**JOINS IN ORACLE-different joins in oracle with examples**

1. The purpose of a join is to combine the data across tables.

2. A join is actually performed by the where clause which combines the specified rows of tables.

3. If a join involves in more than two tables then oracle joins first two tables based on the joins condition and then compares the result with the next table and so on.

**TYPES**

1     Equi join

2     Non-equi join

3     Self join

4     Natural join

5     Cross join

6     Outer join

* Left outer
* Right outer
* Full outer

7     Inner join

8     Using clause  
9     On clause

Assume that we have the following tables.

SQL> select \* from dept;

|  |  |  |
| --- | --- | --- |
| **DEPTNO** | **DNAME** | **LOC** |
| 10 | INVENTORY | HYBD |
| 20 | FINANCE | BGLR |
| 30 | HR | MUMBAI |

SQL> select \* from emp;

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **EMPNO** | **ENAME** | **JOB** | **MGR** | **DEPTNO** |
| 111 | saketh | analyst | 444 | 10 |
| 222 | sudha | clerk | 333 | 20 |
| 333 | jagan | manager | 111 | 10 |
| 444 | madhu | engineer | 222 | 40 |

**1.**      **EQUI JOIN**

A join which contains an equal to ‘=’ operator in the joins condition.

*Ex:*

*SQL>*select empno,ename,job,dname,loc from emp e,dept d where e.deptno=d.deptno;

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **EMPNO** | **ENAME** | **JOB** | **DNAME** | **LOC** |
| 111 | saketh | analyst | INVENTORY | HYBD |
| 333 | jagan | manager | INVENTORY | HYBD |
| 222 | sudha | clerk | FINANCE | BGLR |

Using clause

SQL> select empno,ename,job ,dname,loc from emp e join dept d using(deptno);

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **EMPNO** | **ENAME** | **JOB** | **DNAME** | **LOC** |
| 111 | saketh | analyst | INVENTORY | HYBD |
| 333 | jagan | manager | INVENTORY | HYBD |
| 222 | sudha | clerk | FINANCE | BGLR |

On clause

SQL> select empno,ename,job,dname,loc from emp e join dept d on(e.deptno=d.deptno);

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **EMPNO** | **ENAME** | **JOB** | **DNAME** | **LOC** |
| 111 | saketh | analyst | INVENTORY | HYBD |
| 333 | jagan | manager | INVENTORY | HYBD |
| 222 | sudha | clerk | FINANCE | BGLR |

**2.**      **NON-EQUI JOIN**

 A join which contains an operator other than equal to ‘=’ in the joins condition.

 Ex:

SQL> select empno,ename,job,dname,loc from emp e,dept d where e.deptno > d.deptno;

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **EMPNO** | **ENAME** | **JOB** | **DNAME** | **LOC** |
| 222 | sudha | clerk | INVENTORY | HYBD |
| 444 | madhu | engineer | INVENTORY | HYBD |
| 444 | madhu | engineer | FINANCE | BGLR |
| 444 | madhu | engineer | HR | MUMBAI |

**3.**      **SELF JOIN**

Joining the table itself is called self join.

Ex:

SQL> select e1.empno,e2.ename,e1.job,e2.deptno from emp e1,emp e2 where e1.empno=e2.mgr;

|  |  |  |  |
| --- | --- | --- | --- |
| **EMPNO** | **ENAME** | **JOB** | **DEPTNO** |
| 111 | jagan | analyst | 10 |
| 222 | madhu | clerk | 40 |
| 333 | sudha | manager | 20 |
| 444 | saketh | engineer | 10 |

**4.**      **NATURAL JOIN**

Natural join compares all the common columns.

Ex:

SQL> select empno,ename,job,dname,loc from emp natural join dept;

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **EMPNO** | **ENAME** | **JOB** | **DNAME** | **LOC** |
| 111 | saketh | analyst | INVENTORY | HYBD |
| 333 | jagan | manager | INVENTORY | HYBD |
| 222 | sudha | clerk | FINANCE | BGLR |

**5.**      **CROSS JOIN**

This will gives the cross product.

Ex:

SQL> select empno,ename,job,dname,loc from emp cross join dept;

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **EMPNO** | **ENAME** | **JOB** | **DNAME** | **LOC** |
| 111 | saketh | analyst | INVENTORY | HYBD |
| 222 | sudha | clerk | INVENTORY | HYBD |
| 333 | jagan | manager | INVENTORY | HYBD |
| 444 | madhu | engineer | INVENTORY | HYBD |
| 111 | saketh | analyst | FINANCE | BGLR |
| 222 | sudha | clerk | FINANCE | BGLR |
| 333 | jagan | manager | FINANCE | BGLR |
| 444 | madhu | engineer | FINANCE | BGLR |
| 111 | saketh | analyst | HR | MUMBAI |
| 222 | sudha | clerk | HR | MUMBAI |
| 333 | jagan | manager | HR | MUMBAI |
| 444 | madhu | engineer | HR | MUMBAI |

**6.**      **OUTER JOIN**

Outer join gives the non-matching records along with matching records.

**LEFT OUTER JOIN**

This will display the all matching records and the records which are in left hand side table those that are not in right hand side table.

Ex:

SQL> select empno,ename,job,dname,loc from emp e left outer join dept d

on(e.deptno=d.deptno);

Or

SQL> select empno,ename,job,dname,loc from emp e,dept d where

e.deptno=d.deptno(+);

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **EMPNO** | **ENAME** | **JOB** | **DNAME** | **LOC** |
| 111 | saketh | analyst | INVENTORY | HYBD |
| 333 | jagan | manager | INVENTORY | HYBD |
| 222 | sudha | clerk | FINANCE | BGLR |
| 444 | madhu | engineer |  |  |

**RIGHT OUTER JOIN**

This will display the all matching records and the records which are in right hand side table those that are not in left hand side table.

Ex:

SQL> select empno,ename,job,dname,loc from emp e right outer join dept d

on(e.deptno=d.deptno);

Or

SQL> select empno,ename,job,dname,loc from emp e,dept d where e.deptno(+) =

d.deptno;

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **EMPNO** | **ENAME** | **JOB** | **DNAME** | **LOC** |
| 111 | saketh | analyst | INVENTORY | HYBD |
| 333 | jagan | manager | INVENTORY | HYBD |
| 222 | sudha | clerk | FINANCE | BGLR |
|  |  |  | HR | MUMBAI |

**FULL OUTER JOIN**

This will display the all matching records and the non-matching records from both tables.

Ex:

SQL> select empno,ename,job,dname,loc from emp e full outer join dept d

on(e.deptno=d.deptno);

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **EMPNO** | **ENAME** | **JOB** | **DNAME** | **LOC** |
| 333 | jagan | manager | INVENTORY | HYBD |
| 111 | saketh | analyst | INVENTORY | HYBD |
| 222 | sudha | clerk | FINANCE | BGLR |
| 444 | madhu | engineer |  |  |
|  |  |  | HR | MUMBAI |

**7.**      **INNER JOIN**

This will display all the records that have matched.

Ex:

SQL> select empno,ename,job,dname,loc from emp inner join dept using(deptno);

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **EMPNO** | **ENAME** | **JOB** | **DNAME** | **LOC** |
| 111 | saketh | analyst | INVENTORY | HYBD |
| 333 | jagan | manager | INVENTORY | HYBD |
| 222 | sudha | clerk | FINANCE | BGLR |