# **Assignment 4**

**Question 1**

Create a database with EmployeeSystem.

Answer:

CREATE DATABASE "EmployeeSystem"

**Question 2**

Create tables based on ER diagram.

Answer:

CREATE TABLE Department(

Dept\_id INT NOT NULL PRIMARY KEY,

Name CHAR(50) NOT NULL,

Description CHAR(100));

CREATE TABLE Employee (

Emp\_id INT NOT NULL PRIMARY KEY,

Fname CHAR(50) NOT NULL,

Lname 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,

Resign\_date DATE,

Address CHAR(100),

Dept\_id INT,

FOREIGN KEY (Dept\_id)

REFERENCES Department(Dept\_id));

CREATE TABLE Salary(

Sal\_id INT NOT NULL PRIMARY KEY,

Issue\_date DATE NOT NULL,

Amount float NOT NULL,

Bonus float,

Emp\_id INT,

FOREIGN KEY (Emp\_id)

REFERENCES Employee(Emp\_id));

CREATE TABLE Project(

Proj\_id INT NOT NULL PRIMARY KEY,

Name CHAR(50) NOT NULL,

Description CHAR(100));

CREATE TABLE Assignment(

Emp\_id INT,

Proj\_id INT,

PRIMARY KEY(Emp\_id, Proj\_id),

FOREIGN KEY (Emp\_id)

REFERENCES Employee(Emp\_id),

FOREIGN KEY (Proj\_id)

REFERENCES Project(Proj\_id));

**Question 3**

Add 20 employees.

Answer:

INSERT INTO Employee

(Emp\_id,Fname,Lname,Gender,Age,EmaiL,Designation,Hire\_date,Address,Dept\_id)

VALUES

(1,’Yukiko’,’Saling’,’Female’,25,’ys@gmail.com’,’Sr.Dev’,’1999-10-25’,’California’,1),

(2,’Precious’,’Forest’,’Female’,25,’pf@gmail.com’,’Mobie Dev’,’1999-10-26’,’New York’,1),

(3,’Pat’,’Maple’,’Male’,25,’pm@gmail.com’,’S.Engineer’,’2000-10-25’,’Los Angles’,1),

(4,’Ervin’,’Crail’,’Male’,23,’ec@gmail.com’,’Dev’, ’2000-10-25’,’Bhaktapur’,1),

(5,’Deb’,’Andrada’,’Female’,25,’da@gmail.com’,’Manager’, ’2000-10-25’,’Kathmandu’,2),

(6,’Hipo’,’Flem’,’Male’,21,’hf@gmail.com’,’Jr.Dev’, ’2000-10-25’,’Lalitpur’,1),

(7,’Jamee’,’Dublin’,’Female’,21,’df@gmail.com’,’Jr.Dev’, ’2000-10-25’,’Canberra’,1),

(8,’Ross’,’Gloria’,’Male’,20,’rg@gmail.com’,’Jr.Dev’, ’2015-10-25’,’Moscow’,1),

(9,’Asuna’,’Bell’,’Female’,20,’ab@gmail.com’,’QA Dev’, ’2000-10-25’,’Tokyo’,1),

(10,’Alla’,’Ling’,’Female’,23,’al@gmail.com’,’Product Manager’, ’2000-10-25’,’Seoul’,2),

(11,’Josette’,’Saling’,’Female’,25,’ys1@gmail.com’,’Sr.Dev’, ’2000-10-25’,’California’,1),

(12,’Jannette’,’Forest’,’Female’,25,’pf2@gmail.com’,’Mobie Dev’, ’2000-10-25’,’New York’,1),

(13,’Tyler’,’Maple’,’Male’,25,’pm3@gmail.com’,’S.Engineer’, ’2000-10-25’,’Los Angles’,1),

(14,’Alex’,’Crail’,’Male’,23,’ec4@gmail.com’,’Dev’, ’2000-10-25’,’Bhaktapur’,1),

(15,’Ruby’,’Matthews’,’Female’,25,’da2@gmail.com’,’Manager’, ’2000-10-25’,’Kathmandu’,2),

(16,’Axle’,’Flem’,’Male’,21,’hf3@gmail.com’,’Jr.Dev’, ’2011-10-25’,’Lalitpur’,1),

(17,’Jamee’,’Roswald’,’Female’,21,’df4@gmail.com’,’Jr.Dev’, ’2000-10-25’,’Canberra’,1),

(18,’Ross’,’Blevn’,’Male’,20,’rg5@gmail.com’,’Jr.Dev’, ’2000-10-25’,’Moscow’,1),

(19,’Kirity’,’Bell’,’Female’,20,’ab6@gmail.com’,’QA Dev’, ’2000-10-25’,’Tokyo’,1),

(20,’Alla’,’Knox’,’Female’,23,’al7@gmail.com’,’Product Manager’, ’2000-10-25’,’Seoul’,2);

**Question 4**

Add the salary of each employee.

Answer:

INSERT INTO Salary

(Sal\_id,Issue\_date,Amount,Bonus,Emp\_id)

VALUES

(1,’1999-10-25’,18000,7000,1),

(2,’2000-9-22’,20000,10000,2)**,**

(3,’2001-11-21’,22000,7000,3)**,**

(4,’2001-12-12’,25000,10000,4)**,**

(5,’2002-09-01’,28000,7000,5)**,**

(6,’2002-09-13’,30000,5000,6)**,**

(7,’2003-01-25’,32000,7000,7)**,**

(8,’2003-04-17’,35000,8000,8)**,**

(9,’2003-07-09’,38000,10000,9)**,**

(10,’2004-03-25’,38000,8000,10)**,**

(11,’2005-02-25’,35000,9000,11)**,**

(12,’2006-09-27’,30000,10000,12)**,**

(13,’2006-12-01’,21000,11000,13)**,**

(14,’2007-05-25’,31000,8000,14)**,**

(15,’2007-09-16’,25000,7000,15)**,**

(16,’2008-06-28’,40000,6000,16)**,**

(17,’2008-09-02’,50000,5000,17)**,**

(18,’2009-08-29’,60000,7000,18)**,**

(19,’2009-09-11’,55000,9000,19)**,**

(20,’2009-10-02’,60000,10000,20)**;**

**Question 5**

Add departments with employees working in it.

Answer:

INSERT INTO Department

(Dept\_id, Name, Description)

VALUES

(1, ‘IT’, ‘Deals with the creating projects related to websites’),

(2, ‘HR’, ‘Deals with the recruiting and managing new employees’);

**Question 6**

Add 7 projects.

Answer:

INSERT INTO Project

(Proj\_id, Name, Description)

VALUES

(1, ‘Qfx’, ‘An app to book movie shows.’),

(2, ‘Pathao’, ‘An app to book bikes for transport’),

(3, ‘Meet’, ‘Online meeting platform’),

(4, ‘CodeAcademy’, ‘Online learning platform’),

(5, ‘Khalti’, ‘Online payment Application’),

(6, ‘Intern’, ‘Project to recruit intern’),

(7, ‘Instagram’, ‘Socal Media Application’);

**Question 7**

Move 3 employees to another department(any).

Answer:

UPDATE Employee SET dept\_id = 2 WHERE Emp\_id IN (1,2,3);

**Question 8**

Add resigned date for 2 employee.

Answer:

UPDATE Employee SET Resign\_date = ’28-Sep-2021’ WHERE Emp\_id IN (1,2);

**Question 9**

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

Answer:

SELECT \* FROM Employee WHERE Fname LIKE ‘r%’ OR Fname LIKE ‘R%’;

**Question 10**

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

Answer:

SELECT Employee.\*, COUNT(a.Emp\_id) FROM Employee

JOIN

Assignment AS a ON

Employee.Emp\_id = a.Emp\_id

GROUP BY a.Emp\_id HAVING COUNT(a.Emp\_id)>1;

**Question 11**

Count number of employee who have less than 20000 salary.

Answer:

SELECT COUNT(Emp\_id) as Employees FROM Salary WHERE Amount<20000;

**Question 12**

Increment salary of all employee by 10%.

Answer:

UPDATE Salary SET amount=amount+(amount\*0.1);

**Question 13**

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

Answer:

UPDATE Salary

LEFT JOIN Employee ON

Salary.Emp\_id = Employee.Emp\_id

SET Bonus = Bonus + (Bonus\*(0.1));

**Question 14**

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

Answer:

SELECT Employee.Dept\_id, AVG(Salary.Amount) AS AverageSalary, COUNT(Employee.Emp\_id) AS Employees

FROM Employee INNER JOIN Salary ON

Employee.Emp\_id = Salary.Emp\_id

GROUP BY Employee.Dept\_id;

**Question 15**

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

Answer:

SELECT e.Dept\_id, MAX(s.amount) AS MaxSalary FROM Employee e JOIN Salary s ON

e.Emp\_id = s.Emp\_id

GROUP BY e.Dept\_id;

**Question 16**

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

Answer:

CREATE VIEW EmployeeSalary AS

SELECT Employee.\*, Salary.Amount AS Salary

FROM Employee JOIN Salary

ON Employee.Emp.id = Salary.Emp\_id;

SELECT Department.Name AS Department, EmployeeSalary.Fname AS Employee, EmployeeSalary.Salary

FROM Department, EmployeeSalary

WHERE Department.Dept\_id = EmployeeSalary.Dept\_id

AND EmployeeSalary.Salary = (SELECT MAX(EmployeeSalary.Salary) FROM EmployeeSalary WHERE EmployeeSalary.Dept\_id = Department.Dept\_id);

**Question 17**

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

Answer:

When we want to delete an employee who have resigned we are prompted with an ERROR 1451 which states that the data couldn’t be deleted or updated because that employee has it data located in another table as a foreign key. So to delete the employee data firstly the employee’s data in the salary table should be removed and then we can delete the employee data from Employee table without any error.