DBMS LABORATORY 5

LAB RECORD

NAME : ANIRBAN HAZRA

SECTION : CSE - 16

ROLL : 2005643

DATE : 15/03/2022

DATABASE OBJECT,SUB-QUERY AND JOIN COMMAND

CREATION OF TABLE “STUDENT3” :

```
SQL> create table student3
  2  (stu_roll number(2) constraint c40 primary key,
  3  name varchar2(20) ,
  4  dob date ,
  5  mark number(4) ,
  6  branch varchar2(10) ,
  7  section varchar2(10) ) ;

Table created.
```

DESCRIPTION OF TABLE “STUDENT3” :

```
SQL> desc student3;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------
 STU_ROLL                                  NOT NULL NUMBER(2)
 NAME                                               VARCHAR2(20)
 DOB                                                DATE
 MARK                                               NUMBER(4)
 BRANCH                                             VARCHAR2(10)
 SECTION                                            VARCHAR2(10)
```

CREATION OF TABLE “FACULTY2” :

```
SQL> create table faculty2
  2  (faculty_id number(2) constraint c42 primary key ,
  3  fac_name varchar2(10) ,
  4  stu_roll number(2) constraint c41 references student3(stu_roll) ,
  5  fac_subject varchar(10) ,
  6  class_room varchar(3) ) ;

Table created.

SQL> alter table faculty2 add( class_date_time timestamp(2) );

Table altered.
```

DESCRIPTION OF TABLE “FACULTY2” :

```
SQL> desc faculty2;
 Name                                      Null?    Type
 ----------------------------------------- -------- --------------------
 FACULTY_ID                                NOT NULL NUMBER(2)
 FAC_NAME                                           VARCHAR2(10)
 STU_ROLL                                           NUMBER(2)
 FAC_SUBJECT                                        VARCHAR2(10)
 CLASS_ROOM                                         VARCHAR2(3)
 CLASS_DATE_TIME                                    TIMESTAMP(2)
```

QUERIES :

1. Enter exact data into student table. But roll should insert using sequence, it should start from 1 and increment by 1.[total 5 records]

```
SQL> create sequence s01 increment by 1 start with 1 MaxValue 5;

Sequence created.

SQL> insert into student3 values( s01.nextval , 'Amit' , '13-May-10' , 600 , 'SCE' ,'IT-1' ) ;

1 row created.

SQL> insert into student3 values( s01.nextval , 'Ajay' , '25-sep-09' , 550 , 'IT' ,'IT-2' ) ;

1 row created.

SQL> insert into student3 values( s01.nextval , 'Rohit' , '15-dec-08' , 450 , 'IT' ,'CS-1' ) ;

1 row created.

SQL> insert into student3 values( s01.nextval , 'Mukesh' , '02-nov-07' , 390 , 'SCE' ,'CS-2' ) ;

1 row created.

SQL> insert into student3 values( s01.nextval , 'John' , '30-mar-05' , 400 , 'IT' ,'CS-3' ) ;

1 row created.

SQL> commit;

Commit complete.

SQL> select * from student3;

  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-MAR-05         400 IT         CS-3
```

2. Enter exact data into faculty table. But faculty id should insert using sequence, it should start from 1 and increment by 3[total 5 records]. E.g. 1, 4, 7, 10, 13 Also enter student roll into faculty table using sequence but it should be increment by 2. E.g. 1, 3, 5, 7, 9 [total 5 records]

```
SQL> create sequence s2 increment by 3 start with 1 MaxValue 13;

Sequence created.

SQL> create sequence s3 increment by 2 start with 1 MaxValue 9;

Sequence created.

SQL> insert into faculty2 values(s2.nextval,'Joseph',s3.nextval,'JAVA','C1','11-apr-2002 11:24:14') ;

1 row created.

SQL> insert into faculty2 values(s2.nextval,'Stephen',s3.nextval,'C++','C2','17-feb-2002 10:20:48') ;

1 row created.

SQL> insert into faculty2 values(s2.nextval,'Richardson',s3.nextval,'DOTNET','C3','13-mar-2001 10:40:55') ;

1 row created.

SQL> insert into faculty2 values(s2.nextval,'James',s3.nextval,'PHP','C4','21-apr-2002 09:35:50') ;

1 row created.

SQL> insert into faculty2 values(s2.nextval,'Aks',s3.nextval,'ORACLE','C5','01-may-2002 07:38:20') ;

1 row created.
SQL> select * from faculty2;

FACULTY_ID FAC_NAME     STU_ROLL FAC_SUBJEC CLA CLASS_DATE_TIME
---------- ---------- ---------- ---------- --- ---------------------------------------------------
         1 Joseph              1 JAVA       C1  11-APR-02 11.24.14.00 AM
         4 Stephen             3 C++        C2  17-FEB-02 10.20.48.00 AM
         7 Richardson          5 DOTNET     C3  13-MAR-01 10.40.55.00 AM
        10 James               7 PHP        C4  21-APR-02 09.35.50.00 AM
        13 Aks                 9 ORACLE     C5  01-MAY-02 07.38.20.00 AM

SQL> Anirban Hazra
```

3. Waq to display sequence name, minimum value, maximum value from all created sequences.

```
SQL> select sequence_name , max_value , min_value from user_sequences ;

SEQUENCE_NAME                                                                                    MAX_VALUE  MIN_VALUE
------------------------------------------------------------------------------------------------ ---------- ----------
S01                                                                                                      5          1
S2                                                                                                      13          1
S3                                                                                                       9          1
```

4. Waq to drop these two sequences.

```
SQL> drop sequence s2;

Sequence dropped.

SQL> drop sequence s3;

Sequence dropped.
```

5. Create synonym s55 for student table. And query all rows from synonym. Then drop it.

```
SQL> create synonym s55 for student3;

Synonym created.

SQL> select * from s55;

  STU_ROLL NAME                 DOB             MARK BRANCH     SECTION
---------- -------------------- --------- ---------- ---------- ----------
         7 Jason                30-MAR-05        400 IT         CS-3
         9 Anirban              30-MAR-05        400 IT         CS-3
         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-MAR-05        400 IT         CS-3

7 rows selected.

SQL> drop synonym s55;

Synonym dropped.
```

6. Create view stv1 from student table by selecting roll, name , mark & branch column.

```
SQL> create view stv1 as select stu_roll , name , mark , branch from student3 ;

View created.

SQL> select * from stv1;

  STU_ROLL NAME                       MARK BRANCH
---------- -------------------- ---------- ----------
         7 Jason                       400 IT
         9 Anirban                     400 IT
         1 Amit                        600 SCE
         2 Ajay                        550 IT
         3 Rohit                       450 IT
         4 Mukesh                      390 SCE
         5 John                        400 IT

7 rows selected.
```

8. Waq to create view stv2 from student table selecting roll, name, dob & mark of rollno 3 which can't be deleted from view.

```
SQL> create view stv2 as select stu_roll,name,dob,mark from student3 where stu_roll=3 with read only constraint ro1;

View created.

SQL> select * from stv2;

  STU_ROLL NAME                DOB            MARK
---------- ------------------- --------- ----------
         3 Rohit               15-DEC-08        450
```

9. Drop these two view from database.

```
SQL> drop view stv1;

View dropped.

SQL> drop view stv2;

View dropped.
```

21. Waq to display the mark which are below the mark of ROHIT by using sub-query.

```
SQL> select mark from student3 where mark<any(select mark from student3 where name = 'Rohit') ;

      MARK
----------
       390
       400
       400
       400
```

22. Waq to display third highest mark from student table by using nested within nested query.

```
SQL> select max(mark) as max from student3 where mark < (select max(mark) as max2 from student3 where mark < (select max(mark) from student3)) ;

      MAX
---------
       450
```

23. Waq to display all name & marks those are greater than all IT marks.

```
SQL> select name,mark from student3 where mark > all(select mark from student3 where branch = 'IT' );

NAME                      MARK
-------------------- ----------
Amit                       600
```

24. Waq to display all name & marks those are less than all SCE marks.

```
SQL> select name,mark from student3 where mark < all(select mark from student3 where branch = 'SCE' );

no rows selected
```

25. Waq to display SCE mark which are greater than any IT mark.

```
SQL> select mark from student3 where mark = all(select mark from student3 where branch = 'SCE' and mark > any(select mark from student3 where branch= 'IT' ));

      MARK
----------
       600

SQL> Anirban Hazra
```

THANK

YOU