Ex. No: 6
Date: 12/09/2019

Ex. No. 6 JOINS

Aim

A JOIN clause is used to combine rows from two or more tables, based on a related column between them.

Description

Here are the different types of the JOINs in SQL:

(INNER) JOIN: Returns records that have matching values in both tables

LEFT (OUTER) JOIN: Returns all records from the left table, and the matched records from the right table

RIGHT (OUTER) JOIN: Returns all records from the right table, and the matched records from the left table

FULL (OUTER) JOIN: Returns all records when there is a match in either left or right table.

Questions:

Note: Drop the previously created Manager table and create a new one.

Manager Table:

Ename	mname	City
Anil	Ajay	Nagpur
Shankar	Vijay	Chennai
Jaya	Kiran	Calcutta
Sunil	Jaya	Bombay
Vijay	Rakesh	Calcutta
Prakash	Shankar	Nagpur
Ajay	Sanjay	Coimbatore

1. **Write a query to display the name, living city and salary of employee using natural join.**

```
SQL> select ename,city,salary from emp_company_cs076 natural join employee_cs076
;

ENAME      CITY           SALARY
---------- ---------- ----------
anil       nagpur           1500
shankar    bombay           2000
jaya       chennai          1800
sunil      bombay           1700
vijay      delhi            5000
prakash    calcutta         3000
ajay       chennai          8000

7 rows selected.
```

2. **Write a query to display the name, living city and salary of employee using cross(Cartesian) join.**

```
SQL> select e.ename,e.city,ec.salary from employee_cs076 e cross join emp_compan
y_cs076 ec;

ENAME      CITY           SALARY
---------- ---------- ----------
anil       nagpur           1500
anil       nagpur           2000
anil       nagpur           1800
anil       nagpur           1700
anil       nagpur           5000
anil       nagpur           3000
anil       nagpur           8000
anil       nagpur           1000
anil       nagpur          30000
shankar    bombay           1500
shankar    bombay           2000

ENAME      CITY           SALARY
---------- ---------- ----------
shankar    bombay           1800
shankar    bombay           1700
shankar    bombay           5000
shankar    bombay           3000
shankar    bombay           8000
shankar    bombay           1000
shankar    bombay          30000
jaya       chennai          1500
jaya       chennai          2000
jaya       chennai          1800
jaya       chennai          1700

ENAME      CITY           SALARY
---------- ---------- ----------
jaya       chennai          5000
jaya       chennai          3000
jaya       chennai          8000
jaya       chennai          1000
jaya       chennai         30000
sunil      bombay           1500
sunil      bombay           2000
sunil      bombay           1800
```

3. **Write a SQL statement to make a cartesian product between manager name and employee name**

```
SQL> select e.ename,m.mname from employee_cs076 e cross join manager_cs076 m;

ENAME      MNAME
---------- ----------
anil       ajay
shankar    ajay
jaya       ajay
sunil      ajay
vijay      ajay
prakash    ajay
ajay       ajay
anil       vijay
shankar    vijay
jaya       vijay
sunil      vijay

ENAME      MNAME
---------- ----------
vijay      vijay
prakash    vijay
ajay       vijay
anil       kiran
shankar    kiran
jaya       kiran
sunil      kiran
vijay      kiran
prakash    kiran
ajay       kiran
anil       jaya

ENAME      MNAME
---------- ----------
shankar    jaya
jaya       jaya
sunil      jaya
vijay      jaya
prakash    jaya
ajay       jaya
anil       rakesh
shankar    rakesh
```

4. **Display the employee name, manager name and salary of the employees whose salary is greater than 3000.[using where clause]**

```
SQL> select m.ename,m.mname,ec.salary from manager_cs076 m  cross join emp_compa
ny_cs076 ec where ec.salary>3000;

ENAME           MNAME           SALARY
--------------- --------------- ----------
anil            ajay                5000
shankar         vijay               5000
jaya            kiran               5000
sunil           jaya                5000
vijay           rakesh              5000
prakash         shankar             5000
ajay            sanjay              5000
anil            ajay                8000
shankar         vijay               8000
jaya            kiran               8000
sunil           jaya                8000

ENAME           MNAME           SALARY
--------------- --------------- ----------
vijay           rakesh              8000
prakash         shankar             8000
ajay            sanjay              8000
anil            ajay               30000
shankar         vijay              30000
jaya            kiran              30000
sunil           jaya               30000
vijay           rakesh             30000
prakash         shankar            30000
ajay            sanjay             30000

21 rows selected.
```

5. **Write a SQL statement to prepare a list with employee names who live and work in the same city.**

```
SQL> select distinct e.ename from employee_cs076 e inner join company_cs076 c on
 e.city=c.city;

ENAME
----------
anil
vijay
shankar
jaya
sunil
ajay

6 rows selected.
```

6. **Write a SQL statement to make a list with employee name who live in the city Chennai and whose salary is between 1500 and 10000.**

```
SQL> select distinct e.ename from employee_cs076 e inner join emp_company_cs076
ec on ec.salary between 1500 and 10000 where e.city='chennai';

ENAME
----------
jaya
ajay
```

7. **Display the names of the employees, company name and salary of the employees who are not assigned any living city.**

```
SQL> select emp_company_cs076.ename,emp_company_cs076.cname,emp_company_cs076.sa
lary from emp_company_cs076 left join employee_cs076 on emp_company_cs076.ename=
employee_cs076.ename where employee_cs076.city is NULL;

ENAME      CNAME                     SALARY
---------- -------------------- ----------
kiran      hyundai mobis              30000
amol       acc                         1000
```

8. **Display the employee name, manager name and shift of all the employees. [use left outer join]**

```
SQL> select m.ename,m.mname,em.shift from manager_cs076 m left outer join emp_sh
ift_cs076 em on m.ename=em.ename;

ENAME           MNAME           SH
--------------- --------------- --
anil            ajay            a
sunil           jaya            b
vijay           rakesh          b
prakash         shankar         c
jaya            kiran
ajay            sanjay
shankar         vijay

7 rows selected.
```

9. **Display cities of the employees in which a company is not located.[using right outer join]**

```
SQL> select employee_cs076.city from company_cs076 right outer join employee_cs0
76 on employee_cs076.city=company_cs076.city where employee_cs076.city not in(se
lect city from company_cs076);

CITY
----------
calcutta
```

10. **Display the employee name, manager name and shift of the employees. [using full outer join]**

```
SQL> select m.ename,m.mname,em.shift from manager_cs076 m full outer join emp_sh
ift_cs076 em on m.ename=em.ename;

ENAME           MNAME           SH
--------------- --------------- --
anil            ajay            a
shankar         vijay
jaya            kiran
sunil           jaya            b
vijay           rakesh          b
prakash         shankar         c
ajay            sanjay
                                e

8 rows selected.
```

11. **Display the employee name, manager name and shift of the employees. [using natural join]**

```
SQL> select * from manager_cs076 m natural join emp_shift_cs076 em;

ENAME                MNAME           CITY                 SH
-------------------- --------------- -------------------- --
anil                 ajay            nagpur               a
sunil                jaya            bombay               b
vijay                rakesh          calcutta             b
prakash              shankar         nagpur               c
```

12. Display the employee name and cities of the employees who are assigned a manager and live in the same city as that of the manager [Use Inner Join].

```
SQL> select e.ename,e.city from employee_cs076 e inner join manager_cs076 m on e
.city=m.city;

ENAME      CITY
---------- ----------
anil       nagpur
ajay       chennai
jaya       chennai
prakash    calcutta
sunil      bombay
shankar    bombay
prakash    calcutta
anil       nagpur

8 rows selected.
```

13. Display the ascending list of customers who are either assigned a manager or not.

```
SQL> select * from manager_cs076 order by ename asc;

ENAME           MNAME           CITY
--------------- --------------- --------------------
ajay            sanjay          coimbatore
anil            ajay            nagpur
jaya            kiran           calcutta
prakash         shankar         nagpur
shankar         vijay           chennai
sunil           jaya            bombay
vijay           rakesh          calcutta

7 rows selected.
```

Result:

The above queries have been executed and the results have been verified.