

drop database if exists company;

create database company;

use company;

```
create table if not exists Employee(  
    ssn varchar(35) primary key,  
    name varchar(35) not null,  
    address varchar(255) not null,  
    sex varchar(7) not null,  
    salary int not null,  
    super_ssn varchar(35),  
    d_no int,  
    foreign key (super_ssn) references Employee(ssn) on delete set null  
);
```

```
create table if not exists Department(  
    d_no int primary key,  
    dname varchar(100) not null,  
    mgr_ssn varchar(35),  
    mgr_start_date date,  
    foreign key (mgr_ssn) references Employee(ssn) on delete cascade  
);
```

```
create table if not exists DLocation(  
    d_no int not null,  
    d_loc varchar(100) not null,  
    foreign key (d_no) references Department(d_no) on delete cascade  
);
```

```
create table if not exists Project(  
    p_no int primary key,  
    p_name varchar(25) not null,  
    p_loc varchar(25) not null,  
    d_no int not null,  
    foreign key (d_no) references Department(d_no) on delete cascade  
);
```

```
create table if not exists WorksOn(  
    ssn varchar(35) not null,  
    p_no int not null,  
    hours int not null default 0,  
    foreign key (ssn) references Employee(ssn) on delete cascade,  
    foreign key (p_no) references Project(p_no) on delete cascade  
);
```

INSERT INTO Employee VALUES

```
("01NB235", "Chandan_Krishna", "Siddartha Nagar, Mysuru", "Male", 1500000, "01NB235", 5),  
("01NB354", "Employee_2", "Lakshmipuram, Mysuru", "Female", 1200000, "01NB235", 2),  
("02NB254", "Employee_3", "Pune, Maharashtra", "Male", 1000000, "01NB235", 4),
```

```
("03NB653", "Employee_4", "Hyderabad, Telangana", "Male", 2500000, "01NB354", 5),
("04NB234", "Employee_5", "JP Nagar, Bengaluru", "Female", 1700000, "01NB354", 1);
```

INSERT INTO Department VALUES

```
(001, "Human Resources", "01NB235", "2020-10-21"),
(002, "Quality Assesment", "03NB653", "2020-10-19"),
(003, "System assesment", "04NB234", "2020-10-27"),
(005, "Production", "02NB254", "2020-08-16"),
(004, "Accounts", "01NB354", "2020-09-4");
```

INSERT INTO DLocation VALUES

```
(001, "Jaynagar, Bengaluru"),
(002, "Vijaynagar, Mysuru"),
(003, "Chennai, Tamil Nadu"),
(004, "Mumbai, Maharashtra"),
(005, "Kuvempunagar, Mysuru");
```

INSERT INTO Project VALUES

```
(241563, "System Testing", "Mumbai, Maharashtra", 004),
(532678, "IOT", "JP Nagar, Bengaluru", 001),
(453723, "Product Optimization", "Hyderabad, Telangana", 005),
(278345, "Yeild Increase", "Kuvempunagar, Mysuru", 005),
(426784, "Product Refinement", "Saraswatipuram, Mysuru", 002);
```

INSERT INTO WorksOn VALUES

```
("01NB235", 278345, 5),
("01NB354", 426784, 6),
("04NB234", 532678, 3),
("02NB254", 241563, 3),
("03NB653", 453723, 6);
```

SELECT * FROM Department;

d_no	dname	mgr_ssn	mgr_start_date
1	Human Resources	01NB235	2020-10-21
2	Quality Assesment	03NB653	2020-10-19
3	System assesment	04NB234	2020-10-27
4	Accounts	01NB354	2020-09-04
5	Production	02NB254	2020-08-16

SELECT * FROM Employee;

ssn	name	address	sex	salary	super_ssn	d_no
01NB235	Chandan Krishna	Siddartha Nagar, Mysuru	Male	1500000	01NB235	5
01NB354	Employee_2	Lakshmipuram, Mysuru	Female	1200000	01NB235	2
02NB254	Employee_3	Pune, Maharashtra	Male	1000000	01NB235	4
03NB653	Employee_4	Hyderabad, Telangana	Male	2500000	01NB354	5
04NB234	Employee_5	JP Nagar, Bengaluru	Female	1700000	01NB354	1

```
SELECT * FROM DLocation;
```

d_no	d_loc
1	Jaynagar, Bengaluru
2	Vijaynagar, Mysuru
3	Chennai, Tamil Nadu
4	Mumbai, Maharashtra
5	Kuvempunagar, Mysuru

```
SELECT * FROM Project;
```

p_no	p_name	p_loc	d_no
241563	System Testing	Mumbai, Maharashtra	4
278345	Yeild Increase	Kuvempunagar, Mysuru	5
426784	Product Refinement	Saraswatipuram, Mysuru	2
453723	Product Optimization	Hyderabad, Telangana	5
532678	IOT	JP Nagar, Bengaluru	1

```
SELECT * FROM WorksOn;
```

ssn	p_no	hours
01NB235	278345	5
01NB354	426784	6
04NB234	532678	3
02NB254	241563	3
03NB653	453723	6

-- 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 p_no,p_name,name from Project p, Employee e where p.d_no=e.d_no and e.name like "%Krishna";
```

p_no	p_name	name
278345	Yeild Increase	Chandan_Krishna
453723	Product Optimization	Chandan_Krishna

-- Show the resulting salaries if every employee working on the 'IoT' project is given a 10 percent raise.

```
select w.ssn,name,salary as old_salary,salary*1.1 as new_salary from WorksOn w join Employee e where w.ssn=e.ssn and w.p_no=(select p_no from Project where p_name="IOT") ;
```

ssn	name	old_salary	new_salary
04NB234	Employee_5	1700000	1870000.0

-- 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(salary) as sal_sum, max(salary) as sal_max,min(salary) as sal_min,avg(salary) as
sal_avg
from Employee e join Department d on e.d_no=d.d_no where d.dname="Accounts";
```

sal_sum	sal_max	sal_min	sal_avg
1000000	1000000	1000000	1000000.0000

-- Retrieve the name of each employee who works on all the projects controlled by department number 1 (use NOT EXISTS operator).

```
select Employee.ssn,name,d_no from Employee where not exists
(select p_no from Project p where p.d_no=1 and p_no not in
(select p_no from WorksOn w where w.ssn=Employee.ssn));
```

ssn	name	d_no
04NB234	Employee_5	1

-- For each department that has more than one employees, retrieve the department number and the number of its employees who are making more than Rs. 6,00,000.

```
select d.d_no, count(*) from Department d join Employee e on e.d_no=d.d_no where
salary>600000
group by d.d_no having count(*)>1;
```

d_no	count(*)
5	2

-- Create a view that shows name, dept name and location of all employees

```
create view emp_details as
select name,dname,d_loc from Employee e join Department d on e.d_no=d.d_no join
DLocation dl on
d.d_no=dl.d_no;
select * from emp_details;
```

name	dname	d_loc
Chandan_Krishna	Production	Kuvempunagar, Mysuru
Employee_2	Quality Assesment	Vijaynagar, Mysuru
Employee_3	Accounts	Mumbai, Maharashtra
Employee_4	Production	Kuvempunagar, Mysuru
Employee_5	Human Resources	Jaynagar, Bengaluru

-- Create a trigger that prevents a project from being deleted if it is currently being worked by any employee.

```
DELIMITER //
create trigger PreventDelete
before delete on Project
for each row
BEGIN
IF EXISTS (select * from WorksOn where p_no=old.p_no) THEN
signal sqlstate '45000' set message_text='This project has an employee assigned';
END IF;
END; //
DELIMITER ;
delete from Project where p_no=241563;

ERROR 1644 (45000): This project has an employee assigned
```