

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> █
```