**Task 4 – HR Management Application**

CREATE DATABASE Hr\_Management;

USE Hr\_Management;

**Create the Tables –**

**Departments Table –**

CREATE TABLE Departments (

DepartmentID INT PRIMARY KEY,

DepartmentName VARCHAR(50),

ManagerID INT

);

**Employees Table –**

CREATE TABLE Employees (

EmployeeID INT PRIMARY KEY,

FirstName VARCHAR(50),

LastName VARCHAR(50),

Email VARCHAR(100),

Phone VARCHAR(15),

HireDate DATE,

DepartmentID INT,

ManagerID INT,

Salary DECIMAL(10, 2),

FOREIGN KEY (DepartmentID) REFERENCES Departments(DepartmentID),

FOREIGN KEY (ManagerID) REFERENCES Employees(EmployeeID)

);

**Performance Reviews Table –**

CREATE TABLE PerformanceReviews (

ReviewID INT PRIMARY KEY,

EmployeeID INT,

ReviewDate DATE,

PerformanceScore VARCHAR(20),

Comments TEXT,

FOREIGN KEY (EmployeeID) REFERENCES Employees(EmployeeID) );

**Payroll Table –**

CREATE TABLE Payroll (

PayrollID INT PRIMARY KEY,

EmployeeID INT,

PaymentDate DATE,

Amount DECIMAL(10, 2),

PaymentMethod VARCHAR(20),

FOREIGN KEY (EmployeeID) REFERENCES Employees(EmployeeID)

);

**Alter Department Table –**

ALTER TABLE Departments

ADD CONSTRAINT FK\_Department\_Manager

FOREIGN KEY (ManagerID) REFERENCES Employees(EmployeeID);

**Insert data in the Table –**

**Departments Table –**

INSERT INTO Departments (DepartmentID, DepartmentName, ManagerID) VALUES (1, 'HR', NULL), (2, 'IT', NULL), (3, 'Finance', NULL), (4, 'Sales', NULL), (5, 'Marketing', NULL);

**Employees Table –**

INSERT INTO Employees (EmployeeID, FirstName, LastName, Email, Phone, HireDate, DepartmentID, ManagerID, Salary) VALUES (101, 'Amit', 'Sharma', 'amit.sharma@hrm.com', '9876543210', '2022-10-15', 1, NULL, 90000), (102, 'Priya', 'Gupta', 'priya.gupta@hrm.com', '7896541230', '2021-06-12', 2, 101, 75000), (103, 'Rajesh', 'Singh', 'rajesh.singh@hrm.com', '9874561230', '2020-04-10', 3, 101, 80000), (104, 'Anjali', 'Verma', 'anjali.verma@hrm.com', '9988776655', '2023-01-20', 4, 102, 72000), (105, 'Suresh', 'Yadav', 'suresh.yadav@hrm.com', '9887766554', '2023-05-10', 5, 102, 67000), (106, 'Neha', 'Kumar', 'neha.kumar@hrm.com', '9123456789', '2022-11-30', 2, 101, 70000), (107, 'Vikram', 'Patel', 'vikram.patel@hrm.com', '9765432109', '2023-07-15', 3, NULL, 78000), (108, 'Ritu', 'Jain', 'ritu.jain@hrm.com', '9638527410', '2021-03-18', 1, 103, 85000), (109, 'Manish', 'Desai', 'manish.desai@hrm.com', '9988771234', '2023-06-05', 4, 104, 74000), (110, 'Meera', 'Nair', 'meera.nair@hrm.com', '9876512345', '2023-09-01', 5, 105, 60000);

**Departments Table –**

UPDATE departments

SET ManagerID = 101

WHERE DepartmentID =1;

UPDATE departments

SET ManagerID = 102

WHERE DepartmentID =2;

UPDATE departments

SET ManagerID = 103

WHERE DepartmentID =3;

UPDATE departments

SET ManagerID = 104

WHERE DepartmentID =4;

UPDATE departments

SET ManagerID = 105

WHERE DepartmentID =5;

**PerformanceReviews Table -**

INSERT INTO PerformanceReviews (ReviewID, EmployeeID, ReviewDate, PerformanceScore, Comments) VALUES (1, 101, '2023-01-15', 'Excellent', 'Great leadership skills.'), (2, 102, '2023-02-10', 'Good', 'Solid team player.'), (3, 103, '2023-03-05', 'Average', 'Needs improvement in deadlines.'), (4, 104, '2023-04-25', 'Good', 'Consistent performance.'), (5, 105, '2023-05-30', 'Excellent', 'Outstanding innovation.'), (6, 106, '2023-06-15', 'Poor', 'Frequent absences.'), (7, 107, '2023-07-20', 'Excellent', 'High technical skills.'), (8, 108, '2023-08-10', 'Good', 'Effective communicator.'), (9, 109, '2023-09-05', 'Good', 'Strong sales achievements.'), (10, 110, '2023-10-01', 'Average', 'Moderate contribution.');

**Payroll Table –**

INSERT INTO Payroll (PayrollID, EmployeeID, PaymentDate, Amount, PaymentMethod) VALUES (1, 101, '2023-01-31', 90000, 'Bank Transfer'), (2, 102, '2023-01-31', 75000, 'Bank Transfer'), (3, 103, '2023-01-31', 80000, 'Check'), (4, 104, '2023-02-28', 72000, 'Bank Transfer'), (5, 105, '2023-02-28', 67000, 'Bank Transfer'), (6, 106, '2023-03-31', 70000, 'Check'), (7, 107, '2023-03-31', 78000, 'Bank Transfer'), (8, 108, '2023-04-30', 85000, 'Bank Transfer'), (9, 109, '2023-04-30', 74000, 'Check'), (10, 110, '2023-05-31', 60000, 'Bank Transfer');

**Assignment Queries**

1. **Retrieve the names and contact details of employees hired after January 1, 2023.**

SELECT FirstName, LastName, Email, Phone FROM Employees WHERE HireDate > '2023-01-01';

1. **Find the total payroll amount paid to each department.**

SELECT d.DepartmentName, SUM(p.Amount) AS TotalPayroll FROM Payroll p JOIN Employees e ON p.EmployeeID = e.EmployeeID JOIN Departments d ON e.DepartmentID = d.DepartmentID GROUP BY d.DepartmentName;

1. **List all employees who have not been assigned a manager.**

SELECT FirstName, LastName FROM Employees WHERE ManagerID IS NULL;

1. **Retrieve the highest salary in each department along with the employee’s name.**

SELECT d.DepartmentName, e.FirstName, e.LastName, e.Salary FROM Employees e JOIN Departments d ON e.DepartmentID = d.DepartmentID WHERE e.Salary = ( SELECT MAX(Salary) FROM Employees WHERE DepartmentID = d.DepartmentID );

1. **Find the most recent performance review for each employee.**

SELECT e.FirstName, e.LastName, MAX(pr.ReviewDate) AS RecentReviewDate FROM PerformanceReviews pr JOIN Employees e ON pr.EmployeeID = e.EmployeeID GROUP BY e.EmployeeID, e.FirstName, e.LastName;

1. **Count the number of employees in each department.**

SELECT d.DepartmentName, COUNT(e.EmployeeID) AS EmployeeCount FROM Employees e JOIN Departments d ON e.DepartmentID = d.DepartmentID GROUP BY d.DepartmentName;

1. **List all employees who have received a performance score of "Excellent." Identify the most frequently used payment method in payroll.**

**Employees with "Excellent" performance:**

SELECT e.FirstName, e.LastName FROM Employees e JOIN PerformanceReviews pr ON e.EmployeeID = pr.EmployeeID WHERE pr.PerformanceScore = 'Excellent';

**Most frequently used payment method :**

SELECT PaymentMethod, COUNT(\*) AS UsageCount FROM Payroll GROUP BY PaymentMethod ORDER BY UsageCount DESC LIMIT 1;

1. **Retrieve the top 5 highest-paid employees along with their departments.**

SELECT e.FirstName, e.LastName, d.DepartmentName, e.Salary FROM Employees e JOIN Departments d ON e.DepartmentID = d.DepartmentID ORDER BY e.Salary DESC LIMIT 5;

**9. Showdetails of all employees who report directly to a specific manager (e.g., ManagerID = 101)**

SELECT FirstName, LastName, Email, Phone FROM Employees WHERE ManagerID = 101;