

HR Workforce Management System (MySQL-Based)

Objective

A database-driven system to manage employee data, attendance, leave records, and payroll using MySQL. The project simulates real-world HR processes from hiring to retirement.

Modules

1. Employee Information Management

```
- CREATE TABLE Employees (  
    Emp_id INT PRIMARY KEY,  
    First_name VARCHAR(50),  
    Last_name VARCHAR(50),  
    Dob DATE,  
    Gender CHAR(1),  
    Email VARCHAR(100),  
    Phone VARCHAR(15),  
    Hire_date DATE,  
    Status VARCHAR(20) – Active, Resigned, Retired  
);
```

2. Department Management

```
CREATE TABLE Departments (  
    dept_id INT PRIMARY KEY,  
    dept_name VARCHAR(100),  
    manager_id INT  
);
```

3. Attendance Tracker

```
CREATE TABLE Attendance (  
    emp_id INT,  
    date DATE,  
    status VARCHAR(10), -- Present, Absent, Leave  
    PRIMARY KEY (emp_id, date),  
    FOREIGN KEY (emp_id) REFERENCES Employees(emp_id)  
);
```

4. Leave Management

```
CREATE TABLE LeaveApplications (  
    leave_id INT PRIMARY KEY AUTO_INCREMENT,  
    emp_id INT,  
    start_date DATE,  
    end_date DATE,  
    reason TEXT,  
    status VARCHAR(20), -- Approved, Rejected, Pending  
    FOREIGN KEY (emp_id) REFERENCES Employees(emp_id)  
);
```

5. Payroll System

```
CREATE TABLE Payroll (  
    emp_id INT,  
    month YEAR_MONTH,  
    basic_pay DECIMAL(10,2),  
    deductions DECIMAL(10,2),  
    net_pay DECIMAL(10,2),  
    FOREIGN KEY (emp_id) REFERENCES Employees(emp_id)
```

);

Technologies Used

- Database: MySQL

-Tools: MySQL Workbench or any mobile SQL client (DBeaver, SQL Client)

- Platform: Android Mobile

Sample Queries

SQL

Get Employees count by Department

```
SELECT dept_name, COUNT(*) as employee_count
```

```
FROM Employees
```

```
JOIN Departments ON Employees.dept_id = Departments.dept_id
```

```
GROUP BY dept_name;
```

Check Leave Status of Employee

```
SELECT * FROM LeaveApplications
```

```
WHERE emp_id = 101 AND status = 'Pending';
```

Generate a Simple a Payslip

```
SELECT emp_id, month, basic_pay, deductions, net_pay
```

```
FROM Payroll
```

```
WHERE emp_id = 101 AND month = '2025-04';
```

Sample Payroll of Employees

```
INSERT INTO Payroll (emp_id, month, basic_pay, deductions, net_pay)
```

```
VALUES (101, '2024-04', 30000, 2000, 28000);
```

Sample Attendance of Employees

```
CREATE TABLE Attendance (  
    emp_id INT,  
    date DATE,  
    status VARCHAR(10) -- values: 'Present', 'Absent', 'Leave'  
);
```

Sample Departments

```
CREATE TABLE Departments (  
    dept_id INT PRIMARY KEY,  
    dept_name VARCHAR(50),  
    manager_id INT  
);
```