1)Create database hrms;

2) CREATE TABLE Departments (

DepartmentID INTEGER PRIMARY KEY,

DepartmentName Text(100),

ManagerID INTEGER

);

3) CREATE TABLE Employees (

EmployeeID INTEGERPRIMARY KEY,

FirstName Text(100),

LastName Text(100),

Email Text(100),

Phone Text(20),

HireDate DATE,

DepartmentID INTEGER,

ManagerID INTEGER,

Salary DECIMAL(10, 2),

FOREIGN KEY (DepartmentID) REFERENCES Departments(DepartmentID),

FOREIGN KEY (ManagerID) REFERENCES Employees(EmployeeID)

);

4) CREATE TABLE PerformanceReviews (

ReviewID INTEGER PRIMARY KEY,

EmployeeID INTEGER,

ReviewDate DATE,

PerformanceScore Text(20),

Comments TEXT,

FOREIGN KEY (EmployeeID) REFERENCES Employees(EmployeeID)

);

5) CREATE TABLE Payroll (

PayrollID INT PRIMARY KEY,

EmployeeID INT,

PaymentDate DATE,

Amount DECIMAL(10, 2),

PaymentMethod VARCHAR(50),

FOREIGN KEY (EmployeeID) REFERENCES Employees(EmployeeID)

);

1) INSERT INTO Departments (DepartmentID, DepartmentName, ManagerID) VALUES

(1, 'HR', 101),

(2, 'IT', 102),

(3, 'Finance', 103),

(4, 'Sales', 104),

(5, 'Marketing', 105),

(6, 'Operations', 106),

(7, 'Customer Service', 107),

(8, 'R&D', 108),

(9, 'Legal', 109),

(10, 'Product Management', 110);

2) INSERT INTO Employees (EmployeeID, FirstName, LastName, Email, Phone, HireDate, DepartmentID, ManagerID, Salary) VALUES

(101, 'John', 'Doe', 'johndoe@example.com', '555-1234', '2022-03-01', 1, NULL, 60000),

(102, 'Jane', 'Smith', 'janesmith@example.com', '555-5678', '2021-07-15', 2, NULL, 75000),

(103, 'Michael', 'Johnson', 'michaelj@example.com', '555-9101', '2023-05-01', 3, NULL, 85000),

(104, 'Emily', 'Davis', 'emilydavis@example.com', '555-1122', '2020-06-10', 4, NULL, 50000),

(105, 'Sarah', 'Lee', 'sarahlee@example.com', '555-1313', '2021-10-05', 5, 101, 70000),

(106, 'David', 'White', 'davidwhite@example.com', '555-1414', '2019-01-20', 6, 102, 90000),

(107, 'Daniel', 'Martinez', 'danielm@example.com', '555-1515', '2020-08-22', 7, 103, 62000),

(108, 'Laura', 'Garcia', 'laurag@example.com', '555-1616', '2022-12-03', 8, 104, 95000),

(109, 'Daniel', 'Taylor', 'danieltaylor@example.com', '555-1717', '2018-04-12', 9, 105, 110000),

(110, 'Sophia', 'Miller', 'sophiamiller@example.com', '555-1818', '2021-03-05', 10, 106, 115000);

3) INSERT INTO PerformanceReviews (ReviewID, EmployeeID, ReviewDate, PerformanceScore, Comments) VALUES

(1, 101, '2023-04-01', 'Excellent', 'Exceeded all expectations'),

(2, 102, '2023-03-15', 'Good', 'Good performance but room for improvement'),

(3, 103, '2023-02-20', 'Excellent', 'Great leadership skills shown'),

(4, 104, '2022-12-12', 'Poor', 'Needs improvement in communication skills'),

(5, 105, '2023-01-30', 'Average', 'Good effort but needs more consistency'),

(6, 106, '2023-03-02', 'Good', 'Good technical skills but lacking in teamwork'),

(7, 107, '2023-04-05', 'Excellent', 'Strong problem-solving skills'),

(8, 108, '2023-03-01', 'Excellent', 'Innovation and creativity shine'),

(9, 109, '2022-10-10', 'Good', 'Good strategic thinking'),

(10, 110, '2023-02-10', 'Average', 'Consistent but needs to show more initiative');

4) INSERT INTO Payroll (PayrollID, EmployeeID, PaymentDate, Amount, PaymentMethod) VALUES

(1, 101, '2023-03-31', 6000, 'Bank Transfer'),

(2, 102, '2023-03-31', 7500, 'Check'),

(3, 103, '2023-03-31', 8500, 'Bank Transfer'),

(4, 104, '2023-03-31', 5000, 'Bank Transfer'),

(5, 105, '2023-03-31', 7000, 'Check'),

(6, 106, '2023-03-31', 9000, 'Bank Transfer'),

(7, 107, '2023-03-31', 6200, 'Bank Transfer'),

(8, 108, '2023-03-31', 9500, 'Check'),

(9, 109, '2023-03-31', 11000, 'Bank Transfer'),

(10, 110, '2023-03-31', 11500, 'Bank Transfer');

Sql 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';

2.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;

3.List all employees who have not been assigned a manager.

SELECT FirstName, LastName

FROM Employees

WHERE ManagerID IS NULL;

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

SELECT e.DepartmentID, e.FirstName, e.LastName, e.Salary

FROM Employees e

WHERE e.Salary = (SELECT MAX(Salary) FROM Employees WHERE DepartmentID = e.DepartmentID);

5.Find the most recent performance review for each employee.

SELECT e.EmployeeID, e.FirstName, e.LastName, pr.ReviewDate, pr.PerformanceScore

FROM PerformanceReviews pr

JOIN Employees e ON pr.EmployeeID = e.EmployeeID

WHERE pr.ReviewDate = (SELECT MAX(ReviewDate) FROM PerformanceReviews WHERE EmployeeID = e.EmployeeID);

6.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;

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

-- Employees with "Excellent" score

SELECT e.FirstName, e.LastName, pr.PerformanceScore

FROM PerformanceReviews pr

JOIN Employees e ON pr.EmployeeID = e.EmployeeID

WHERE pr.PerformanceScore = 'Excellent';

-- Most frequent payment method

SELECT PaymentMethod, COUNT(\*) AS MethodCount

FROM Payroll

GROUP BY PaymentMethod

ORDER BY MethodCount DESC

LIMIT 1;

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

SELECT e.FirstName, e.LastName, e.Salary, d.DepartmentName

FROM Employees e

JOIN Departments d ON e.DepartmentID = d.DepartmentID

ORDER BY e.Salary DESC

LIMIT 5;

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

SELECT e.FirstName, e.LastName, e.Email, e.Phone, e.Salary

FROM Employees e

WHERE e.ManagerID = 101;