

## Experiment 3

a)

1)

```
mysql> CREATE TABLE Employee (  
-> Fname VARCHAR(15) NOT NULL,  
->      Minit CHAR(1),  
->      Lname VARCHAR(15) NOT NULL,  
->      Ssn CHAR(9) NOT NULL,  
->      Bdate DATE,  
->      Address VARCHAR(30),  
->      SEX CHAR(1), -- Or VARCHAR(6)  
->      Salary DECIMAL(10,2),  
->      Super_ssn CHAR(9),  
->      Dno INT NOT NULL,  
->      PRIMARY KEY (Ssn),  
->      FOREIGN KEY (Super_ssn) REFERENCES Employee(Ssn),  
->      FOREIGN KEY (Dno) REFERENCES Department(Dnumber)  
-> );  
Query OK, 0 rows affected (0.05 sec)
```

2)

```
mysql> CREATE TABLE Employee (  
-> Fname VARCHAR(15) NOT NULL,  
->      Minit CHAR(1),  
->      Lname VARCHAR(15) NOT NULL,  
->      Ssn CHAR(9) NOT NULL,  
->      Bdate DATE,  
->      Address VARCHAR(30),  
->      SEX CHAR(1), -- Or VARCHAR(6)  
->      Salary DECIMAL(10,2),  
->      Super_ssn CHAR(9),  
->      Dno INT NOT NULL,  
->      PRIMARY KEY (Ssn),  
->      FOREIGN KEY (Super_ssn) REFERENCES Employee(Ssn),  
->      FOREIGN KEY (Dno) REFERENCES Department(Dnumber)  
-> );  
Query OK, 0 rows affected (0.05 sec)
```

3)

```
mysql> CREATE TABLE DEPT_LOCATIONS(  
  -> DNUMBER INT NOT NULL,  
  -> DLOCATION VARCHAR(15) NOT NULL,  
  -> PRIMARY KEY (DNUMBER, DLOCATION),  
  -> FOREIGN KEY (DNUMBER) REFERENCES DEPARTMENT (DNUMBER)  
  -> );  
Query OK, 0 rows affected (0.03 sec)
```

4)

```
mysql> CREATE TABLE PROJECT(  
  -> PNAME VARCHAR(15) NOT NULL,  
  -> PNUMBER INT NOT NULL,  
  -> PLOCATION VARCHAR(15),  
  -> DNUM INT NOT NULL,  
  -> PRIMARY KEY (PNUMBER),  
  -> UNIQUE (PNAME),  
  -> FOREIGN KEY (DNUM) REFERENCES DEPARTMENT (DNUMBER)  
  -> );  
Query OK, 0 rows affected (0.07 sec)
```

5)

```
mysql> CREATE TABLE WORK_ON(  
  -> ESSN CHAR(9) NOT NULL,  
  -> PNO INT NOT NULL,  
  -> HOURS DECIMAL(3,1) NOT NULL,  
  -> PRIMARY KEY(ESSN , PNO),  
  -> FOREIGN KEY(ESSN) REFERENCES EMPLOYEE(SSN),  
  -> FOREIGN KEY(PNO) REFERENCES PROJECT (PNUMBER)  
  -> );  
Query OK, 0 rows affected (0.07 sec)
```

6)

```
mysql> CREATE TABLE DEPENDENT (  
  -> ESSN CHAR(9) NOT NULL,  
  -> DEPENDENT_NAME VARCHAR(15) NOT NULL,  
  -> SEC CHAR(1),  
  -> BDATE DATE,  
  -> RELATIONSHIP VARCHAR(8),  
  -> PRIMARY KEY (ESSN , DEPENDENT_NAME),  
  -> FOREIGN KEY(ESSN) REFERENCES EMPLOYEE(SSN)  
  -> );  
Query OK, 0 rows affected (0.03 sec)
```

b)

1)

```
mysql> select*from employee;  
+-----+-----+-----+-----+-----+-----+-----+  
| Fname | Minit | Lname | Ssn    | Bdate  | Address                | SEX |  
+-----+-----+-----+-----+-----+-----+-----+  
| John  | NULL  | Smith | 123456789 | 1965-01-09 | 731 Fondren, Houston TX | M   |  
| Franklin | NULL  | Wong  | 333445555 | 1965-12-08 | 638 Voss, Houston TX   | M   |  
| Joyce | NULL  | English | 453453453 | 1972-07-31 | 5631 Rice, Houston TX  | F   |  
| Ramesh | NULL  | Narayan | 666884444 | 1962-09-15 | 975 Fire Oak, Humble TX | M   |  
| James | NULL  | Borg   | 888665555 | 1937-11-10 | 450 Stone, Houston TX   | M   |  
| Jennifer | NULL  | Wallace | 987654321 | 1941-06-20 | 291 Berry, Bellaire TX | F   |  
| Ahmad | NULL  | Jabbar | 987987987 | 1969-03-29 | 980 Dallas, Houston TX | M   |  
| Alicia | NULL  | Zelaya | 999887777 | 1968-01-19 | 3321 Castle, Spring TX | F   |  
+-----+-----+-----+-----+-----+-----+-----+  
8 rows in set (0.00 sec)
```

2)

```
mysql> select*from department;
```

Dname	Dnumber	Mgr_ssn	Mgr_start_date
Headquarters	1	888665555	1981-06-19
Administration	4	987654321	1995-01-01
Research	5	333445555	1988-05-22

```
3 rows in set (0.00 sec)
```

3)

```
mysql> select*from dependent;
```

Essn	Dependent_name	Sex	Bdate	Relationship
123456789	Alice	F	1988-12-30	Daughter
123456789	Elizabeth	F	1967-05-05	Spouse
123456789	Michael	M	1988-01-04	Son
333445555	Alice	F	1986-04-04	Daughter
333445555	Joy	F	1958-05-03	Spouse
333445555	Theodore	M	1983-10-25	Son
987654321	Abner	M	1942-02-28	Spouse

```
7 rows in set (0.00 sec)
```

4)

```
mysql> select*from project;
```

Pname	Pnumber	Plocation	Dnum
Bellaire	1	Bellaire	5
Sugarland	2	Sugarland	5
Houston1	3	Houston	5
Stafford	10	Stafford	4
Houston2	20	Houston	1
Stafford2	30	Stafford	4

```
6 rows in set (0.00 sec)
```

5)

```
mysql> select*from works_on;
+-----+-----+-----+
| Essn   | Pno  | HOURS |
+-----+-----+-----+
| 123456789 | 1    | 32.50 |
| 123456789 | 2    | 7.50  |
| 333445555 | 2    | 10.00 |
| 333445555 | 3    | 10.00 |
| 333445555 | 10   | 10.00 |
| 333445555 | 20   | 10.00 |
| 453453453 | 1    | 20.00 |
| 453453453 | 2    | 20.00 |
| 666884444 | 3    | 40.00 |
| 888665555 | 20   | 0.00  |
| 987654321 | 20   | 15.00 |
| 987654321 | 30   | 20.00 |
| 987987987 | 10   | 35.00 |
| 987987987 | 30   | 5.00  |
| 999887777 | 10   | 10.00 |
| 999887777 | 30   | 30.00 |
+-----+-----+-----+
16 rows in set (0.00 sec)
```

6)

```
mysql> select * from dept_locations;
+-----+-----+
| Dnumber | Dlocation |
+-----+-----+
| 1       | Houston   |
| 4       | Stafford  |
| 5       | Bellaire  |
| 5       | Houston   |
| 5       | Sugarland |
+-----+-----+
5 rows in set (0.00 sec)
```