

DBMS LABORATORY 4

LAB RECORD

NAME : ANIRBAN HAZRA

SECTION : CSE - 16

ROLL : 2005643

DATE : 18/02/2022

SQL - QUERIES USING DIFFERENT TYPES OF JOIN

CREATION OF TABLE “STUDENT” :

```
SQL> create table student
  2  (stu_roll number(2) constraint c20 primary key,
  3  name varchar2(20) ,
  4  dob date ,
  5  mark number(4) ,
  6  branch varchar2(20) ,
  7  section varchar2(20) ) ;

Table created.
```

DESCRIPTION OF TABLE “STUDENT” :

```
SQL> desc student ;
```

Name	Null?	Type
STU_ROLL	NOT NULL	NUMBER(2)
NAME		VARCHAR2(20)
DOB		DATE
MARK		NUMBER(4)
BRANCH		VARCHAR2(20)
SECTION		VARCHAR2(20)

INSERTION INTO TABLE “FACULTY” :

```
SQL> insert into student values ( 1 , 'Amit' , '13-may-10' , 600 , 'SCE' , 'IT-1' ) ;

1 row created.

SQL> insert into student values ( 2 , 'Ajay' , '25-sep-09' , 550 , 'IT' , 'IT-2' ) ;

1 row created.

SQL> insert into student values ( 3 , 'Rohit' , '15-dec-08' , 450 , 'IT' , 'CS-1' ) ;

1 row created.

SQL> insert into student values ( 4 , 'Mukesh' , '02-nov-07' , 390 , 'SCE' , 'CS-2' ) ;

1 row created.

SQL> insert into student values ( 5 , 'John' , '30-may-05' , 400 , 'IT' , 'CS-3' ) ;

1 row created.

SQL> ANIRBAN
```

FINAL TABLE CREATED “STUDENT” :

```
SQL> select * from student ;
```

STU_ROLL	NAME	DOB	MARK	BRANCH	SECTION
1	Amit	13-MAY-10	600	SCE	IT-1
2	Ajay	25-SEP-09	550	IT	IT-2
3	Rohit	15-DEC-08	450	IT	CS-1
4	Mukesh	02-NOV-07	390	SCE	CS-2
5	John	30-MAY-05	400	IT	CS-3

CREATION OF TABLE “FACULTY” :

```
SQL> create table faculty
2 (faculty_id number(3) constraint c21 primary key,
3 fac_name varchar2(20),
4 stu_roll number(2) constraint c22 references student(stu_roll),
5 fac_subject varchar2(20),
6 class_room varchar2(5));
```

Table created.

INSERTION INTO TABLE “FACULTY” :

```
SQL> insert into faculty values ( 501 , 'Joseph' , 1 , 'Java' , 'C1' ) ;
```

1 row created.

```
SQL> insert into faculty values ( 502 , 'Stephen' , 2 , 'C++' , 'C2' ) ;
```

1 row created.

```
SQL> insert into faculty values ( 503 , 'Richardson' , 3 , 'DOTNET' , 'C3' ) ;
```

1 row created.

```
SQL> insert into faculty values ( 504 , 'James' , 4 , 'PHP' , 'C4' ) ;
```

1 row created.

```
SQL> insert into faculty values ( 505 , 'AKS' , 5 , 'ORACLE' , 'C5' ) ;
```

1 row created.

DESCRIPTION OF TABLE “FACULTY” :

```
SQL> desc faculty;
```

Name	Null?	Type
FACULTY_ID	NOT NULL	NUMBER(3)
FAC_NAME		VARCHAR2(20)
STU_ROLL		NUMBER(2)
FAC_SUBJECT		VARCHAR2(20)
CLASS_ROOM		VARCHAR2(5)

FINAL TABLE CREATED “FACULTY” :

```
SQL> select * from faculty ;
```

FACULTY_ID	FAC_NAME	STU_ROLL	FAC_SUBJECT	CLASS
501	Joseph	1	Java	C1
502	Stephen	2	C++	C2
503	Richardson	3	DOTNET	C3
504	James	4	PHP	C4
505	AKS	5	ORACLE	C5

**“THE QUERIES AND THEIR RESPECTIVE
SCREENSHOTS ARE ATTACHED IN THE NEXT
PAGE”**

1. Waq to display the student roll, name, dob, mark and faculty name, subject, classroom, from student, faculty table those student roll no are common to student roll no of faculty table using equi join.

```
SQL> select student.stu_roll,name,dob,mark,fac_name,fac_subject,class_room from student,faculty where student.stu_roll = faculty.stu_roll ;
```

STU_ROLL	NAME	DOB	MARK	FAC_NAME	FAC_SUBJECT	CLASS
1	Amit	13-MAY-10	600	Joseph	Java	C1
2	Ajay	25-SEP-09	550	Stephen	C++	C2
3	Rohit	15-DEC-08	450	Richardson	DOTNET	C3
4	Mukesh	02-NOV-07	390	James	PHP	C4
5	John	30-MAY-05	400	AKS	ORACLE	C5

2. Waq to display the all distinct roll no of student table those student roll nos are less than from faculty table roll no using non equi join.

```
SQL> select distinct student.stu_roll from student,faculty where faculty.stu_roll > student.stu_roll;
```

STU_ROLL
1
2
3
4

3. Waq to join student & faculty table without using any join command. And check how many rows created.

```
SQL> select s.stu_roll as "S.STU_ROLL",name,dob,mark,branch,section,faculty_id,fac_name,f.stu_roll as "F.STU_ROLL",fac_subject,class_room from student s,faculty f;
```

S.STU_ROLL	NAME	DOB	MARK	BRANCH	SECTION	FACULTY_ID	FAC_NAME	F.STU_ROLL	FAC_SUBJECT	CLASS
1	Amit	13-MAY-10	600	SCE	IT-1	501	Joseph	1	Java	C1
1	Amit	13-MAY-10	600	SCE	IT-1	502	Stephen	2	C++	C2
1	Amit	13-MAY-10	600	SCE	IT-1	503	Richardson	3	DOTNET	C3
1	Amit	13-MAY-10	600	SCE	IT-1	504	James	4	PHP	C4
1	Amit	13-MAY-10	600	SCE	IT-1	505	AKS	5	ORACLE	C5
2	Ajay	25-SEP-09	550	IT	IT-2	501	Joseph	1	Java	C1
2	Ajay	25-SEP-09	550	IT	IT-2	502	Stephen	2	C++	C2
2	Ajay	25-SEP-09	550	IT	IT-2	503	Richardson	3	DOTNET	C3
2	Ajay	25-SEP-09	550	IT	IT-2	504	James	4	PHP	C4
2	Ajay	25-SEP-09	550	IT	IT-2	505	AKS	5	ORACLE	C5
3	Rohit	15-DEC-08	450	IT	CS-1	501	Joseph	1	Java	C1
3	Rohit	15-DEC-08	450	IT	CS-1	502	Stephen	2	C++	C2
3	Rohit	15-DEC-08	450	IT	CS-1	503	Richardson	3	DOTNET	C3
3	Rohit	15-DEC-08	450	IT	CS-1	504	James	4	PHP	C4
3	Rohit	15-DEC-08	450	IT	CS-1	505	AKS	5	ORACLE	C5
4	Mukesh	02-NOV-07	390	SCE	CS-2	501	Joseph	1	Java	C1
4	Mukesh	02-NOV-07	390	SCE	CS-2	502	Stephen	2	C++	C2
4	Mukesh	02-NOV-07	390	SCE	CS-2	503	Richardson	3	DOTNET	C3
4	Mukesh	02-NOV-07	390	SCE	CS-2	504	James	4	PHP	C4
4	Mukesh	02-NOV-07	390	SCE	CS-2	505	AKS	5	ORACLE	C5
5	John	30-MAY-05	400	IT	CS-3	501	Joseph	1	Java	C1
5	John	30-MAY-05	400	IT	CS-3	502	Stephen	2	C++	C2
5	John	30-MAY-05	400	IT	CS-3	503	Richardson	3	DOTNET	C3
5	John	30-MAY-05	400	IT	CS-3	504	James	4	PHP	C4
5	John	30-MAY-05	400	IT	CS-3	505	AKS	5	ORACLE	C5

25 rows selected.

25 rows have been selected .

4. Waq to check from faculty table, which student's roll no and faculty's id are same. Then display their faculty names only.

```
SQL> select fac_name from faculty,student where student.stu_roll = faculty_id ;  
no rows selected
```

5. Waq to display student roll, name & faculty id, fac name from student and faculty tables those are common roll no by using natural join.

```
SQL> select stu_roll,name,faculty_id,fac_name from student natural join faculty ;
```

STU_ROLL	NAME	FACULTY_ID	FAC_NAME
1	Amit	501	Joseph
2	Ajay	502	Stephen
3	Rohit	503	Richardson
4	Mukesh	504	James
5	John	505	AKS

6. Waq to display student's roll, name and faculty id, fac name from student, faculty table by using 'using' clause.

```
SQL> select stu_roll,name,faculty_id,fac_name from student join faculty using(stu_roll);
```

STU_ROLL	NAME	FACULTY_ID	FAC_NAME
1	Amit	501	Joseph
2	Ajay	502	Stephen
3	Rohit	503	Richardson
4	Mukesh	504	James
5	John	505	AKS

7. Waq to display student roll, name & faculty id, fac name from student, faculty where faculty id and student roll are same.

```
SQL> select student.stu_roll,name,faculty_id,fac_name from faculty,student where student.stu_roll=faculty_id;  
no rows selected
```


8. Waq to display student roll, name, mark, fac id, fac name from student, faculty table those are common roll no to both table except those rollno of student table are also not matched to faculty table.

(LEFT OUTER JOIN USED)

```
SQL> select student.stu_roll,name,mark,faculty_id,fac_name from student left outer join faculty on student.stu_roll=faculty.stu_roll;
```

STU_ROLL	NAME	MARK	FACULTY_ID	FAC_NAME
1	Amit	600	501	Joseph
2	Ajay	550	502	Stephen
3	Rohit	450	503	Richardson
4	Mukesh	390	504	James
5	John	400	505	AKS

9. Waq to display student roll, name, mark, faculty id, fac name from student, faculty table those are common roll no except display fac id, fac name of corresponding rows of stu roll no of faculty table those are not matched to student table roll no.

(RIGHT OUTER JOIN USED)

```
SQL> select student.stu_roll,name,mark,faculty_id,fac_name from student right outer join faculty on student.stu_roll=faculty.stu_roll;
```

STU_ROLL	NAME	MARK	FACULTY_ID	FAC_NAME
1	Amit	600	501	Joseph
2	Ajay	550	502	Stephen
3	Rohit	450	503	Richardson
4	Mukesh	390	504	James
5	John	400	505	AKS

```
SQL> ANIRBAN HAZRA
```

THANK
YOU
