Assignment-4

Stream   **: IT**
Subject   **: Database Management System Lab**
Subject Code   **: IT-691**

1. Create table **DEPARTMENT**

Column Name	Data Type	Size	Constraints
DeptCode	Varchar2	4	Not null, Primary key
DeptName	Varchar2	40	Not null
HOD	Varchar2	4	Not null

.
CREATE TABLE DEPARTMENT_005 (
   DeptCode VARCHAR2(4) NOT NULL PRIMARY KEY,
   DeptName VARCHAR2(40) NOT NULL,
   HOD VARCHAR2(4) NOT NULL);

```
SQL> CREATE TABLE DEPARTMENT_005 (
    DeptCode VARCHAR2(4) NOT NULL PRIMARY KEY,
    DeptName VARCHAR2(40) NOT NULL,
    HOD VARCHAR2(4) NOT NULL);  2    3    4

Table created.

SQL> Desc DEPARTMENT_005;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 DEPTCODE                                  NOT NULL VARCHAR2(4)
 DEPTNAME                                  NOT NULL VARCHAR2(40)
 HOD                                       NOT NULL VARCHAR2(4)

SQL>
```

2. Insert values into DEPARTMENT table, as follows:

DeptCode	DeptName	HOD
IT	Information Technology	F201
EE	Electrical Engineering	F801
CSE	Computer Science and Engineering	F101
ECE	Electronics Engineering	F701
MCA	Master of Computer application	F301

INSERT INTO DEPARTMENT_005 (DeptCode, DeptName, HOD) VALUES ('&DeptCode', '&DeptName', '&HOD');

```
SQL> INSERT INTO DEPARTMENT_005 (DeptCode, DeptName, HOD) VALUES ('&DeptCode','&DeptName','&HOD');
Enter value for deptcode: IT
Enter value for deptname: Information Technology
Enter value for hod: F201
old   1: INSERT INTO DEPARTMENT_005 (DeptCode, DeptName, HOD) VALUES ('&DeptCode','&DeptName','&HOD')
new   1: INSERT INTO DEPARTMENT_005 (DeptCode, DeptName, HOD) VALUES ('IT','Information Technology ','F201')

1 row created.

SQL> commit;

Commit complete.

SQL> INSERT INTO DEPARTMENT_005 (DeptCode, DeptName, HOD) VALUES ('&DeptCode','&DeptName','&HOD')
  2  ;
Enter value for deptcode: EE
Enter value for deptname: Electrical Engineering
Enter value for hod: F801
old   1: INSERT INTO DEPARTMENT_005 (DeptCode, DeptName, HOD) VALUES ('&DeptCode','&DeptName','&HOD')
new   1: INSERT INTO DEPARTMENT_005 (DeptCode, DeptName, HOD) VALUES ('EE','Electrical Engineering','F801')

1 row created.
```

```
SQL> Select * from DEPARTMENT_005;

DEPT DEPTNAME                                HOD
---- ------------------------------------    ----
IT   Information Technology                  F201
EE   Electrical Engineering                  F801
CSE  Computer Science and Engineering        F101
ECE  Electronics Engineering                 F701
MCA  Master of Computer Application          F301

SQL>
```

3. Add a foreign key constraint in STUDENT against DeptCode column which references department.
ALTER TABLE Student_005
ADD CONSTRAINT fk_deptcode
FOREIGN KEY (DeptCode)
REFERENCES DEPARTMENT_005(DeptCode);

```
SQL> ALTER TABLE Student_005
ADD CONSTRAINT fk_deptcode
FOREIGN KEY (DeptCode)
REFERENCES DEPARTMENT_005(DeptCode);
  2    3    4
Table altered.

SQL>
```

4. Create table: FACULTY

Column Name	Data Type	Size	Constraints
FacultyCode	Varchar2	4	Primary key
FacultyName	Varchar2	15	Not null
DateOfJoin	Date		Not null
DeptCode	Varchar2	4	Not null

CREATE TABLE FACULTY_005 (
    FacultyCode VARCHAR2(4) PRIMARY KEY,

FacultyName VARCHAR2(15) NOT NULL,
DateOfJoin DATE NOT NULL,
DeptCode VARCHAR2(4) NOT NULL
);

```
SQL> CREATE TABLE FACULTY_005 (
    FacultyCode VARCHAR2(4) PRIMARY KEY,
    FacultyName VARCHAR2(15) NOT NULL,
    DateOfJoin DATE NOT NULL,
    DeptCode VARCHAR2(4) NOT NULL
);
  2    3    4    5    6
Table created.

SQL> desc FACULTY_005;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 FACULTYCODE                               NOT NULL VARCHAR2(4)
 FACULTYNAME                               NOT NULL VARCHAR2(15)
 DATEOFJOIN                                NOT NULL DATE
 DEPTCODE                                  NOT NULL VARCHAR2(4)

SQL>
```

5. Insert appropriate values in the above table.

FacultyCode	FacultyName	DateOfJoin	DeptCode
F101	S. RoyChoudhury	01-10-2005	CSE
F105	P. Roy	01-05-2006	CSE
F201	D. Dutta	24-08-2005	IT
F301	S. Paul	15-03-2003	MCA
F401	D. Majumdar	01-02-2002	IT
F501	N. Sanyal	31-12-2003	EE
F601	I. Majumdar	10-04-2000	ECE
F701	S. Ghosh	01-01-2004	ECE
F801	P. Das	15-06-2002	EE

```
SQL> Insert into FACULTY_005 (FacultyCode, FacultyName, DateOfJoin, DeptCode) values('&FacultyCode', '&FacultyName', '&DateOfJoin', '&DeptCode');
Enter value for facultycode: F101
Enter value for facultyname: S.RoyChoudhury
Enter value for dateofjoin: 01/10/2005
Enter value for deptcode: CSE
old   1: Insert into FACULTY_005 (FacultyCode, FacultyName, DateOfJoin, DeptCode) values('&FacultyCode', '&FacultyName', '&DateOfJoin', '&DeptCode')
new   1: Insert into FACULTY_005 (FacultyCode, FacultyName, DateOfJoin, DeptCode) values('F101', 'S.RoyChoudhury', '01/10/2005', 'CSE')

1 row created.

SQL> COMMIT;
```

```
SQL> select * from FACULTY_005;

FACU FACULTYNAME      DATEOFJO DEPT
---- --------------- -------- ----
F101 S.RoyChoudhury  01-10-05 CSE
F105 P.Roy           01-05-06 CSE
F201 D.Dutta         24-08-05 IT
F301 S.Paul          15-03-03 MCA
F401 D.Majumdar      01-02-02 IT
F501 N.Sanyal        31-12-03 EE
F601 I.Majumdar      10-04-00 ECE
F701 S.Ghosh         01-01-04 ECE
F801 P.Das           15-06-02 EE

9 rows selected.
```

6. Alter the table **Faculty** and add check constraint such that FacultyCode starts with 'F'

ALTER TABLE FACULTY_005
ADD CONSTRAINT chk_facultycode CHECK (FacultyCode LIKE 'F%');

```
SQL> ALTER TABLE FACULTY_005
ADD CONSTRAINT chk_facultycode CHECK (FacultyCode LIKE 'F%');
  2
Table altered.
```

7. Alter the table **Faculty** and add check constraint such DeptCode is either CSE,IT, MCA, EE, ECE

ALTER TABLE FACULTY_005
ADD CONSTRAINT chk_deptcode CHECK (DeptCode IN ('CSE', 'IT', 'MCA', 'EE', 'ECE'));

```
SQL> ALTER TABLE FACULTY_005
ADD CONSTRAINT chk_deptcode CHECK (DeptCode IN ('CSE', 'IT', 'MCA', 'EE', 'ECE'));
  2
Table altered.
```

8. Add constraint : DeptCode of **Faculty** is foreign key and references DeptCode in **Department.**
ALTER TABLE FACULTY_005
ADD CONSTRAINT fk_deptcode_faculty
FOREIGN KEY (DeptCode) REFERENCES DEPARTMENT_005(DeptCode);

```
SQL> ALTER TABLE FACULTY_005
ADD CONSTRAINT fk_deptcode_faculty
FOREIGN KEY (DeptCode) REFERENCES DEPARTMENT_005(DeptCode);
  2    3
Table altered.
```

9. Add Constraint: HOD of **Department** table is foreign key and references FacultyCode of **Faculty.**
ALTER TABLE DEPARTMENT_005
ADD CONSTRAINT fk_hod_faculty
FOREIGN KEY (HOD) REFERENCES FACULTY_005(FacultyCode);

```
SQL> ALTER TABLE DEPARTMENT_005
ADD CONSTRAINT fk_hod_faculty
FOREIGN KEY (HOD) REFERENCES FACULTY_005(FacultyCode);
  2    3
Table altered.

SQL>
```