

Employee Management System - SQL Exercises

Database Schema

Departments Table

```
CREATE TABLE Departments (  
    DepartmentID INT PRIMARY KEY,  
    DepartmentName VARCHAR(100)  
);
```

Employees Table

```
CREATE TABLE Employees (  
    EmployeeID INT PRIMARY KEY,  
    FirstName VARCHAR(50),  
    LastName VARCHAR(50),  
    DepartmentID INT FOREIGN KEY REFERENCES Departments(DepartmentID),  
    Salary DECIMAL(10, 2),  
    JoinDate DATE  
);
```

Exercises

Exercise 1: Create a Simple View

Goal: Create a view to show basic employee details.

Task:

Create a view named `vw_EmployeeBasicInfo` that displays `EmployeeID`, `FirstName`, `LastName`, and `DepartmentName` by joining `Employees` and `Departments`.

Exercise 2: Add Computed Column - Full Name

Goal: Use a computed column in a view.

Task:

Modify or create a view named `vw_EmployeeFullName` that includes a computed column `FullName` (concatenation of `FirstName` and `LastName`).

Example Computed Column:

FirstName + ' ' + LastName AS FullName

Exercise 3: Add Computed Column - Annual Salary

Goal: Add a financial computed column.

Task:

Create a view named vw_EmployeeAnnualSalary that includes a computed column AnnualSalary (Salary * 12).

Exercise 4: Add Multiple Computed Columns

Goal: Combine multiple computed columns in a single view.

Task:

Create a view named vw_EmployeeReport that includes:

- EmployeeID
- FullName
- DepartmentName
- AnnualSalary
- Bonus (10% of AnnualSalary)

Example Bonus Calculation:

(Salary * 12) * 0.10 AS Bonus