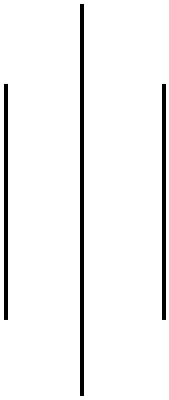
MACHNET

SQL

Assignment



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GitHub Link: https://github.com/Drt36/machnet-backend/tree/assignment4

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1.Create a database with EmployeeSystem.

```
Create database employeedb;
```

2.Create tables based on ER diagram.

```
create table department(department_id int not null primary key,name char(50) not null,description char(100))


create table employee(employee_id int not null primary key,first_name char(50) not null,last_name char(50) not null,gender char(6) not null,age int not null,email char(50) not null,designation char(50) not null,hire_date date not null,resigned_date date,address char(100),department_id int,FOREIGN KEY (department_id) REFERENCES department(department_id));


create table salary(salary_id int not null primary key,amount float not null,bonus float,employee_id int,foreign key (employee_id) references employee(employee_id));


create table project(project_id int not null primary key,name char(50) not null,description char(100));

create table work(employee_id int,project_id int,primary key(employee_id,project_id),foreign key (employee_id) references employee(employee_id),foreign key (project_id) references project(project_id));
```

3.Add 20 employees.

```
INSERT INTO employee (employee_id,first_name, last_name, gender, age, email,designation,hire_date,department_id,address)
values
(1,'Raman', 'gupta', 'Male', 35, 'Raman@gmail.com', 'Prodct Engineer','1999-5-20',1,'birgunj'),
(2,'Tommy', 'gupta', 'male', 24, 'Tommy@gmail.com', 'Mechanical Engineer','2012-6-20',1,'birgunj'),
(3,'Kome', 'panday', 'female',28, 'Kome@gmail.com', 'Sales manager','2021-7-20',3,'pokhara'),
(4,'madhan', 'panday', 'male',21, 'madhan@gmail.com', 'Software Engineer','2021-8-20',1,'birgunj'),
```

(5,'sumit', 'gupta', 'male',25, 'sumit@gmail.com', 'digital marketer','2000-08-30',2,'jaipur'),
(6,'tome', 'gupta', 'male',21, 'tome@gmail.com', 'HR Manager','2015-11-20',4,'jaipur'),
(7,'rame', 'gupta', 'female',23, 'rame@gmail.com', 'Jr. HR manager','2018-6-14',4,'birgunj'),
(8,'Ramaner', 'gupta', 'male',23, 'Ramaner@gmail.com', 'Sr. Software Engineer','2001-2-20',1,'birgunj'),
(9,'rose', 'gupta', 'female',29, 'rose@gmail.com', 'Finance Manager','2000-08-30',5,'birgunj'),
(10,'raxi', 'gupta', 'male',26, 'raxi@gmail.com', 'Sales Manger','1995-9-20',3,'birgunj'),
(11,'ashwarya', 'gupta', 'female',21, 'ashwarya@gmail.com', 'Manager of It','2014-6-20',1,'birgunj'),
(12,'testing', 'gupta', 'male',29, 'testing@gmail.com', 'sales person','2021-9-20',3,'birgunj'),
(13,'dummy', 'gupta', 'female',27, 'dummy535@gmail.com', 'field marketer','2021-5-20',2,'birgunj'),
(14,'ramnam', 'gupta', 'male',29, 'ramnam@gmail.com', 'HR manager ','2021-7-20',4,'birgunj'),
(15,'tommy', 'gupta', 'female',31, 'tommy@gmail.com', 'Finance head','2021-8-20',5,'birgunj'),
(16,'testing', 'gupta', 'male',32, 'dummy532@gmail.com', 'Software Engineer','2021-7-20',1,'birgunj'),
(17,'dummy', 'gupta', 'female',21, 'dummy533@gmail.com', 'Software Engineer','2021-11-14',1,'birgunj'),
(18,'rame', 'gupta', 'male',22, 'dummy534@gmail.com', 'Manger','2021-2-20',1,'bhaktapur'),
(19,'dharm', 'thanait', 'male',40, 'dhama531@gmail.com', 'Software Engineer','1998-11-14',1,'birgunj'),
(20,'rame', 'gupta', 'male',21, 'rame546531@gmail.com', 'Manger','2021-2-20',1,'bhaktapur');

4.Add the salary of each employee.

INSERT INTO salary (salary_id,amount,employee_id)
values
(1,15000,1),
(2,25000,2),
(3,15000,3),
(4,35000,4),
(5,55000,5),
(6,25000,6),

```
(7,15000,7),
(8,25000,8),
(9,15000,9),
(10,35000,10),
(11,55000,11),
(12,25000,12),
(13,15000,13),
(14,25000,14),
(15,15000,15),
(16,35000,16),
(17,55000,17),
(18,25000,18),
(19,55000,19),
(20,25000,20);
```

5.Add departments with employees working in it.

```
insert into department values (1,'Engineering','engineering related
work'),(2,'Marketing','marketing related work'),(3,'Sales','sales related work'),(4,'HR','HR
related work'),(5,'Finance','finance related work');
```

6.Add 7 projects.

```
INSERT INTO project(project_id,name,description)
values
(1,'taba pay','payment related work'),
(2,'sajilo shopping','ecommerce project'),
(3,'TMS',3),
(4,'School Management Software',NULL),
(5,'Smart Indentity Card','To take attendence in smart way'),
(6,'VR ecommerce',NULL),
(7,'recommendation engine','to recommend related stuffs');
```

7.Move 3 employees to another department(any).

```
UPDATE employee
SET department_id=2
WHERE employee_id in(1,2,3);
```

8.Add resigned date for 2 employee.

```
UPDATE employee
SET resigned_date='2021-8-28'
WHERE employee_id in(1,2);
```

9.Show detail of employee whose first name start with ‘R’ or ‘r’.

```
select * from employee WHERE first_name like 'r%' or first_name like 'R%';
```

10.Show detail of employees who work in more than one project.

```
SELECT e.* FROM employee as e JOIN work as w ON e.employee_id =
w.employee_id GROUP BY w.employee_id HAVING COUNT(w.employee_id)>1;
```

11.Count number of employee who have less than 20000 salary.

```
SELECT COUNT(employee_id) as NumOfEmployee
FROM salary where amount<20000;
```

12.Increment salary of all employee by 10%.

```
update salary set amount=amount+(amount*0.1);
```

13.Give bonus of 10% to all employee hired before 2000-09-30.

```
UPDATE salary s
LEFT JOIN employee e
ON s.employee_id = e.employee_id
set bonus=amount*0.1
WHERE e.hire_date<'2000-09-30';
```

14.Find the average salary of each department, number of employee working on that department.

```
select e.department_id,avg(s.amount) as AverageSalary,count(e.employee_id) as
NumofEmp
FROM employee e
inner join salary s
ON e.employee_id=s.employee_id
group by e.department_id;
```

15.Select the employee from each department which has a maximum salary.

```
select e.*, max(s.amount) as max_salary
from employee as e
join salary s
on e.employee_id=s.employee_id
group by e.department_id;
```

16.Select the employee from each department which has a maximum salary without using group by clause.

```
create view empsalary as
select e.*, s.amount as salary
FROM employee e JOIN salary s
on e.employee_id = s.employee_id;


SELECT department.name AS 'department',
empsalary.first_name AS Employee,
empsalary.salary
FROM department, empsalary
WHERE department.department_id = empsalary.department_id
AND empsalary.salary =
(SELECT MAX(empsalary.salary)
FROM empsalary WHERE empsalary.department_id = department.department_id);
```

17.Check what happens when you want to delete an employee who have resigned; What needs to be done to delete?

Error: "Cannot delete or update a parent row: a foreign key constraint fails"

Action: delete employee from salary then delete from employee