Practice Exercise I

1) Create a table name STUDENT with following structure.

```sql
CREATE TABLE STUDENT (
    RegNo NUMBER(3),
    Name VARCHAR2(15),
    Gender CHAR(1),
    DOB DATE,
    MobileNo NUMBER(10),
    City VARCHAR2(15)
);
```

2) Create a table name FACULTY with following structure.

Column

```sql
CREATE TABLE FACULTY (
    FacNo VARCHAR2(4),
    FacName VARCHAR2(15),
    Gender CHAR(1),
    DOB DATE,
    DOJ DATE,
    MobileNo NUMBER(10),
    DeptNo VARCHAR2(4)
);

```

3) Create a table name DEPARTMENT with following structure.

```sql
CREATE TABLE DEPARTMENT (
    DeptNo VARCHAR2(4),
    DeptName VARCHAR2(15),
    DeptHead VARCHAR2(4)
);
```

4) Create a table name COURSE with following structure.

```sql
CREATE TABLE COURSE (
    CourseNo VARCHAR2(3),
    CourseDesc VARCHAR2(14),
    CourseType CHAR(1),
    SemNo CHAR(1),
    HallNo VARCHAR2(4),
    FacNo VARCHAR2(4)
);

```

5) Modify the table FACULTY by adding a column name DeptNo of datatype VARCHAR(4)

```sql
ALTER TABLE FACULTY
ADD (DeptNo VARCHAR2(5));

```

6) Alter the table STUDENT with following structure.

Column Constraints

Name

PRIMARY

1 RegNo KEY

2 MobileNo NOT NULL

```sql
ALTER TABLE STUDENT
    MODIFY (RegNo NUMBER(3) PRIMARY KEY,
            MobileNo NUMBER(10) NOT NULL);

```

7)Alter the table name FACULTY with following structure. The DeptNo in this table refers the DeptNo in the DEPARTMENT table.

Column Constraints

Name

FacNo

PRIMARY

I KEY

Gender

CHECK

2 'M' or 'F'

```sql
ALTER TABLE FACULTY
ADD CONSTRAINT FacNo_pk PRIMARY KEY (FacNo);
ALTER TABLE FACULTY
ADD CONSTRAINT Gender_ck CHECK (Gender IN ('M', 'F'));
```

8)After the FACULTY table is successfully created, test if you can add a constraint FOREIGN KEY to the DeptNo of this table.

```sql
ALTER TABLE FACULTY
ADD CONSTRAINT DeptNo_fk FOREIGN KEY (DeptNo) REFERENCES DEPARTMENT(DeptNo);

```

9)Alter the table name DEPARTMENT with following structure

Column Constraint

Name

DeptNo

PRIMARY

I KEY

```sql
ALTER TABLE DEPARTMENT
    ADD CONSTRAINT DeptNo_pk PRIMARY KEY (DeptNo);
```

10) Alter the table name COURSE with following structure.

Column

Constraint #

Name

CourseNo

PRIMARY

1 KEY

2 SemNo 1 to 6

```sql
ALTER TABLE COURSE
    ADD CONSTRAINT CourseNo_pk PRIMARY KEY (CourseNo);
ALTER TABLE COURSE
    ADD CONSTRAINT SemNo_ck CHECK (SemNo IN ('1', '2', '3', '4', '5', '6'));

```

Practice Questions:

11. Populate all the five tables with your own data.

```sql
INSERT INTO STUDENT(REGNO,NAME,GENDER,DOB,MOBILENO,CITY)
VALUES(192372006,'JESWANTH','M',TO_DATE('2006-03-19','YYYY-MM-DD'),9177545949,'NELLORE');
```

```sql
INSERT INTO STUDENT(REGNO,NAME,GENDER,DOB,MOBILENO,CITY)
VALUES(192365017,'MITHUN','M',TO_DATE('2005-09-30','YYYY-MM-DD'),9989723628,'KADAPA');
```

```sql
INSERT INTO DEPARTMENT (DEPTNO,DEPTNAME,DEPTHEAD)
VALUES('D001','COMPUTERSCIENCE','F001');
```

```sql
INSERT INTO FACULTY(FACNO,FACNAME,GENDER,DOB,DOJ,MOBILENO,DEPTNO)
VALUES(002,'RAMA','M',TO_DATE('1975-03-09','YYYY-MM-DD'),TO_DATE('2018-10-09','YYYY-MM-DD'),9177545947,'D002')
```

```sql
INSERT INTO COURSE(COURSENO,COURSEDESC,COURSETYPE,SEMNO,HALLNO,FACNO)
VALUES('CS7','CN','C','1','001','F001')
```

12.Update the value of student name whose register number is '19232006'.

```
UPDATE STUDENT
SET NAME= 'JESWANTH'
WHERE REGNO = 192372006;
```

13.Delete the record in the table FACULTY, who resigned her job.

```
DELETE FROM FACULTY
WHERE FACULTYNAME = 'SIVA';
```

14.Modify the date of birth for the faculty whose name is RAM; with a value '1983-05-01'.

```
UPDATE FACULTY
SET DOB = TO_DATE('1975-10-09','YYYY-MM-DD')
WHERE FACULTYNAME = 'SIVA';
```

15.Remove all faculty who are having over 65 years.

```
DELETE FROM FACULTY
WHERE MONTHS_BETWEEN(SYSDATE , DOB)/12 > 65;
```

16.View all the records from the five tables.

```
SELECT * FROM STUDENT;
SELECT * FROM COURSE;
SELECT * FROM FACULTY;
SELECT * FROM DEPARTMENT;
```

REGNO	NAME	GENDER	DOB	MOBILENO	CITY
192311098	HARI PRIYA	F	18-Apr-2005	9701970277	ANANTHAPURAM
192372006	JESWANTH	M	19-Mar-2006	9177545949	NELLORE
192311064	PRANEETHA	F	22-Jul-2006	9177545949	HYDERABAD
192365017	MITHUN	M	30-Sep-2005	9989723628	KADAPA

COURSENO	COURSEDESC	COURSETYPE	SEMNO	HALLNO	FACNO
CS6	CA	C	1	002	F002
CS7	CN	C	1	001	F001

FACNO	FACNAME	GENDER	DOB	DOJ	MOBILENO	DEPTNO
2	RAMA	M	09-Mar-1975	09-Oct-2018	9177545947	D002
1	SIVA	M	09-Mar-1975	09-Oct-2018	9177545948	D001

DEPTNO	DEPTNAME	DEPTHEAD
D001	COMPUTERSCIENCE	F001
D002	QUANTITATIVE	F002

WHERE Clause Questions::

17.The student counsellor wanted to display the registration number, student name

and date of birth for all the students.

```
1  SELECT REGNO,NAME,DOB
2  FROM STUDENT;
```

Results | Explain | Describe | Saved SQL | History

REGNO	NAME	DOB
192311098	HARI PRIYA	18-Apr-2005
192372006	JESWANTH	19-Mar-2006
192311064	PRANEETHA	22-Jul-2006
192365017	MITHUN	30-Sep-2005

18.The controller of examinations wanted to list all the female students.

```sql
SELECT NAME
FROM STUDENT
WHERE GENDER = 'F';
```

Results | Explain | Describe | Saved SQL | History

NAME
HARI PRIYA
PRANEETHA

20. Display all faculty details joined before “November 2024”.

```sql
SELECT *
FROM FACULTY
WHERE DOJ < TO_DATE('2024-11-04','YYYY-MM-DD');
```

Results | Explain | Describe | Saved SQL | History

FACNO	FACNAME	GENDER	DOB	DOJ	MOBILENO	DEPTNO
2	RAMA	M	09-Mar-1975	09-Oct-2018	9177545947	D002
1	SIVA	M	09-Mar-1975	09-Oct-2018	9177545948	D001

21. Display all the courses not allotted to halls

```
1  SELECT *
2  FROM COURSE
3  WHERE HALLNO IS NULL;
```

Results | Explain | Describe | Saved SQL | History

no data found

LIKE Clause Questions::

22. List the students whose name ends with the substring "a"

```
1  SELECT *
2  FROM STUDENT
3  WHERE NAME LIKE '%A'
```

Results | Explain | Describe | Saved SQL | History

REGNO	NAME	GENDER	DOB	MOBILENO	CITY
192311098	HARI PRIYA	F	18-Apr-2005	9701970277	ANANTHAPURAM
192311064	PRANEETHA	F	22-Jul-2006	9177545949	HYDERABAD

23. Display all students whose name contains the substring "Ha"

```
1  SELECT *
2  FROM STUDENT
3  WHERE NAME LIKE '%HA%'
```

Results | Explain | Describe | Saved SQL | History

REGNO	NAME	GENDER	DOB	MOBILENO	CITY
192311098	HARI PRIYA	F	18-Apr-2005	9701970277	ANANTHAPURAM
192311064	PRANEETHA	F	22-Jul-2006	9177545949	HYDERABAD

2 rows returned in 0.01 seconds Download

24. Find all the students who are located in cities having "NEL" as substring

```
1  SELECT *
2  FROM STUDENT
3  WHERE CITY LIKE '%NEL%';
```

Results | Explain | Describe | Saved SQL | History

REGNO	NAME	GENDER	DOB	MOBILENO	CITY
192372006	JESWANTH	M	19-Mar-2006	9177545949	NELLORE

25. Display the students whose names do not contain six letters.

```
1  SELECT *
2  FROM STUDENT
3  WHERE NAME NOT LIKE '%_____%';
```

Results | Explain | Describe | Saved SQL | History

REGNO	NAME	GENDER	DOB	MOBILENO	CITY
192372006	JESWANTH	M	19-Mar-2006	9177545949	NELLORE
192365017	MITHUN	M	30-Sep-2005	9989723628	KADAPA

26. Find all the students whose names contains “th”

```
1  SELECT *
2  FROM STUDENT
3  WHERE NAME LIKE '%TH%';
```

Results | Explain | Describe | Saved SQL | History

REGNO	NAME	GENDER	DOB	MOBILENO	CITY
192372006	JESWANTH	M	19-Mar-2006	9177545949	NELLORE
192311064	PRANEETHA	F	22-Jul-2006	9177545949	HYDERABAD
192365017	MITHUN	M	30-Sep-2005	9989723628	KADAPA