CREATE TABLE DEPARTMENT(DNO INTEGER, DNAME VARCHAR(15), MGRSSN INTEGER, MGRSTARTDATE DATE, PRIMARY KEY(DNO));

CREATE TABLE EMPLOYEE (SSN INTEGER, FNAME VARCHAR (15), LNAME VARCHAR (15), ADDRESS VARCHAR (15), SEX CHAR, SUPERSSN INTEGER, DNO INTEGER, SALARY INTEGER, PRIMARY KEY(SSN), FOREIGN KEY(SUPERSSN) REFERENCES EMPLOYEE(SSN), FOREIGN KEY(DNO) REFERENCES DEPARTMENT(DNO));

ALTER TABLE DEPARTMENT ADD FOREIGN KEY(MGRSSN) REFERENCES EMPLOYEE(SSN);

CREATE TABLE DLOCATION (DNO INTEGER, DLOC VARCHAR (15), PRIMARY KEY(DNO, DLOC), FOREIGN KEY (DNO) REFERENCES DEPARTMENT (DNO));

CREATE TABLE PROJECT (PNO INTEGER, PNAME VARCHAR (15), PLOCATION VARCHAR (15), DNO INTEGER, PRIMARY KEY(PNO), FOREIGN KEY (DNO) REFERENCES DEPARTMENT (DNO));

CREATE TABLE WORKSON(SSN INTEGER, PNO INTEGER, HOURS INTEGER, PRIMARY KEY (SSN, PNO), FOREIGN KEY(SSN) REFERENCES EMPLOYEE(SSN), FOREIGN KEY (PNO) REFERENCES PROJECT(PNO));

INSERT INTO EMPLOYEE VALUES (123491, 'JHON', 'SCOTT', 'BANGALORE', 'M', NULL, NULL, 450000);

INSERT INTO EMPLOYEE VALUES (123492, 'JAMES', 'SMITH', 'BANGALORE', 'M', NULL, NULL,

500000);

INSERT INTO EMPLOYEE VALUES (123493, 'HEARN', 'BAKER', 'BANGALORE', 'M', NULL, NULL, 700000);

INSERT INTO EMPLOYEE VALUES (123494, 'EDWARD', 'SCOTT', 'MYSORE', 'M', NULL, NULL, 500000);

INSERT INTO EMPLOYEE VALUES (123495, 'PAVAN', 'HEGDE', 'MANGALORE', 'M', NULL, NULL, 650000);

INSERT INTO EMPLOYEE VALUES (123496, 'GIRISH', 'MALYA', 'MYSORE', 'M', NULL, NULL, 450000);

INSERT INTO EMPLOYEE VALUES (123497, 'NEHA', 'RAI', 'MANGALORE', 'F', NULL, NULL, 800000);

INSERT INTO EMPLOYEE VALUES (123498, 'ANAGHA', 'RAI', 'MANGALORE', 'F', NULL, NULL, 350000);

INSERT INTO EMPLOYEE VALUES (123499, 'SANTHOSH', 'KUMAR', 'MANGALORE', 'M', NULL, NULL, 300000);

INSERT INTO EMPLOYEE VALUES (123400, 'VEENA', 'M', 'MYSORE', 'F', NULL, NULL, 600000);

INSERT INTO EMPLOYEE VALUES (123401, 'NAGESH', 'HR', 'BANGALORE', 'M', NULL, NULL, 500000);

INSERT INTO DEPARTMENT VALUES (1, 'ACCOUNTS', 123499, '2001-01-01');

INSERT INTO DEPARTMENT VALUES (2, 'IT', 123401, '2016-08-01');

INSERT INTO DEPARTMENT VALUES (3, 'ECE', 123491, '2008-06-01');

INSERT INTO DEPARTMENT VALUES (4, 'ISE', 123400, '2008-08-01');

INSERT INTO DEPARTMENT VALUES (5, 'CSE', 123497, '2002-06-01');

UPDATE EMPLOYEE SET SUPERSSN=NULL ,DNO=3 WHERE SSN=123491;

UPDATE EMPLOYEE SET SUPERSSN=123493 ,DNO=5 WHERE SSN=123492;

UPDATE EMPLOYEE SET SUPERSSN=123494 ,DNO=5 WHERE SSN=123493;

UPDATE EMPLOYEE SET SUPERSSN=123495 ,DNO=5 WHERE SSN=123494;

UPDATE EMPLOYEE SET SUPERSSN=123496 ,DNO=5 WHERE SSN=123495;

UPDATE EMPLOYEE SET SUPERSSN=123497 ,DNO=5 WHERE SSN=123496;

UPDATE EMPLOYEE SET SUPERSSN=NULL ,DNO=5 WHERE SSN=123497;

UPDATE EMPLOYEE SET SUPERSSN=123499 ,DNO=1 WHERE SSN=123498;

UPDATE EMPLOYEE SET SUPERSSN=NULL ,DNO=1 WHERE SSN=123499;

UPDATE EMPLOYEE SET SUPERSSN=NULL ,DNO=4 WHERE SSN=123400;

UPDATE EMPLOYEE SET SUPERSSN=NULL ,DNO=2 WHERE SSN=123401;

INSERT INTO DLOCATION VALUES (1, 'BANGALORE');

INSERT INTO DLOCATION VALUES (2, 'BANGALORE');

INSERT INTO DLOCATION VALUES (3, 'BANGALORE');

INSERT INTO DLOCATION VALUES (4, 'MANGALORE');

INSERT INTO DLOCATION VALUES (5, 'MANGALORE');

INSERT INTO PROJECT VALUES (100, 'IOT', 'BANGALORE', 5);

INSERT INTO PROJECT VALUES (101, 'CLOUD', 'BANGALORE', 5);

INSERT INTO PROJECT VALUES (102, 'BIGDATA', 'BANGALORE', 5);

INSERT INTO PROJECT VALUES (103, 'SENSORS', 'BANGALORE', 3);

INSERT INTO PROJECT VALUES (104, 'BANK MANAGEMENT', 'BANGALORE', 1);

INSERT INTO PROJECT VALUES (105, 'AI', 'BANGALORE', 1);

INSERT INTO PROJECT VALUES (106, 'OPENSTACK', 'BANGALORE', 4);

INSERT INTO PROJECT VALUES (107, 'SMART CITY', 'BANGALORE', 2);

INSERT INTO WORKSON VALUES (123492, 100, 4);

INSERT INTO WORKSON VALUES (123492, 101, 6);

INSERT INTO WORKSON VALUES (123492, 102, 8);

INSERT INTO WORKSON VALUES (123493, 100, 10);

INSERT INTO WORKSON VALUES (123495, 100, 3);

INSERT INTO WORKSON VALUES (123496, 101, 4);

INSERT INTO WORKSON VALUES (123497, 102, 5);

INSERT INTO WORKSON VALUES (123494, 102, 6);

INSERT INTO WORKSON VALUES (123491, 103, 7);

INSERT INTO WORKSON VALUES (123498, 104, 5);

INSERT INTO WORKSON VALUES (123499, 105, 6);

INSERT INTO WORKSON VALUES (123400, 106, 4);

INSERT INTO WORKSON VALUES (123401, 107, 10);

(SELECT DISTINCT P.PNO

FROM PROJECT P,DEPARTMENT D,EMPLOYEE E

WHERE P.DNO=D.DNO AND D.MGRSSN=E.SSN AND E.LNAME='SCOTT')

UNION

(SELECT DISTINCT P.PNO

FROM PROJECT P,WORKSON W,EMPLOYEE E

WHERE P.PNO=W.PNO AND W.SSN=E.SSN AND E.LNAME='SCOTT');

SELECT E.FNAME, E.LNAME, 1.1\*E.SALARY AS HIKE\_SALARY

FROM EMPLOYEE E,WORKSON W,PROJECT P

WHERE E.SSN=W.SSN AND P.PNO=W.PNO AND P.PNAME='IOT';

SELECT SUM(E.SALARY) AS SUM\_SAL,MAX(E.SALARY) AS MAX\_SAL,MIN(E.SALARY) AS MIN\_SAL,AVG(E.SALARY) AS AVG\_SAL

FROM EMPLOYEE E,DEPARTMENT D

WHERE E.DNO=D.DNO AND D.DNAME='ACCOUNTS';

SELECT E.FNAME, E.LNAME

FROM EMPLOYEE E

WHERE NOT EXISTS(SELECT PNO FROM PROJECT

WHERE DNO = '5' AND PNO NOT IN (SELECT

PNO FROM WORKSON

WHERE E.SSN=SSN));

SELECT DNO,COUNT(\*) AS NO\_OF\_EMP

FROM EMPLOYEE

WHERE SALARY>600000 AND DNO IN(SELECT DNO

FROM EMPLOYEE

GROUP BY(DNO)

HAVING COUNT(\*)>5)

GROUP BY DNO;