

TASK 1

Project Title:

Employee Payroll Management System

Objective:

To develop a secure, data-driven web application that manages employee information, payroll records, leave tracking, and salary slips.

Project Features:

Requirement	Description
Data-Driven Web Application	Stores and retrieves employee, payment, and leave data using SQL Server
State Management	Implements login sessions using Session("username")
Validation	Ensures required fields are not left blank and have proper formats (e.g., email, dates)
Data Security	Protects against SQL injection, uses session validation, and restricts direct page access
Users & Roles	Admin registers employees, enters payments/leaves, generate slips. Employee views Salary Slip by ID.

TASK 2

Software Requirements Specification (SRS)

Functional Requirements:

1. Login Authentication

- User enters credentials and accesses dashboard upon success.

2. Register Employee

- Admin can add name, email, address, phone, and joining date.

3. Record Salary Payment

- Admin can enter month, year, basic salary, and total pay.

4. Leave Management

- Leave type, date, and duration are recorded per employee.

5. Generate Salary Slip

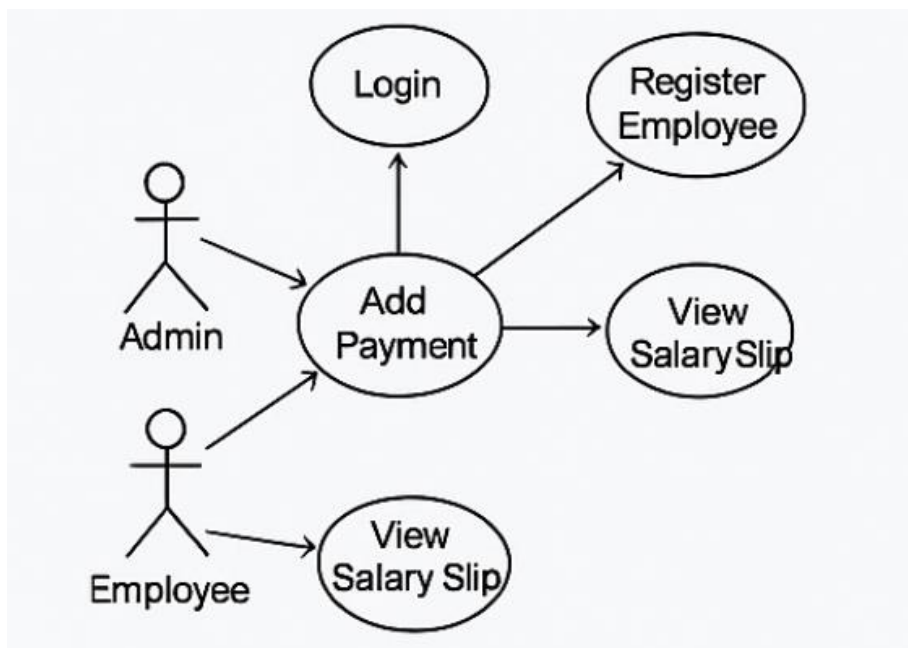
- Generate salary details by entering Employee ID.

Non-Functional Requirements:

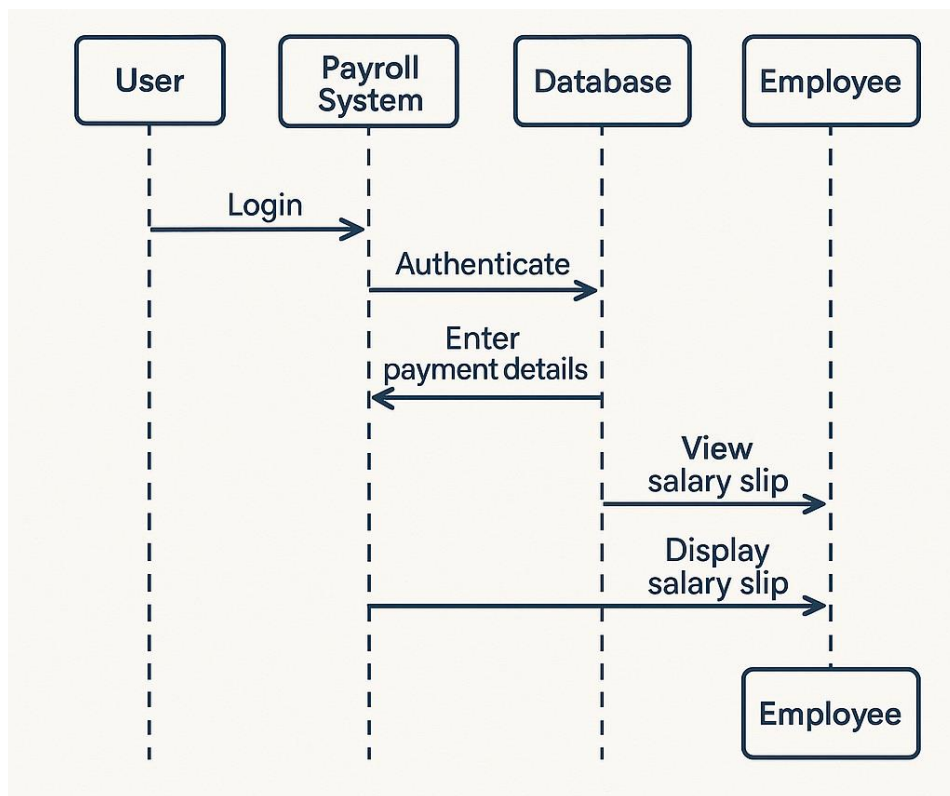
Feature	Description
Usability	Clean, user-friendly UI with buttons and forms
Performance	Loads salary slip instantly with GridView
Security	SQL parameterization, session tracking, logout feature
Compatibility	Works in modern browsers and Visual Studio/IIS environment
Maintainability	Code-behind architecture separates design and logic

TASK 3a

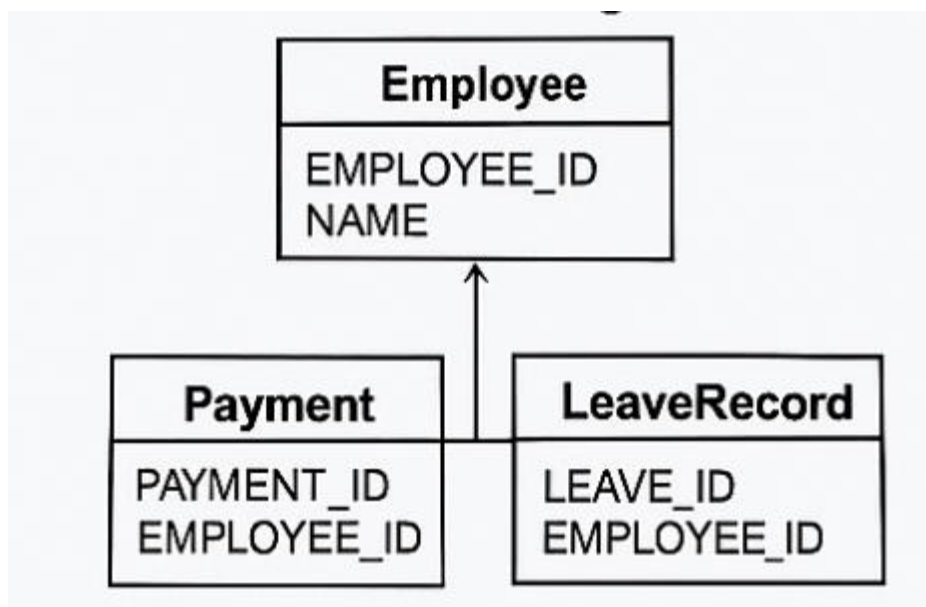
Use Case Diagram



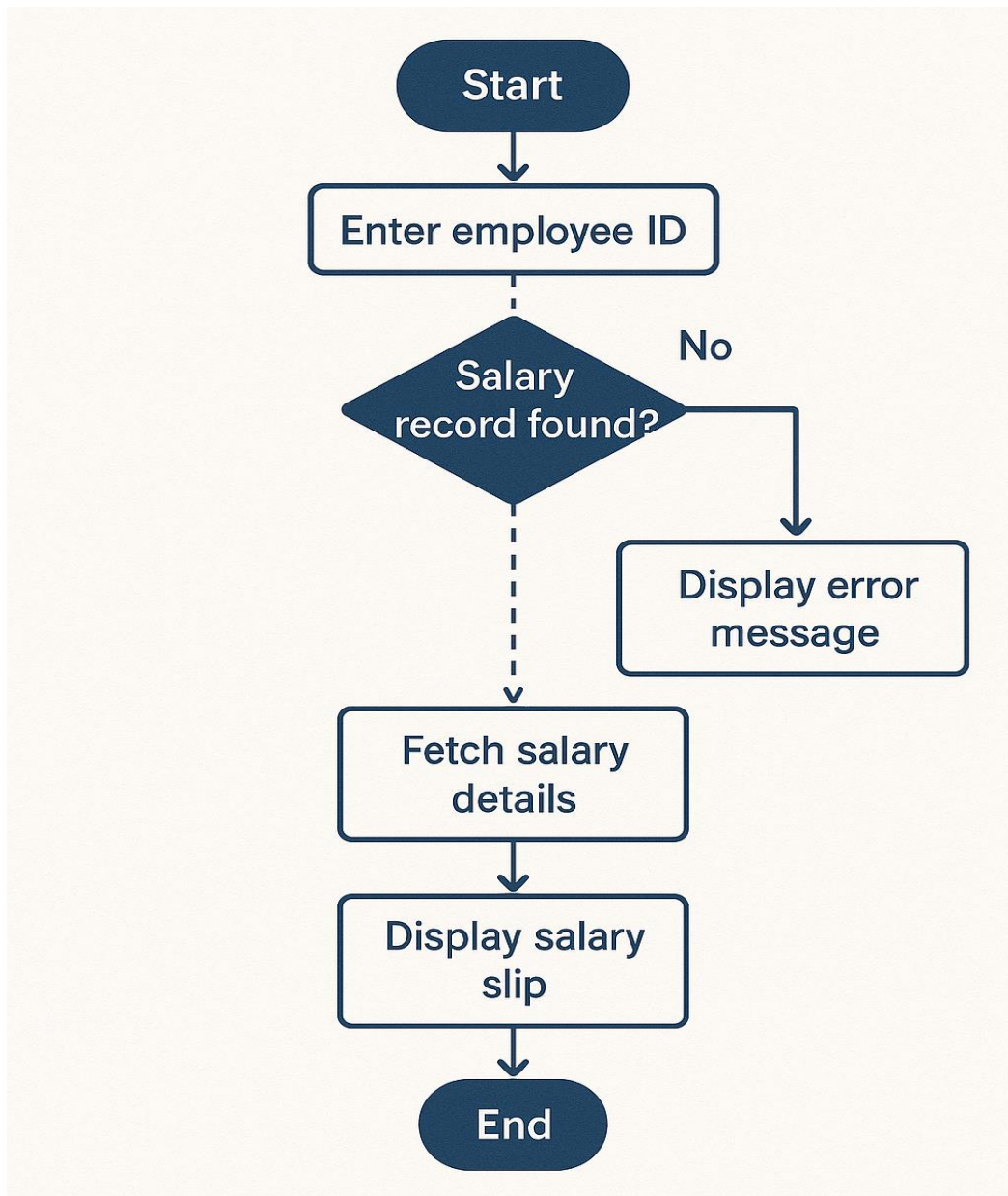
Sequence Diagram



Class Diagram



Activity Diagram



TASK 3b

Component Model

[User] \rightleftharpoons [ASP.NET Forms]

\updownarrow

[VB.NET Code-Behind]

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[SQL Server Database]

Deployment Model

[User's Web Browser]



(HTTP Request)



[Web Server - IIS]

- Hosts ASP.NET Pages
- Runs VB.NET Code



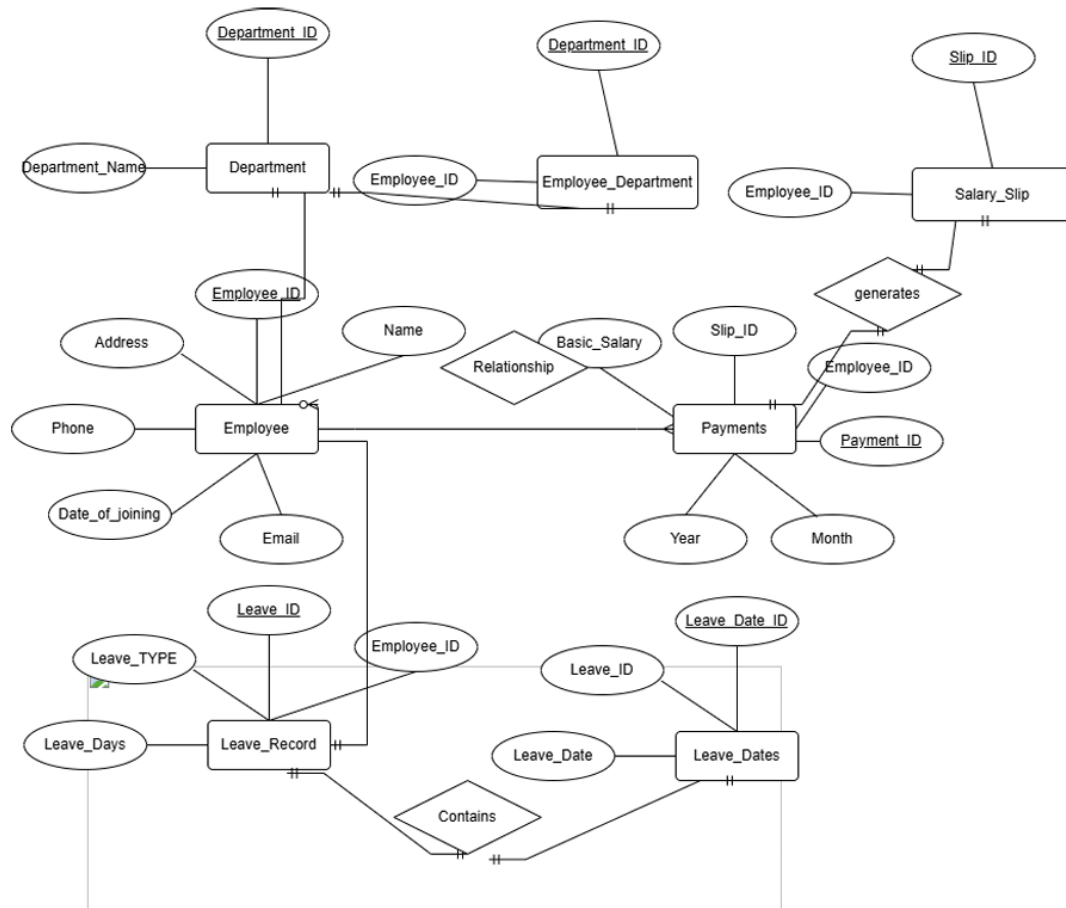
[Database Server - SQL Server]

- Stores all records

TASK 4

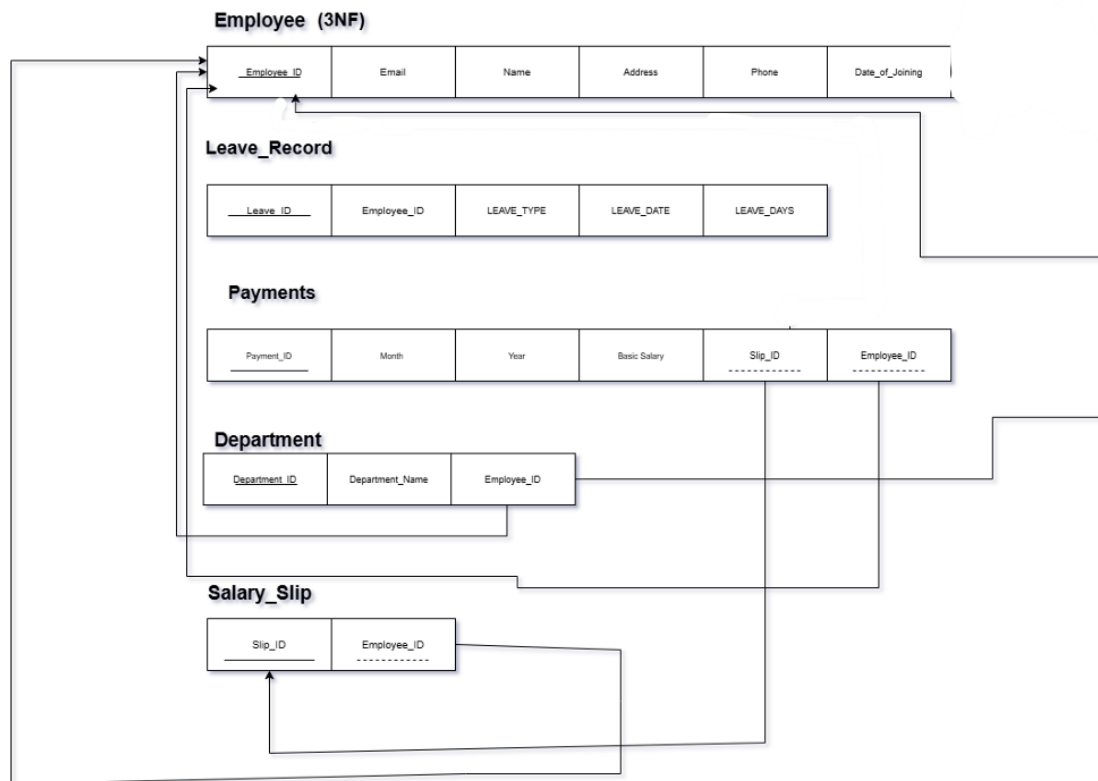
ER Model

The ER Model defines the relationships between entities. These entities are connected by relationships such as Employee to Payment, Employee to Leave Records, and Employee to Department

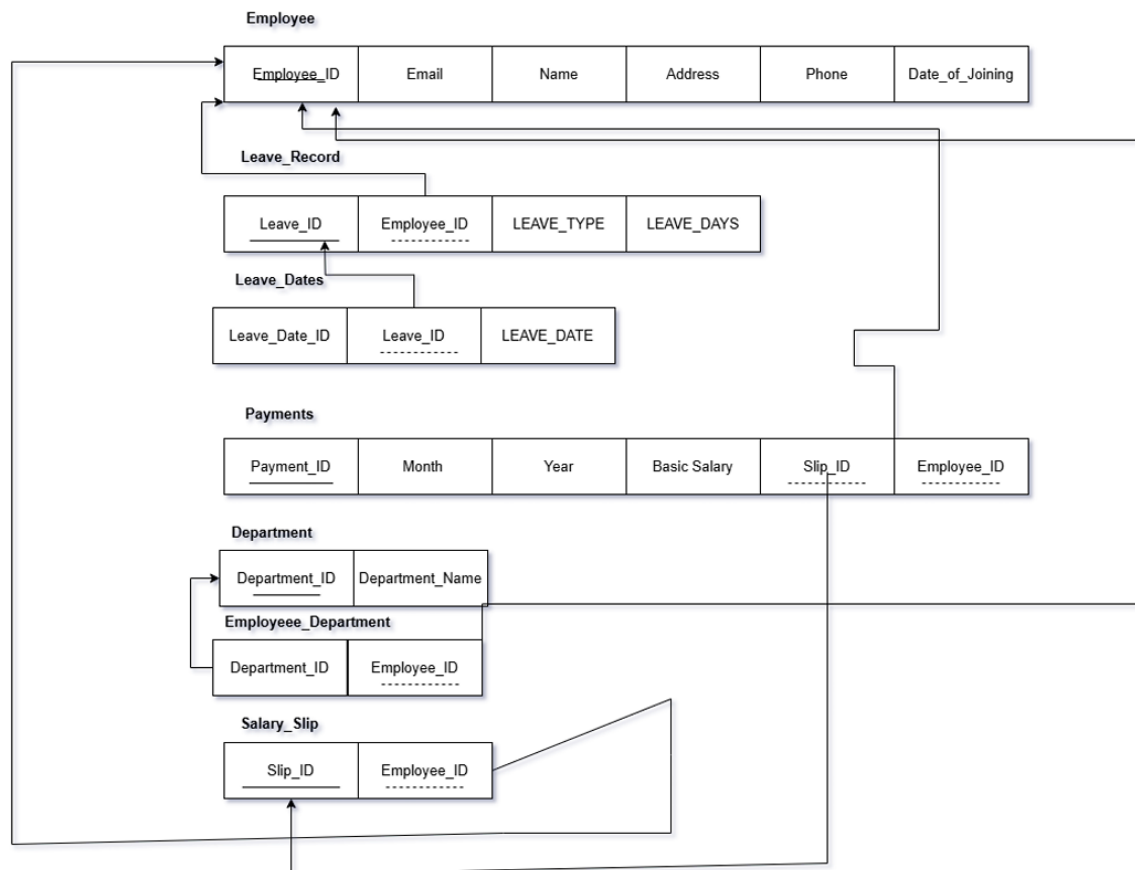


Relational Model

RELATIONAL SCHEMA



Normalized Form



SQL Implementation

```
CREATE TABLE Employee_New (
    EMPLOYEE_ID INT PRIMARY KEY IDENTITY(1,1),
    NAME VARCHAR(100),
    EMAIL VARCHAR(100),
    ADDRESS VARCHAR(255),
    PHONE VARCHAR(15),
    DATE_OF_JOINING DATE
);
```

```
CREATE TABLE Payment (
```



```
PAYMENT_ID INT PRIMARY KEY IDENTITY(1,1),  
EMPLOYEE_ID INT FOREIGN KEY REFERENCES Employee_New(EMPLOYEE_ID),  
MONTH VARCHAR(15),  
YEAR VARCHAR(4),  
BASIC_SALARY DECIMAL(10,2),  
TOTAL_PAY DECIMAL(10,2)  
);
```

```
CREATE TABLE Leave_Records (  
    LEAVE_ID INT PRIMARY KEY IDENTITY(1,1),  
    EMPLOYEE_ID INT FOREIGN KEY REFERENCES Employee_New(EMPLOYEE_ID),  
    LEAVE_TYPE VARCHAR(50),  
    LEAVE_DATE DATE,  
    LEAVE_DAYS INT  
);
```

```
<connectionStrings>
```

```
  <add name="SqlConn"
```

```
    connectionString="Data Source=.\SQLEXPRESS;Initial  
Catalog=PayrollDB;Integrated Security=True"
```

```
    providerName="System.Data.SqlClient" />
```

```
</connectionStrings>
```