO
     7654 MARTIN           1250         30         30 CHICAGO
     7844 TURNER           1500         30         30 CHICAGO
     7876 ADAMS            1100         20         20 DALLAS
     7900 JAMES             950         30         30 CHICAGO
     7934 MILLER           1300         10         10 NEW YORK
                                                   40 BOSTON

15 rows selected.
```

3. Natural join

```
SQL> select * from EMP natural join DEPT;

    DEPTNO      EMPNO ENAME      JOB            MGR HIREDATE         SAL       COMM DNAME          LOC
---------- ---------- ---------- --------- ---------- --------- ---------- ---------- -------------- -------------
        10       7839 KING       PRESIDENT            17-NOV-81       5000            ACCOUNTING     NEW YORK
        30       7698 BLAKE      MANAGER         7839 01-MAY-81       2850            SALES          CHICAGO
        10       7782 CLARK      MANAGER         7839 09-JUN-81       2450            ACCOUNTING     NEW YORK
        20       7566 JONES      MANAGER         7839 02-APR-81       2975            RESEARCH       DALLAS
        20       7788 SCOTT      ANALYST         7566 19-APR-87       3000            RESEARCH       DALLAS
        20       7902 FORD       ANALYST         7566 03-DEC-81       3000            RESEARCH       DALLAS
        20       7369 SMITH      CLERK           7902 17-DEC-80        800            RESEARCH       DALLAS
        30       7499 ALLEN      SALESMAN        7698 20-FEB-81       1600        300 SALES          CHICAGO
        30       7521 WARD       SALESMAN        7698 22-FEB-81       1250        500 SALES          CHICAGO
        30       7654 MARTIN     SALESMAN        7698 28-SEP-81       1250       1400 SALES          CHICAGO
        30       7844 TURNER     SALESMAN        7698 08-SEP-81       1500          0 SALES          CHICAGO
        20       7876 ADAMS      CLERK           7788 23-MAY-87       1100            RESEARCH       DALLAS
        30       7900 JAMES      CLERK           7698 03-DEC-81        950            SALES          CHICAGO
        10       7934 MILLER     CLERK           7782 23-JAN-82       1300            ACCOUNTING     NEW YORK

14 rows selected.
```

4. Cross join

EMPNO	ENAME	JOB	MGR	HIREDATE	SAL	COMM	DEPTNO	DEPTNO	DNAME	LOC
7839	KING	PRESIDENT	-	17-NOV-81	5000	-	10	10	ACCOUNTING	NEW YORK
7698	BLAKE	MANAGER	7839	01-MAY-81	2850	-	30	10	ACCOUNTING	NEW YORK
7782	CLARK	MANAGER	7839	09-JUN-81	2450	-	10	10	ACCOUNTING	NEW YORK
7566	JONES	MANAGER	7839	02-APR-81	2975	-	20	10	ACCOUNTING	NEW YORK
7788	SCOTT	ANALYST	7566	19-APR-87	3000	-	20	10	ACCOUNTING	NEW YORK
7902	FORD	ANALYST	7566	03-DEC-81	3000	-	20	10	ACCOUNTING	NEW YORK
7369	SMITH	CLERK	7902	17-DEC-80	800	-	20	10	ACCOUNTING	NEW YORK
7499	ALLEN	SALESMAN	7698	20-FEB-81	1600	300	30	10	ACCOUNTING	NEW YORK
7521	WARD	SALESMAN	7698	22-FEB-81	1250	500	30	10	ACCOUNTING	NEW YORK
7654	MARTIN	SALESMAN	7698	28-SEP-81	1250	1400	30	10	ACCOUNTING	NEW YORK
7844	TURNER	SALESMAN	7698	08-SEP-81	1500	0	30	10	ACCOUNTING	NEW YORK
7876	ADAMS	CLERK	7788	23-MAY-87	1100	-	20	10	ACCOUNTING	NEW YORK
7900	JAMES	CLERK	7698	03-DEC-81	950	-	30	10	ACCOUNTING	NEW YORK
7934	MILLER	CLERK	7782	23-JAN-82	1300	-	10	10	ACCOUNTING	NEW YORK
7839	KING	PRESIDENT	-	17-NOV-81	5000	-	10	20	RESEARCH	DALLAS
7698	BLAKE	MANAGER	7839	01-MAY-81	2850	-	30	20	RESEARCH	DALLAS
7782	CLARK	MANAGER	7839	09-JUN-81	2450	-	10	20	RESEARCH	DALLAS
7566	JONES	MANAGER	7839	02-APR-81	2975	-	20	20	RESEARCH	DALLAS
7788	SCOTT	ANALYST	7566	19-APR-87	3000	-	20	20	RESEARCH	DALLAS
7902	FORD	ANALYST	7566	03-DEC-81	3000	-	20	20	RESEARCH	DALLAS
7369	SMITH	CLERK	7902	17-DEC-80	800	-	20	20	RESEARCH	DALLAS
7499	ALLEN	SALESMAN	7698	20-FEB-81	1600	300	30	20	RESEARCH	DALLAS
7521	WARD	SALESMAN	7698	22-FEB-81	1250	500	30	20	RESEARCH	DALLAS
7654	MARTIN	SALESMAN	7698	28-SEP-81	1250	1400	30	20	RESEARCH	DALLAS
7844	TURNER	SALESMAN	7698	08-SEP-81	1500	0	30	20	RESEARCH	DALLAS
7876	ADAMS	CLERK	7788	23-MAY-87	1100	-	20	20	RESEARCH	DALLAS
7900	JAMES	CLERK	7698	03-DEC-81	950	-	30	20	RESEARCH	DALLAS
7934	MILLER	CLERK	7782	23-JAN-82	1300	-	10	20	RESEARCH	DALLAS
7839	KING	PRESIDENT	-	17-NOV-81	5000	-	10	30	SALES	CHICAGO
7698	BLAKE	MANAGER	7839	01-MAY-81	2850	-	30	30	SALES	CHICAGO
7782	CLARK	MANAGER	7839	09-JUN-81	2450	-	10	30	SALES	CHICAGO
7566	JONES	MANAGER	7839	02-APR-81	2975	-	20	30	SALES	CHICAGO
7788	SCOTT	ANALYST	7566	19-APR-87	3000	-	20	30	SALES	CHICAGO
7902	FORD	ANALYST	7566	03-DEC-81	3000	-	20	30	SALES	CHICAGO
7369	SMITH	CLERK	7902	17-DEC-80	800	-	20	30	SALES	CHICAGO
7499	ALLEN	SALESMAN	7698	20-FEB-81	1600	300	30	30	SALES	CHICAGO
7521	WARD	SALESMAN	7698	22-FEB-81	1250	500	30	30	SALES	CHICAGO
7654	MARTIN	SALESMAN	7698	28-SEP-81	1250	1400	30	30	SALES	CHICAGO
7844	TURNER	SALESMAN	7698	08-SEP-81	1500	0	30	30	SALES	CHICAGO
7876	ADAMS	CLERK	7788	23-MAY-87	1100	-	20	30	SALES	CHICAGO
7900	JAMES	CLERK	7698	03-DEC-81	950	-	30	30	SALES	CHICAGO
7934	MILLER	CLERK	7782	23-JAN-82	1300	-	10	30	SALES	CHICAGO
7839	KING	PRESIDENT	-	17-NOV-81	5000	-	10	40	OPERATIONS	BOSTON
7698	BLAKE	MANAGER	7839	01-MAY-81	2850	-	30	40	OPERATIONS	BOSTON
7782	CLARK	MANAGER	7839	09-JUN-81	2450	-	10	40	OPERATIONS	BOSTON
7566	JONES	MANAGER	7839	02-APR-81	2975	-	20	40	OPERATIONS	BOSTON
7788	SCOTT	ANALYST	7566	19-APR-87	3000	-	20	40	OPERATIONS	BOSTON
7902	FORD	ANALYST	7566	03-DEC-81	3000	-	20	40	OPERATIONS	BOSTON
7369	SMITH	CLERK	7902	17-DEC-80	800	-	20	40	OPERATIONS	BOSTON
7499	ALLEN	SALESMAN	7698	20-FEB-81	1600	300	30	40	OPERATIONS	BOSTON
7521	WARD	SALESMAN	7698	22-FEB-81	1250	500	30	40	OPERATIONS	BOSTON
7654	MARTIN	SALESMAN	7698	28-SEP-81	1250	1400	30	40	OPERATIONS	BOSTON
7844	TURNER	SALESMAN	7698	08-SEP-81	1500	0	30	40	OPERATIONS	BOSTON
7876	ADAMS	CLERK	7788	23-MAY-87	1100	-	20	40	OPERATIONS	BOSTON
7900	JAMES	CLERK	7698	03-DEC-81	950	-	30	40	OPERATIONS	BOSTON
7934	MILLER	CLERK	7782	23-JAN-82	1300	-	10	40	OPERATIONS	BOSTON

56 rows returned in 0.02 seconds   CSV Export

5. Self join

```
SQL> select b.ename Employee,a.ename Manager from emp a,emp b
  2  where a.empno=b.mgr;

EMPLOYEE    MANAGER
----------  ----------
BLAKE       KING
CLARK       KING
JONES       KING
SCOTT       JONES
FORD        JONES
SMITH       FORD
ALLEN       BLAKE
WARD        BLAKE
MARTIN      BLAKE
TURNER      BLAKE
ADAMS       SCOTT
JAMES       BLAKE
MILLER      CLARK

13 rows selected.
```