CREATE TABLE EMPLOYEE(SSN VARCHAR(8),

Name VARCHAR(10),

Address VARCHAR(30),

Sex CHAR(2),

Salary NUMBER(10),SuperSSN VARCHAR(8),DNo VARCHAR(6),

CONSTRAINT PK\_SSN PRIMARY KEY(SSN));

CREATE TABLE DEPARTMENT(DNo VARCHAR(6),

DName VARCHAR(10),

MgrSSN VARCHAR(8),

MgrStartDate DATE,

CONSTRAINT PK\_DNo PRIMARY KEY(DNo),

CONSTRAINT FK\_MgrSSN FOREIGN KEY(MgrSSN) REFERENCES EMPLOYEE(SSN));

CREATE TABLE DLOCATION(DNo VARCHAR(6),

DLoc VARCHAR(15),

CONSTRAINT PK\_DNo\_DLoc PRIMARY KEY(DNo,DLoc),

CONSTRAINT FK\_DNo FOREIGN KEY(DNo) REFERENCES DEPARTMENT(DNo));

CREATE TABLE PROJECT(PNo VARCHAR(5),

PName VARCHAR(10),

PLocation VARCHAR(14),

DNo VARCHAr(6),

CONSTRAINT PK\_PNo PRIMARY KEY(PNo),

CONSTRAINT FK\_PDNo FOREIGN KEY(DNo) REFERENCES DEPARTMENT(DNo));

CREATE TABLE WORKS\_ON(SSN VARCHAR(8),

PNo VARCHAR(5),

Hours NUMBER(5),

CONSTRAINT PK\_PNo\_SSN PRIMARY KEY(PNo,SSN),

CONSTRAINT FK\_WSSN FOREIGN KEY(SSN) REFERENCES EMPLOYEE(SSN),

CONSTRAINT FK\_PNo FOREIGN KEY(PNo) REFERENCES PROJECT(PNo));

ALTER TABLE EMPLOYEE ADD CONSTRAINT FK\_SSN FOREIGN KEY(SuperSSN) REFERENCES EMPLOYEE(SSN);

ALTER TABLE EMPLOYEE ADD CONSTRAINT FK\_EDNo FOREIGN KEY(DNo) REFERENCES DEPARTMENT(DNo);

**Queries**

1.Make a list of all project numbers for projects that involve an employee whose last name is ‘Scott’, either as a worker or as a manager of the department that controls the project.

SELECT DISTINCT PNo

FROM PROJECT

WHERE PNo IN(

(SELECT P.PNo

FROM PROJECT P,DEPARTMENT D ,EMPLOYEE E

WHERE P.DNo=D.DNo AND D.MgrSSN=E.SSN AND E.Name='Scott')

UNION

(SELECT W.PNo FROM WORKS\_ON W, EMPLOYEE E

WHERE E.SSN=W.SSN AND E.Name='Scott'));

2.Show the resulting salaries if every employee working on the ‘IoT’ project is given a 10

percentraise.

SELECT E.Name,1.1\* E.Salary AS Increased\_salary

FROM EMPLOYEE E, WORKS\_ON W, PROJECT P

WHERE E.SSN=W.SSN AND W.PNo=P.PNo AND P.PName='IoT';

3.Find the sum of the salaries of all employees of the ‘Accounts’ department,as well as the maximum salary, the minimum salary, and the average salary in this department.

SELECT SUM (E. Salary) AS TOTAL\_SALARY,MAX(E. Salary) AS

MAX\_SALARY,MIN(E. Salary) AS MIN\_SALARY,AVG(E. Salary) AS

AVG\_SALARY

FROM EMPLOYEE E, DEPARTMENT D

WHERE E. DNo= D. DNo AND D.DName='Accounts';

4.Retrieve the name of each employee who works on all the projects controlledby department number 5 (use NOT EXISTS operator).

SELECT E.Name

FROM EMPLOYEE E

WHERE NOT EXISTS((SELECT PNo FROM PROJECT WHERE DNo='D5')

MINUS (SELECT W.PNo FROM WORKS\_ON W WHERE E.SSN=W.SSN));

5.For each department that has more than five employees, retrieve the department number and

thenumber of its employees who are making more than Rs. 6,00,000.

SELECT D.DNo,COUNT(\*)

FROM EMPLOYEE E, DEPARTMENT D

WHERE E.DNo= D.DNo AND E.Salary>600000

GROUP BY D.DNo

HAVING COUNT(\*)>=5;