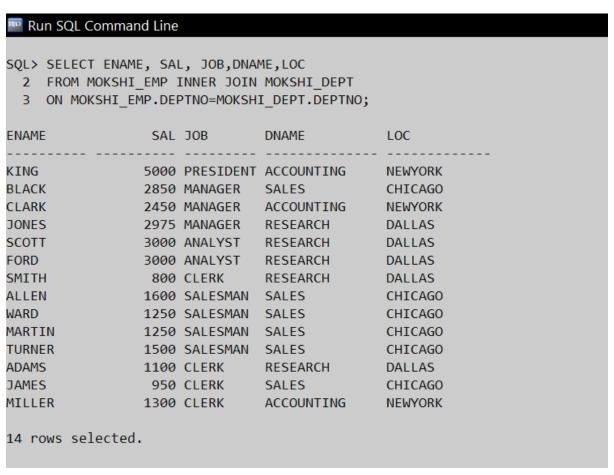
FYCS - 04

Practical No. 5

JOINS

INNER:

- The INNER JOIN keyword selects all rows from both the tables as long as the condition satisfies.
- SYNTAX SELECT table1.column1,table1.column2,table2.column1,.... FROM table1 INNER JOIN table2 ON table1.matching_column = table2.matching_column;



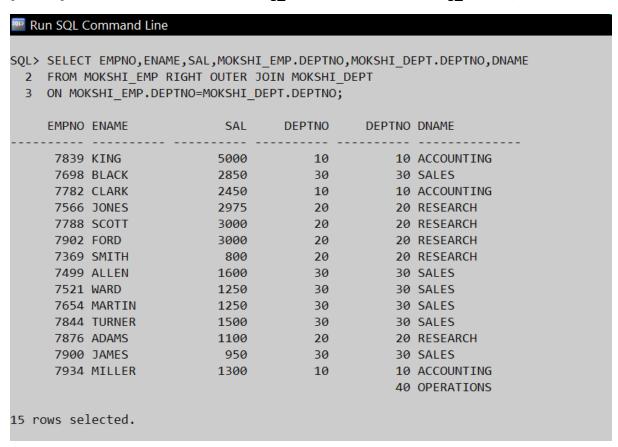
NATURAL:

- A natural join is a type of equi join which occurs implicitly by comparing all the same names columns in both tables. The join result has only one column for each pair of equally named columns.
- SYNTAX Select * From table1 natural join table2;

EPTNO	EMPNO	ENAME	308	HRG	HIREDATE	5AL	COMM	DNAME	LOC
10	7839	KING	PRESIDENT		17-NOV-81	5888		ACCOUNTING	NEWYORK
-38	7698	BLACK	MANAGER	7839	01-MAY-81	2850		SALES	CHICAGO
10	7782	CLARK	MANAGER	7839	09-JAN-81	2450		ACCOUNTING	NEWYORK
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	7992	17-DEC-80	888		RESEARCH	DALLAS
30	7499	ALLEN	SALESMAN	7698	20-FEB-81	1688	388	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	9	SALES	CHICAGO
20	7876	ADAMS	CLERK	7788	23-MAY-87	1100		RESEARCH	DALLAS
30	7900	JAMES	CLERK	7698	83-DEC-B1	950		SALES	CHICAGO
10	7934	MILLER	CLERK	7782	23-JAN-82	1300		ACCOUNTING	NEWYORK

OUTER:

- In an outer join, unmatched rows in one or both tables can be returned. Right: returns only unmatched rows from the right table
- SYNTAX SELECT table1.column1,table1.column2,table2.column1,.... FROM table1 RIGHT [OUTER] JOIN table2 ON table1.matching column = table2.matching column;



Left: returns only unmatched rows from the left table.

• SYNTAX SELECT table1.column1,table1.column2,table2.column1,.... FROM table1 LEFT [OUTER] JOIN table2 ON table1.matching column = table2.matching column;

Run SQL Command Line

SQL> SELECT EMPNO, ENAME, SAL, MOKSHI_EMP.DEPTNO, MOKSHI_DEPT.DEPTNO, DNAME

- 2 FROM MOKSHI_EMP LEFT OUTER JOIN MOKSHI_DEPT
- 3 ON MOKSHI_EMP.DEPTNO=MOKSHI_DEPT.DEPTNO;

EMPNO	ENAME	SAL	DEPTNO	DEPTNO	DNAME
7839	KING	5000	10	10	ACCOUNTING
7698	BLACK	2850	30	30	SALES
7782	CLARK	2450	10	10	ACCOUNTING
7566	JONES	2975	20	20	RESEARCH
7788	SCOTT	3000	20	20	RESEARCH
7902	FORD	3000	20	20	RESEARCH
7369	SMITH	800	20	20	RESEARCH
7499	ALLEN	1600	30	30	SALES
7521	WARD	1250	30	30	SALES
7654	MARTIN	1250	30	30	SALES
7844	TURNER	1500	30	30	SALES
7876	ADAMS	1100	20	20	RESEARCH
7900	JAMES	950	30	30	SALES
7934	MILLER	1300	10	10	ACCOUNTING
14 rows sel	lected.				

Full: returns unmatched rows from both tables • SYNTAX SELECT table1.column1,table1.column2,table2.column1,.... FROM table1 FULL [OUTER] JOIN table2 ON table1.matching_column = table2.matching_column;

FROM MOKSHI_EMP FULL OUTER JOIN MOKSHI_DEPT ON MOKSHI_EMP.DEPTNO=MOKSHI_DEPT.DEPTNO;									
EMPNO	ENAME	SAL	DEPTNO	DEPTNO	DNAME				
7839	KING	5000	10	10	ACCOUNTING				
7698	BLACK	2850	30	30	SALES				
7782	CLARK	2450	10	10	ACCOUNTING				
7566	JONES	2975	20	20	RESEARCH				
7788	SCOTT	3000	20	20	RESEARCH				
7902	FORD	3000	20	20	RESEARCH				
7369	SMITH	800	20	20	RESEARCH				
7499	ALLEN	1600	30	30	SALES				
7521	WARD	1250	30	30	SALES				
7654	MARTIN	1250	30	30	SALES				
7844	TURNER	1500	30	30	SALES				
7876	ADAMS	1100	20	20	RESEARCH				
7900	JAMES	950	30	30	SALES				
7934	MILLER	1300	10	10	ACCOUNTING				
				40	OPERATIONS				

CROSS: • The CARTESIAN JOIN is also known as CROSS JOIN.

- In a CARTESIAN JOIN there is a join for each row of one table to every row of another table. This usually happens when the matching column or WHERE condition is not specified.
- SYNTAX SELECT * FROM TABLE1,TABLE2;

	T MOPL	MOKSHI_EMP, MOKS	112 000 13							
EMPNO	ENAME	308		HIREDATE	5AL	COMM	DEPTINO	DEPTNO		LOC
7010	KING	PRESIDENT		17-NOV-81	5000		10	+0	ACCOUNTING	NEWYORK
	BLACK	MANAGER		01-MAY-81	2850		30		ACCOUNTING	NEWYORK
	CLARK	MANAGER		09-JAN-81	2450		10		ACCOUNTING	NEWYORK
	JONES .	MANAGER		02-APR-81	2975		20		ACCOUNTING	NEWYORK
	SCOTT	ANALYST		19-APR-87	3000		20		ACCOUNTING	NEWYORK
	FORD	ANALYST		03-DEC-81	3000		20		ACCOUNTING	NEWYORK
	SMITH	CLERK		17-DEC-80	800		20		ACCOUNTING	NEWYORK
	ALLEN	SALESMAN		20-FEB-81	1600	300	30		ACCOUNTING	NEWYORK
	MARD	SALESMAN		22-FEB-81	1250	500	30		ACCOUNTING	NEWYORK
	MARTIN	SALESMAN		28-5EP-81	1250	1400	30		ACCOUNTING	NEWYORK
	TURNER	SALESMAN		08-5EP-81	1500	0	36		ACCOUNTING	NEWYORK
	ADAMS	CLERK		23-MAY-87	1100	177	20		ACCOUNTING	NEWYORK
	JAMES	CLERK		83-DEC-81	950		30		ACCOUNTING	NEWYORK
	MILLER	CLERK		23-JAN-82	1399		10		ACCOUNTING	NEWYORK
	KING	PRESIDENT		17-NOV-81	5000		10		RESEARCH	DALLAS
	BLACK	MANAGER		01-MAY-81	2850		30		RESEARCH	DALLAS
	CLARK	MANAGER		09-JAN-81	2450		10		RESEARCH	DALLAS
	JONES	MANAGER		02-APR-81	2975		20		RESEARCH	DALLAS
	SCOTT	AMALYST		19-APR-87	3000		20		RESEARCH	DALLAS
	FORD	ANALYST		03-DEC-81	3000		20		RESEARCH	DALLAS.
	SMITH	CLERK		17-DEC-80	880	100	20		RESEARCH	DALLAS
	ALLEN	SALESMAN		20-FEB-81	1600	300	30		RESEARCH	DALLAS
	MARD	SALESMAN		22-FEB-81	1250	598	30		RESEARCH	DALLAS
	MARTIN	SALESMAN		28-SEP-81	1250	1400	30		RESEARCH	DALLAS
	TURNER	SALESMAN		08-5EP-81	1500	0.00	38		RESEARCH	DALLAS
	ADAMS	CLERK		23-MAY-87	1100		20		RESEARCH	DALLAS
	JAMES.	CLERK		03-DEC-81	950		30	0.77	RESEARCH	DALLAS
	MILLER	CLERK		23-JAN-82	1300		10		RESEARCH	DALLAS
	KING	PRESIDENT		17-NOV-81	5000		10		SALES	CHICAGO
	BLACK	MANAGER		01-MAY-81	2850		36		SALES	CHICAGO
	CLARK	MANAGER		09-JAN-81	2450		10		SALES	CHICAGO
	JONES	MANAGER		02-APR-81	2975		20		SALES	CHICAGO
	SCOTT	ANALY5T		19-APR-87	3000		20		SALES	CHICAGO
	FORD	ANALYST		03-DEC-81	3000		20		SALES	CHICAGO
	SMITH	CLERK		17-DEC-80	800	1010	20		SALES	CHICAGO
	ALLEN	SALESMAN		20-FEB-81	1600	300	30		SALES	CHICAGO
	MARD	SALESMAN		22-FEB-81	1258	500	30		SALES	CHICAGO
	MARTIN	SALESMAN		28-5EP-81	1250	1400	30		SALES	CHICAGO
7844	TURNER	SALESMAN	7698	08-5EP-81	1500	0	30	30	SALES	CHICAGO
r SQL C	ommand Li	ne								
	ADAMS	CLERK	7788 2	3-MAY-87	1100		20	30 SA	E5	CHICAGO
	DAMES	CLERK		3-DEC-81	950		30	30 5A		CHICAGO
	MILLER	CLERK		3-3AN-82	1300		10	30 SAI		CHICAGO
7839		PRESIDENT		7-NOV-81	5000		10			BOSTON
	BLACK	MANAGER		1-MAY-81	2850		30			BOSTON
	CLARK	MANAGER		9-JAN-81	2450		10			BOSTON
	30NES	MANAGER		2-APR-81	2975		28			BOSTON
	SCOTT	ANALYST		9-APR-87	3000		20			BOSTON
7902		ANALYST		3-DEC-81	3000		20			BOSTON
	SMITH	CLERK		7-DEC-80	890		28			BOSTON
	ALLEN	SALESMAN		0-FEB-81	1600	300	38			BOSTON
7521		SALESMAN		2-FEB-81	1250	500	30			BOSTON
	MARTIN	SALESMAN		8-SEP-81	1250	1400	30			BOSTON
	TURNER	SALESMAN		8-SEP-81	1500	9	30			BOSTON
	ADAMS	CLERK		3-MAY-87	1100	**	20			BOSTON
	JAMES.	CLERK		3-DEC-81	950		30			BOSTON
	MILLER	CLERK		3-JAN-82	1300		10	40 OP	Charles a Market	MINIST SHOP

SELF:

- As the name signifies, in SELF JOIN a table is joined to itself. That is, each row of the table is joined with itself and all other rows depending on some conditions
- SYNTAX SELECT a.column 1 , b.column2 FROM table_name a, table_name b WHERE some condition;

