For Project Management System:

CREATE DATABASE project\_management\_system;

For Employee Table:

1. CREATE TABLE employee ( EmployeeID INT AUTO\_INCREMENT PRIMARY KEY,    Employee\_Name VARCHAR(50), Email\_Id VARCHAR(50), Monthly\_logged\_hours INT);
2. INSERT INTO employee (EmployeeID, Employee\_Name, Email\_Id, Monthly\_logged\_hours) VALUES ('2','Ram Sharma','r.sharma@gmail.com','20');
3. INSERT INTO employee (EmployeeID, Employee\_Name, Email\_Id, Monthly\_logged\_hours) VALUES ('2','Roy Mishra','r.mishra@gmail.com','15');
4. INSERT INTO employee (EmployeeID, Employee\_Name, Email\_Id, Monthly\_logged\_hours) VALUES ('3','Vani Kapoor','v.kapoor@gmail.com','10');
5. INSERT INTO employee (EmployeeID, Employee\_Name, Email\_Id, Monthly\_logged\_hours) VALUES ('4','Neerja Khan','n.khan@gmail.com','10');
6. INSERT INTO employee (EmployeeID, Employee\_Name, Email\_Id, Monthly\_logged\_hours) VALUES ('5','Simran Rai','s.rai@gmail.com','20');

For Project table:

1. CREATE TABLE Project ( ProjectID INT AUTO\_INCREMENT PRIMARY KEY, Project\_Name VARCHAR(50), Project\_ETA INT, Project\_Coordinator INT,Project\_Date Date);
2. INSERT INTO PROJECT VALUES ('101','Project1','100','2','2017-05-13')
3. INSERT INTO PROJECT VALUES ('102','Project2','500','5','2017-02-02')
4. INSERT INTO PROJECT VALUES ('103','Project3','140','2','2017-01-01')
5. INSERT INTO PROJECT VALUES ('104','Project4','250','4','2017-06-20')

For Project Member table:-

1. CREATE TABLE PROJECT\_MEMBERS (Member\_Id INT AUTO\_INCREMENT PRIMARY KEY , ProjectID INT NOT NUll, EmployeeID INT NOT NULL,FOREIGN KEY fk\_project(ProjectID) REFERENCES project(ProjectID), FOREIGN KEY fk\_employee(EmployeeID) REFERENCES employee(EmployeeID));
2. INSERT INTO `project\_members`(`Member\_Id`, `ProjectID`, `EmployeeID`) VALUES ('1','101','4')
3. INSERT INTO `project\_members`(`Member\_Id`, `ProjectID`, `EmployeeID`) VALUES ('2','102','1')
4. INSERT INTO `project\_members`(`Member\_Id`, `ProjectID`, `EmployeeID`) VALUES (‘3’,’103’,’5’)
5. INSERT INTO `project\_members`(`Member\_Id`, `ProjectID`, `EmployeeID`) VALUES (‘4’,’101’,’1’)
6. INSERT INTO `project\_members`(`Member\_Id`, `ProjectID`, `EmployeeID`) VALUES (‘5’,’103’,3)
7. INSERT INTO `project\_members`(`Member\_Id`, `ProjectID`, `EmployeeID`) VALUES (‘6’,’101’,’3’)
8. INSERT INTO `project\_members`(`Member\_Id`, `ProjectID`, `EmployeeID`) VALUES (‘7’,’102’,’4’)

For Project Forecast:-

1. CREATE TABLE project\_forecast (Forecast\_Id INT AUTO\_INCREMENT PRIMARY KEY, Member\_Id INT NOT NUll, Forecast\_hours DECIMAL (11,2), Forecast\_monday DATE, FOREIGN KEY fk\_memb(Member\_Id) REFERENCES project\_members(Member\_Id))
2. INSERT INTO `project\_forecast`(`Forecast\_Id`, `Member\_Id`, `Forecast\_hours`, `Forecast\_monday`) VALUES ('1','2','10','2017-02-06')
3. INSERT INTO `project\_forecast`(`Forecast\_Id`, `Member\_Id`, `Forecast\_hours`, `Forecast\_monday`) VALUES ('2','2','40','2017-02-20')
4. INSERT INTO `project\_forecast`(`Forecast\_Id`, `Member\_Id`, `Forecast\_hours`, `Forecast\_monday`) VALUES ('3','1','25','2017-05-15')

For Employee Work Log:-

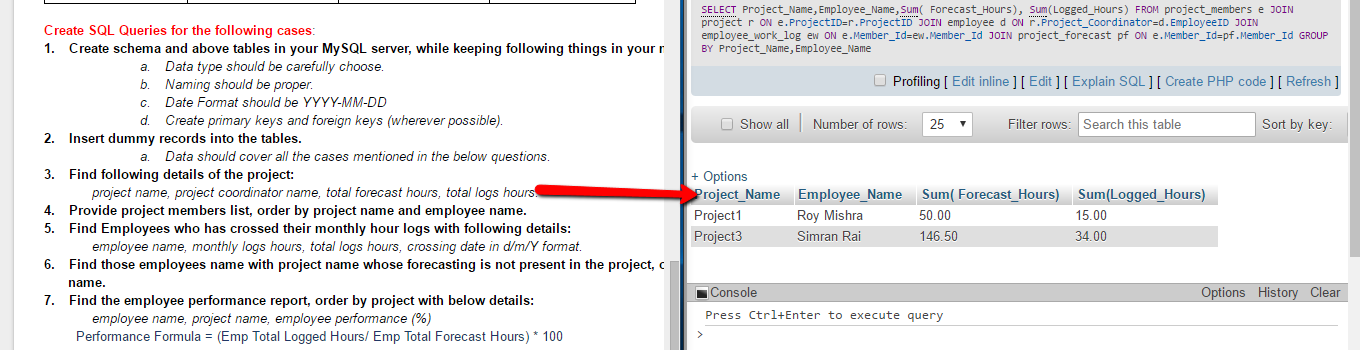
1. CREATE TABLE employee\_work\_log (log\_Id INT AUTO\_INCREMENT PRIMARY KEY, Member\_Id INT NOT NULL, logged\_hours DECIMAL (11,2), log\_date DATE, FOREIGN KEY fk\_me(Member\_Id) REFERENCES project\_members(Member\_Id))
2. INSERT INTO `employee\_work\_log`(`log\_Id`, `Member\_Id`, `logged\_hours`, `log\_date`) VALUES ('1','2','5.5','2017-02-07')
3. INSERT INTO `employee\_work\_log`(`log\_Id`, `Member\_Id`, `logged\_hours`, `log\_date`) VALUES ('2','7','7','2017-02-13')
4. INSERT INTO `employee\_work\_log`(`log\_Id`, `Member\_Id`, `logged\_hours`, `log\_date`) VALUES ('3','2','4','2017-02-10')
5. INSERT INTO `employee\_work\_log`(`log\_Id`, `Member\_Id`, `logged\_hours`, `log\_date`) VALUES ('4','7','5','2017-02-14')
6. INSERT INTO `employee\_work\_log`(`log\_Id`, `Member\_Id`, `logged\_hours`, `log\_date`) VALUES ('5','1','8','2017-05-16')
7. INSERT INTO `employee\_work\_log`(`log\_Id`, `Member\_Id`, `logged\_hours`, `log\_date`) VALUES ('6','7','3','2017-02-15')
8. INSERT INTO `employee\_work\_log`(`log\_Id`, `Member\_Id`, `logged\_hours`, `log\_date`) VALUES ('7','1','7','2017-05-17')

Q 1. **Find following details of the project:**

***project name, project coordinator name, total forecast hours, total logs hours.***

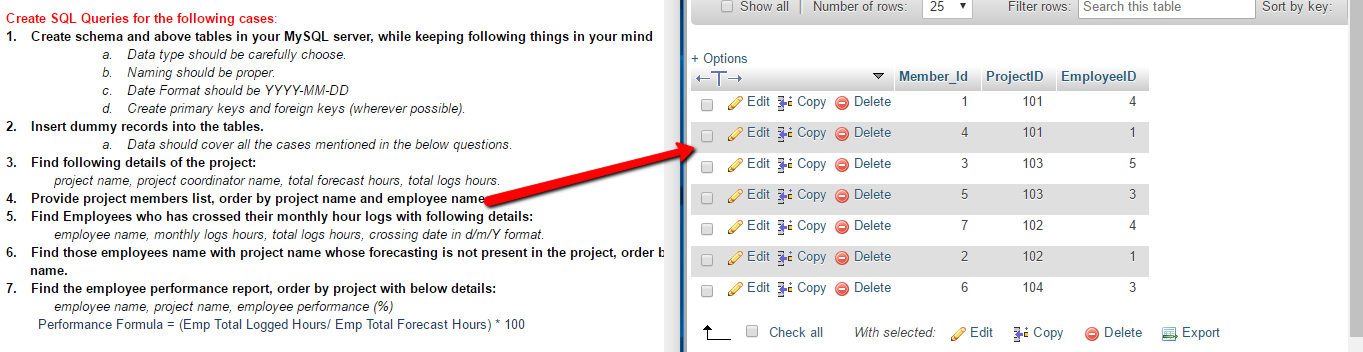
**Ans.** SELECT Project\_Name,Employee\_Name,Sum( Forecast\_Hours), Sum(Logged\_Hours) FROM project\_members e JOIN project r ON e.ProjectID=r.ProjectID JOIN employee d ON r.Project\_Coordinator=d.EmployeeID JOIN employee\_work\_log ew ON e.Member\_Id=ew.Member\_Id JOIN project\_forecast pf ON e.Member\_Id=pf.Member\_Id GROUP BY

Project\_Name,Employee\_Name;

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Q 2.  **Provide project members list, order by project name and employee name.**

**Ans.** SELECT e.\* FROM project\_members e LEFT JOIN project r ON e.ProjectID=r.ProjectID LEFT JOIN employee d ON e.EmployeeID=d.EmployeeID ORDER BY Project\_Name, Employee\_Name;



Q3.  **Find Employees who has crossed their monthly hour logs with following details:**

*employee name, monthly logs hours, total logs hours, crossing date in d/m/Y format.*

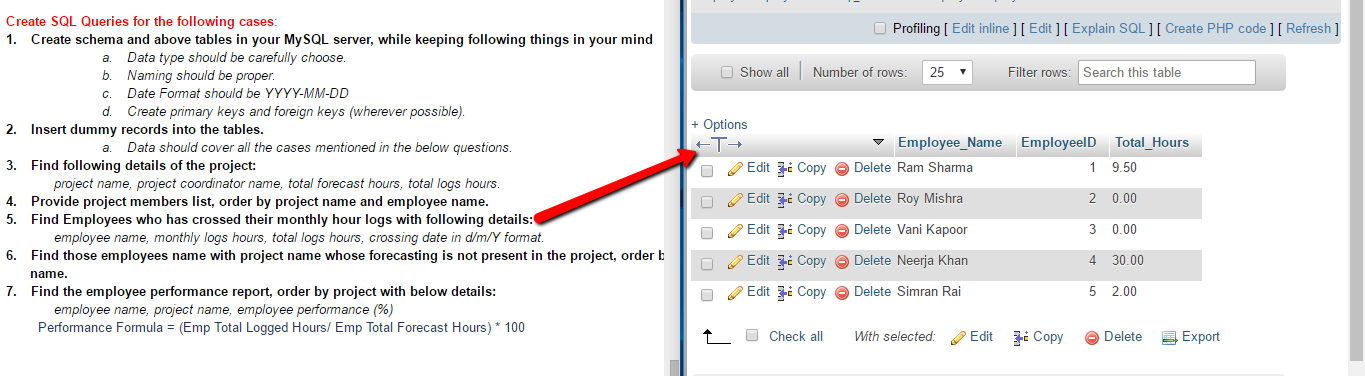
Ans.

SELECT employee.Employee\_Name,employee.EmployeeID, SUM(ifnull(worked,0)) as Total\_Hours FROM employee

left JOIN

(SELECT employee\_work\_log.Member\_Id ,SUM(employee\_work\_log.logged\_hours) as worked, project\_members.EmployeeID as emp\_id FROM employee\_work\_log,project\_members WHERE employee\_work\_log.Member\_Id=project\_members.Member\_Id GROUP BY employee\_work\_log.Member\_Id) t1

ON employee.EmployeeID=t1.emp\_id GROUP BY employee.EmployeeID



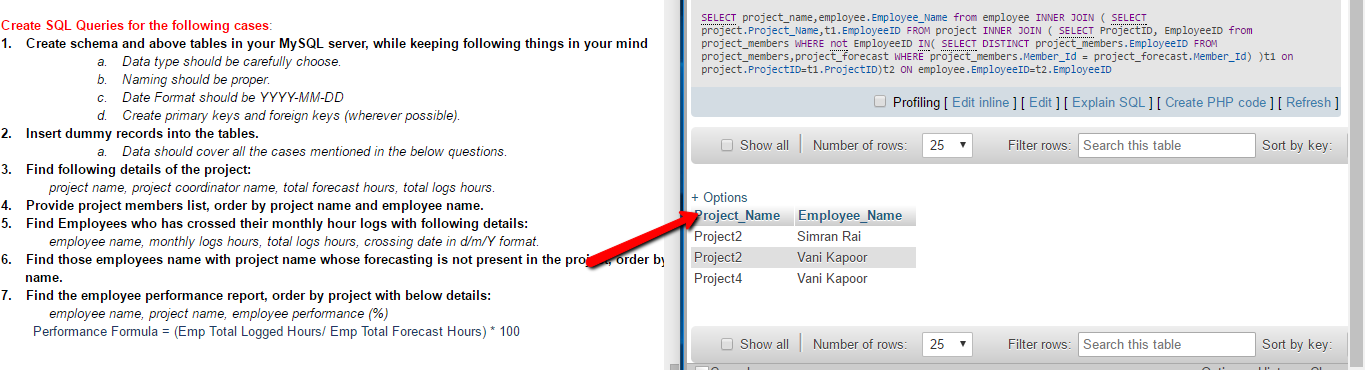
Q4. **Find those employees name with project name whose forecasting is not present in the project, order by project name.**

**Ans.** SELECT project\_name,employee.Employee\_Name from employee INNER JOIN (

SELECT project.Project\_Name,t1.EmployeeID FROM project INNER JOIN (

SELECT ProjectID, EmployeeID from project\_members WHERE not EmployeeID IN(

SELECT DISTINCT project\_members.EmployeeID FROM project\_members,project\_forecast WHERE project\_members.Member\_Id = project\_forecast.Member\_Id) )t1 on project.ProjectID=t1.ProjectID)t2 ON employee.EmployeeID=t2.EmployeeID;



Q5.  **Find the employee performance report, order by project with below details:**

*employee name, project name, employee performance (%)*

SELECT DISTINCT employee.Employee\_Name,ProjectID,Performance FROM employee INNER JOIN (

SELECT project\_members.EmployeeID,project\_members.ProjectID ,Performance FROM project\_members INNER JOIN (

(SELECT t1.Member\_Id, ((t1.Total\_work/t2.forecast\_hours)\*100) as Performance FROM

(SELECT project\_members.Member\_Id, SUM(employee\_work\_log.logged\_hours) as Total\_work from project\_members,employee\_work\_log WHERE project\_members.Member\_Id=employee\_work\_log.Member\_Id GROUP BY project\_members.Member\_Id) t1

INNER JOIN

((SELECT project\_forecast.Member\_Id ,SUM(forecast\_hours) as forecast\_hours from project\_forecast,project\_members WHERE project\_forecast.Member\_Id= project\_members.Member\_Id GROUP BY Member\_Id) t2) on t1.Member\_Id=t2.Member\_Id)) t3 ON project\_members.Member\_Id=t3.Member\_Id) t4

