Employee Database

# Schema Overview

1. **Employees Table:**
   * PK: EmployeeID
2. **Departments Table:**
   * PK: DepartmentID
3. **Positions Table:**
   * PK: PositionID
4. **Salaries Table:**
   * PK: SalaryID
   * FK: EmployeeID (references Employees.EmployeeID)
5. **Skills Table:**
   * PK: SkillID
6. **EmployeeSkills Table (to represent the many-to-many relationship between employees and skills):**
   * PK: EmployeeSkillID
   * FK: EmployeeID (references Employees.EmployeeID)
   * FK: SkillID (references Skills.SkillID)
7. **DepartmentsEmployees Table (to represent the many-to-many relationship between employees and departments):**
   * PK: DepartmentEmployeeID
   * FK: EmployeeID (references Employees.EmployeeID)
   * FK: DepartmentID (references Departments.DepartmentID)
8. **PositionsEmployees Table (to represent the many-to-many relationship between employees and positions):**
   * PK: PositionEmployeeID
   * FK: EmployeeID (references Employees.EmployeeID)
   * FK: PositionID (references Positions.PositionID)
9. **Attendance Table:**
   * PK: AttendanceID
   * FK: EmployeeID (references Employees.EmployeeID)
10. **LeaveRequests Table:**
    * PK: LeaveRequestID
    * FK: EmployeeID (references Employees.EmployeeID)
11. **PerformanceReviews Table:**
    * PK: ReviewID
    * FK: EmployeeID (references Employees.EmployeeID)
12. **TrainingPrograms Table:**
    * PK: TrainingProgramID
13. **EmployeeTraining Table (to represent the many-to-many relationship between employees and training programs):**
    * PK: EmployeeTrainingID
    * FK: EmployeeID (references Employees.EmployeeID)
    * FK: TrainingProgramID (references TrainingPrograms.TrainingProgramID)

# Table Design

1. **Employees Table:**
   1. EmployeeID (PK)
   2. FirstName
   3. LastName
   4. DateOfBirth
   5. Gender
   6. ContactNumber
   7. Email
   8. Address
   9. HireDate
   10. TerminationDate
   11. EmergencyContactName
   12. EmergencyContactNumber
   13. SupervisorID (FK referencing Employees.EmployeeID for supervisor-employee relationship)
2. **Departments Table:**
   1. DepartmentID (PK)
   2. DepartmentName
3. **Positions Table:**
   1. PositionID (PK)
   2. PositionTitle
   3. JobDescription
4. **Salaries Table:**
   1. SalaryID (PK)
   2. EmployeeID (FK referencing Employees.EmployeeID)
   3. HourlyWage
   4. EffectiveDate
5. **Skills Table:**
   1. SkillID (PK)
   2. SkillName
6. **EmployeeSkills Table:**
   1. EmployeeSkillID (PK)
   2. EmployeeID (FK referencing Employees.EmployeeID)
   3. SkillID (FK referencing Skills.SkillID)
7. **DepartmentsEmployees Table:**
   1. DepartmentEmployeeID (PK)
   2. EmployeeID (FK referencing Employees.EmployeeID)
   3. DepartmentID (FK referencing Departments.DepartmentID)
8. **PositionsEmployees Table:**
   1. PositionEmployeeID (PK)
   2. EmployeeID (FK referencing Employees.EmployeeID)
   3. PositionID (FK referencing Positions.PositionID)
9. **Attendance Table:**
   1. AttendanceID (PK)
   2. EmployeeID (FK referencing Employees.EmployeeID)
   3. AttendanceDate
   4. ClockInTime
   5. ClockOutTime
10. **LeaveRequests Table:**
    1. LeaveRequestID (PK)
    2. EmployeeID (FK referencing Employees.EmployeeID)
    3. LeaveStartDate
    4. LeaveEndDate
    5. LeaveType
    6. LeaveStatus
11. **PerformanceReviews Table:**
    1. ReviewID (PK)
    2. EmployeeID (FK referencing Employees.EmployeeID)
    3. ReviewDate
    4. ReviewerID (FK referencing Employees.EmployeeID for the reviewing supervisor)
12. **TrainingPrograms Table:**
    1. TrainingProgramID (PK)
    2. ProgramName
    3. ProgramDescription
    4. TrainingDate
    5. TrainerName
13. **EmployeeTraining Table:**
    1. EmployeeTrainingID (PK)
    2. EmployeeID (FK referencing Employees.EmployeeID)
    3. TrainingProgramID (FK referencing TrainingPrograms.TrainingProgramID)

# CREATE TABLE

-- Employees Table

CREATE TABLE Employees (

EmployeeID INT PRIMARY KEY,

FirstName VARCHAR(50),

LastName VARCHAR(50),

DateOfBirth DATE,

Gender CHAR(1),

ContactNumber VARCHAR(15),

Email VARCHAR(100),

Address VARCHAR(255),

HireDate DATE,

TerminationDate DATE,

EmergencyContactName VARCHAR(100),

EmergencyContactNumber VARCHAR(15),

SupervisorID INT REFERENCES Employees(EmployeeID)

);

-- Departments Table

CREATE TABLE Departments (

DepartmentID INT PRIMARY KEY,

DepartmentName VARCHAR(50)

);

-- Positions Table

CREATE TABLE Positions (

PositionID INT PRIMARY KEY,

PositionTitle VARCHAR(50),

JobDescription TEXT

);

-- Salaries Table

CREATE TABLE Salaries (

SalaryID INT PRIMARY KEY,

EmployeeID INT REFERENCES Employees(EmployeeID),

HourlyWage DECIMAL(5, 2),

EffectiveDate DATE

);

-- Skills Table

CREATE TABLE Skills (

SkillID INT PRIMARY KEY,

SkillName VARCHAR(50)

);

-- EmployeeSkills Table

CREATE TABLE EmployeeSkills (

EmployeeSkillID INT PRIMARY KEY,

EmployeeID INT REFERENCES Employees(EmployeeID),

SkillID INT REFERENCES Skills(SkillID)

);

-- DepartmentsEmployees Table

CREATE TABLE DepartmentsEmployees (

DepartmentEmployeeID INT PRIMARY KEY,

EmployeeID INT REFERENCES Employees(EmployeeID),

DepartmentID INT REFERENCES Departments(DepartmentID)

);

-- PositionsEmployees Table

CREATE TABLE PositionsEmployees (

PositionEmployeeID INT PRIMARY KEY,

EmployeeID INT REFERENCES Employees(EmployeeID),

PositionID INT REFERENCES Positions(PositionID)

);

-- Attendance Table

CREATE TABLE Attendance (

AttendanceID INT PRIMARY KEY,

EmployeeID INT REFERENCES Employees(EmployeeID),

AttendanceDate DATE,

ClockInTime TIME,

ClockOutTime TIME

);

-- LeaveRequests Table

CREATE TABLE LeaveRequests (

LeaveRequestID INT PRIMARY KEY,

EmployeeID INT REFERENCES Employees(EmployeeID),

LeaveStartDate DATE,

LeaveEndDate DATE,

LeaveType VARCHAR(50),

LeaveStatus VARCHAR(20)

);

-- PerformanceReviews Table

CREATE TABLE PerformanceReviews (

ReviewID INT PRIMARY KEY,

EmployeeID INT REFERENCES Employees(EmployeeID),

ReviewDate DATE,

ReviewerID INT REFERENCES Employees(EmployeeID)

);

-- TrainingPrograms Table

CREATE TABLE TrainingPrograms (

TrainingProgramID INT PRIMARY KEY,

ProgramName VARCHAR(100),

ProgramDescription TEXT,

TrainingDate DATE,

TrainerName VARCHAR(100)

);

-- EmployeeTraining Table

CREATE TABLE EmployeeTraining (

EmployeeTrainingID INT PRIMARY KEY,

EmployeeID INT REFERENCES Employees(EmployeeID),

TrainingProgramID INT REFERENCES TrainingPrograms(TrainingProgramID)

);

# Sample Data INSERT

-- Employees Table

INSERT INTO Employees (EmployeeID, FirstName, LastName, DateOfBirth, Gender, ContactNumber, Email, Address, HireDate, TerminationDate, EmergencyContactName, EmergencyContactNumber, SupervisorID)

VALUES

(1, 'John', 'Doe', '1980-05-15', 'M', '123-456-7890', 'john.doe@email.com', '123 Main St, Cityville', '2010-01-15', NULL, 'Jane Doe', '987-654-3210', NULL),

(2, 'Jane', 'Smith', '1985-08-22', 'F', '987-654-3210', 'jane.smith@email.com', '456 Oak St, Townsville', '2012-03-20', NULL, 'John Doe', '123-456-7890', NULL),

-- ... (up to 20 rows)

-- Departments Table

INSERT INTO Departments (DepartmentID, DepartmentName)

VALUES

(1, 'Quality Control'),

(2, 'Human Resources'),

(3, 'Finance'),

(4, 'Management');

-- Positions Table

INSERT INTO Positions (PositionID, PositionTitle, JobDescription)

VALUES

(1, 'Quality Inspector', 'Inspect and ensure quality of car parts'),

(2, 'HR Specialist', 'Handle human resources tasks'),

(3, 'Financial Analyst', 'Analyze financial data'),

(4, 'Manager', 'Supervise and manage teams');

-- Salaries Table (changed to HourlyWage)

INSERT INTO Salaries (SalaryID, EmployeeID, HourlyWage, EffectiveDate)

VALUES

(1, 1, 25.50, '2010-01-15'),

(2, 2, 30.00, '2012-03-20'),

-- ... (up to 20 rows)

-- Skills Table

INSERT INTO Skills (SkillID, SkillName)

VALUES

(1, 'Quality Control'),

(2, 'Communication'),

(3, 'Financial Analysis'),

(4, 'Management');

-- EmployeeSkills Table

INSERT INTO EmployeeSkills (EmployeeSkillID, EmployeeID, SkillID)

VALUES

(1, 1, 1),

(2, 1, 2),

-- ... (up to 20 rows)

-- DepartmentsEmployees Table

INSERT INTO DepartmentsEmployees (DepartmentEmployeeID, EmployeeID, DepartmentID)

VALUES

(1, 1, 1),

(2, 2, 2),

-- ... (up to 20 rows)

-- PositionsEmployees Table

INSERT INTO PositionsEmployees (PositionEmployeeID, EmployeeID, PositionID)

VALUES

(1, 1, 1),

(2, 2, 2),

-- ... (up to 20 rows)

-- Attendance Table

INSERT INTO Attendance (AttendanceID, EmployeeID, AttendanceDate, ClockInTime, ClockOutTime)

VALUES

(1, 1, '2024-01-13', '08:00:00', '16:00:00'),

(2, 2, '2024-01-13', '09:30:00', '17:30:00'),

-- ... (up to 20 rows)

-- LeaveRequests Table

INSERT INTO LeaveRequests (LeaveRequestID, EmployeeID, LeaveStartDate, LeaveEndDate, LeaveType, LeaveStatus)

VALUES

(1, 1, '2024-02-01', '2024-02-05', 'Vacation', 'Approved'),

(2, 2, '2024-03-10', '2024-03-12', 'Sick Leave', 'Pending'),

-- ... (up to 20 rows)

-- PerformanceReviews Table

INSERT INTO PerformanceReviews (ReviewID, EmployeeID, ReviewDate, ReviewerID)

VALUES

(1, 1, '2024-04-01', 2),

(2, 2, '2024-04-15', 1),

-- ... (up to 20 rows)

-- TrainingPrograms Table

INSERT INTO TrainingPrograms (TrainingProgramID, ProgramName, ProgramDescription, TrainingDate, TrainerName)

VALUES

(1, 'Quality Control Training', 'Training on quality control procedures', '2024-05-01', 'Trainer A'),

(2, 'Communication Workshop', 'Improving communication skills', '2024-05-15', 'Trainer B'),

-- ... (up to 20 rows)

-- EmployeeTraining Table

INSERT INTO EmployeeTraining (EmployeeTrainingID, EmployeeID, TrainingProgramID)

VALUES

(1, 1, 1),

(2, 2, 2),

-- ... (up to 20 rows)