1 About Department of MCA

PARUL University

Parul University is a legitimate university established under Gujarat Private University Act 2009, after legislation passed by the Government of Gujarat on 26th March 2015 giving University status to Parul Group of Institutes functioning under the aegis of Parul Arogya Seva Mandal Trust.

Faculty of IT & Computer Science

Faculty of IT and Computer Science, Parul University has materialized as one of the prime IT education providers at global level. Various departments under Faculty of IT and Computer Science strive in preparing IT-industry ready professionals by means of various skill development courses, vocational courses, co-curricular & extra-curricular activities, industry visits and expert lectures.

MCA Department

The Department of Master of Computer Application at Parul University emphasizes on building professionals in the domain of computer applications by providing necessary environment by means of facilitating suitable blend of technical and non-technical learning experience. The department cultivates students in various curricular, co-curricular and extra-curricular activities in order to produce future system analysts, system designers, system programmers, application programmers, testing professionals, system managers, project managers, researchers and other leading positions in systems/IT department.

The department offers various subjects from diversified technical/non-technical areas such as – core IT domain, management, communication skills, mathematics & logic building and rich pool of elective subjects.

The department of MCA focuses on project-based learning, and hence students are motivated to work on tiny hands-on projects in practical oriented subjects to get better exposure. Moreover, throughout their MCA studies, students are required to work on around 3 mini/major projects in individual/team to get enough confidence on software-development and thereby become industry-ready.

2 Project Profile

2.1 Project Definition

PAY ROLL MANAGEMENT SYSTEM is a software to maintain employers pay an employee for the work they have completed.

2.2 Project Description

A payroll management system is a tool - predominantly a software program - that enables your business to handle all your employee's financial records in a hassle-free, automated fashion. This includes employee's salaries, bonuses, deductions, net pay, and generation of pay-slips for a specific period.

Existing System / Work Environment

your business activities are primarily divided into two broad categories: the macro and the micro.

The macro here refers to the broader and big picture stuff. These are the activities that aid the long-term vision of your organization. Your business development strategy, sales, revenue, cash flow, etc., fall under this category.

The micro refers to the everyday administrative chores that fuel the day-to-day operations of your business. Although these tasks seem mundane and repetitive, they are just as important to keep your business running like a well-oiled machine.

Problem Statement

Worry about manually handling things like generating pay-slips, calculating tax deductions and so on

2.5 Need for New System

There are several benefits of implementing a service like this for your business. Some of them have been briefly highlighted below:

- Employee morale
- Statutory compliance
- Manage employee information efficiently
- Generate reports related to employee attendance, salary structure, etc.
- Startup friendly
- Time-saving
- Plan for the future

Proposed System & Features

ADMIN :-

- Login
- Manage Employees Details
- Manage Salary of Employee
- Report of Salary (yearly , monthly)

Employee:-

- Login
- day to day attendance by clicking button
- View Report of monthly of Attendance & Salary

2.7 Scope

- New Start-up can go on to develop business logic without worry about salary count.
- Easy to Use.

2.8 Outcomes

- Employee & Bussiness owner can track record of attendance of employee & Salary.
- Easy to use.
- Very User Friendly for track record & print pay slip any time in office.

2.9 Tools & Technology used

Hardware Requirements

- Hard Disk : 2 GB
- RAM : 4 GB
- Processor : 2.7 GHz

Software Requirements

- PHP 4.7.2.2
- MY SQL

TECHNOLOGY :

2.9.1. PHP:

➢ PHP is an acronym for “PHP: Hypertext Pre-processor”.

➢ PHP is a widely-used, open source scripting language.

➢ PHP scripts are executed on the server.

➢ PHP is free to download and use.

2.9.2. MySQL:

➢ MySQL is the most popular Open Source Relational SQL Database Management System.

➢ MySQL is one of the best RDBMS being used for developing various Web – based software applications. MySQL is developed, marketed and supported by MySQL AB, Which is a Swedish company.

3 REQUIREMENT ANALYSIS

3.1. Feasibility Study: -

Preliminary investigation examines project feasibility. The likelihood the system will be useful to the organization. The main objective of the feasibility study is to test the Technical, Operational Economical feasibility for adding new modules and debugging old running system. All system is feasible if they are unlimited resources and infinite time. There are aspects in the feasibility

Study portion of the preliminary investigation:

- Technical Feasibility
- Operational Feasibility
- Economic Feasibility

1. Technical Feasibility:

Technical Feasibility evaluates technical merits of the system at the same time collecting additional information about performance, reliability, maintainability and productivity.

2. Economic Feasibility:

Among the most important information contained in feasibility study is the cost-benefit analysis. Cost-benefit analysis cost for development and weights them against tangible and intangible benefits in the system.

3. Operational Feasibility:

The project has been developed in such a way that it becomes very easy with little computer knowledge to operate it. The website is very user friendly and does not require any technical person to operate. Thus, the project is even operationally feasibility.

3.2 USERS OF SYSTEM

- Admin
- Employee

3.2.1 Description of User role:

Admin : Admin can Manage Employee Details, Manage Employee Salary Details , Generate Salary Slips And Check Reports.

Employee : Employee can Fill Self Attendance at the Office and Employee can View Monthly Attend-Leave Reports and Download & print any Salary slip Which Generated By Admin

3.3 Modules

Admin :

- Login /logout
- Manage Employee Details
- Manage Employee Salary Information
- Manage And Generate Salary Slips
- View All type of Reports.

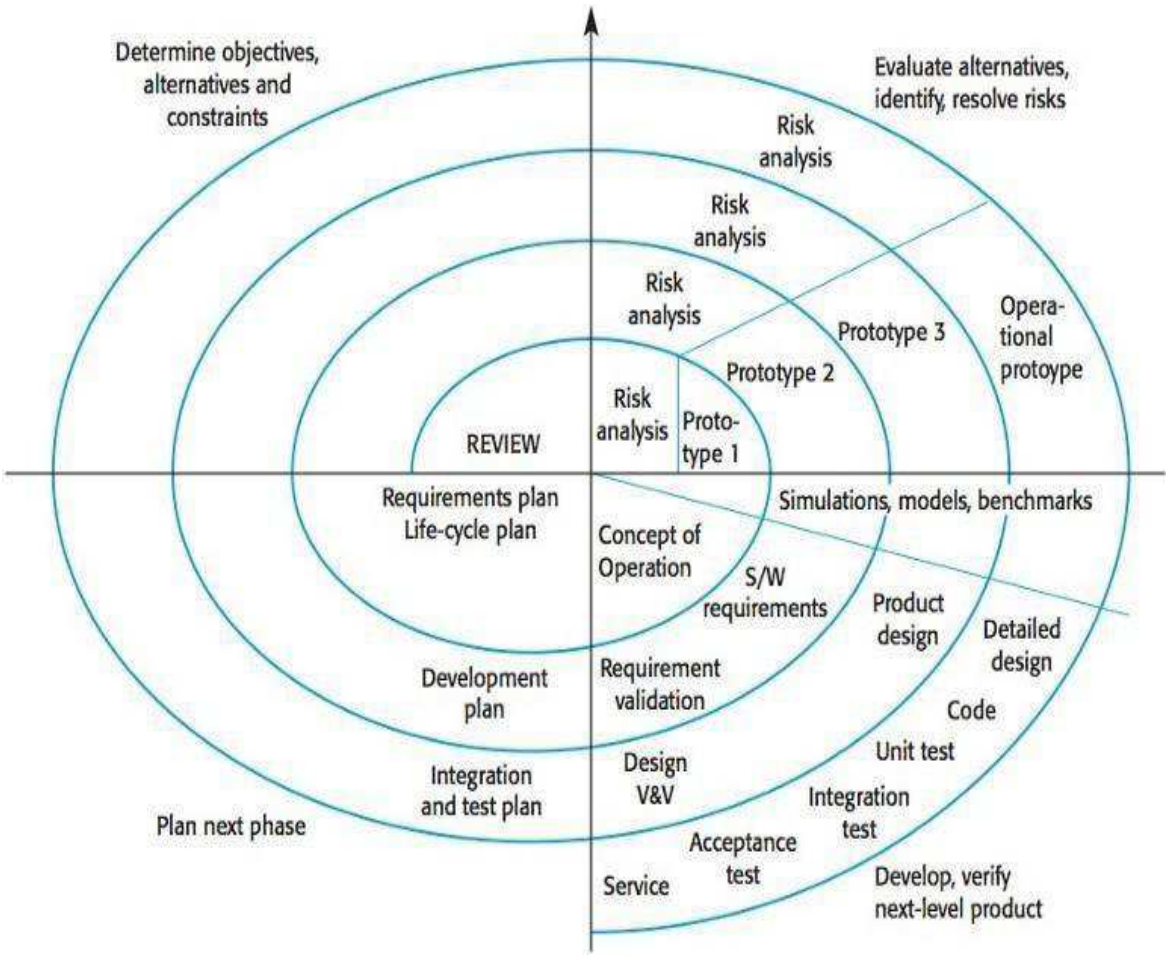
Staff :

- Login/Logout
- Self Attendance
- View Monthly Attend-Leave Details
- View All Salary Slip & Download
-

3.4 PROCESS MODEL

We have use spiral model for our system because in feature we can updated our system easily in spiral model we can update our system for users requirements.

Spiral Model: -



RISK MANAGEMENT

A risk analysis is a series of steps that help a software team to understand and manage uncertainty. A risk is a potential problem which should be identified, its probability of occurrence should be assessed, its impact should be estimated and a contingency plan should be prepared.

Developing a Risk Table:

RISK NAME	CATEGORY	PROBABILITY	IMPACT
Staff Inexperienced	A	50 %	3
Delivery deadline will be tightened	B	60 %	3
Customer will change requirements	C	20 %	3

3.5 REQUIREMENTS GATHERING:

Hardware Requirements:-

Processor: Intel Pentium based system

Processor Speed: 250 MHz to 833 MHz

RAM: 2 GB

Software Requirements:-

Front End: HTML, JAVASCRIPT, CSS

Technology: PHP

Database: SQL

Operating System: Windows XP/7/8/10

3.6 Use case diagram symbols and notation :

Use cases:

Horizontally shape oval that represent the different uses that a user might have

Actors:

Stick figures that represent the people actually employing the use cases.

Associations:

A line between actors and use cases. In complex diagrams, it is important to know which actors are associated with which use cases.

System boundary boxes:

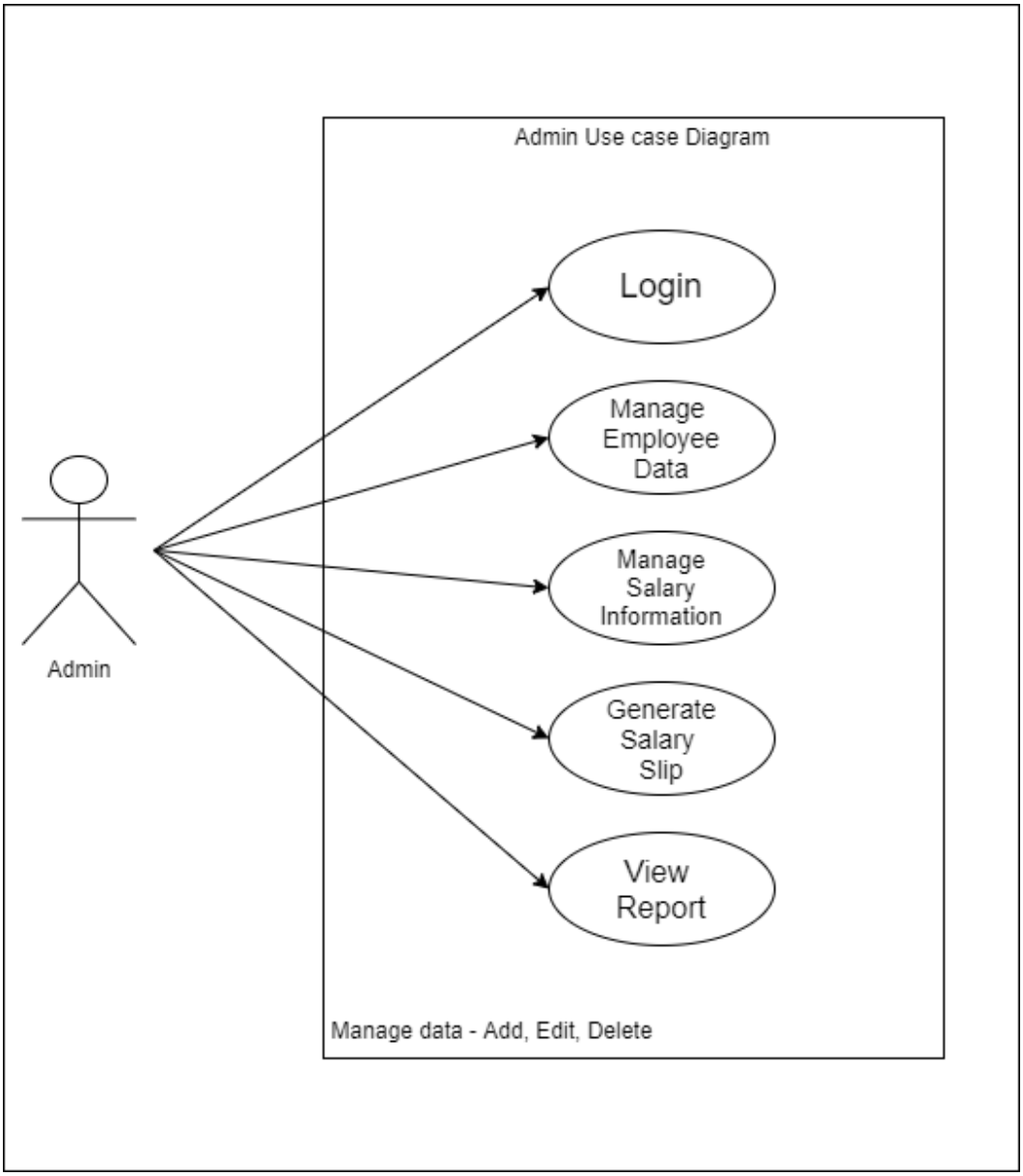
A box that sets a system scope to use cases. All use cases outside the box would be considered outside the scope of that system. For example, Psycho Killer is outside the scope of occupations in the chainsaw example found below.

Packages:

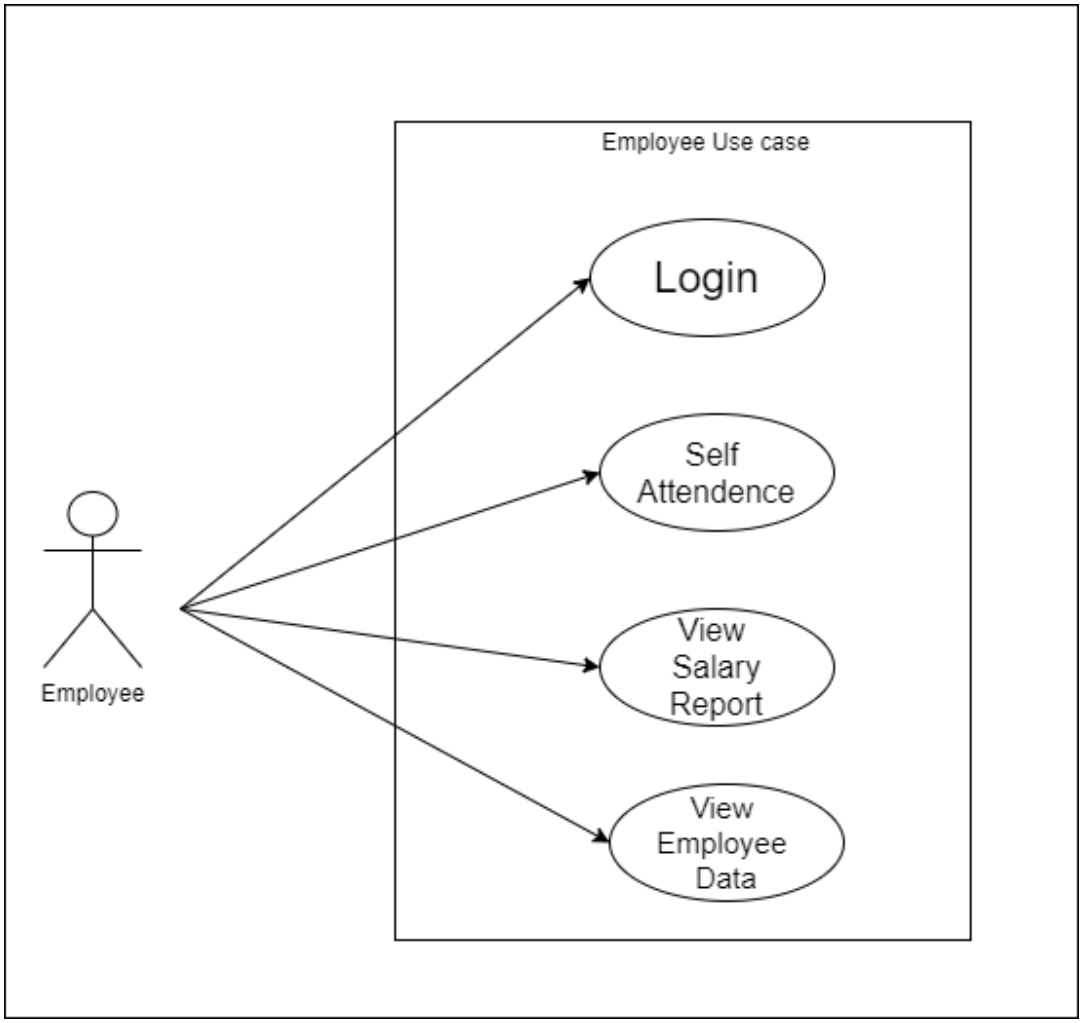
A UML shape that allows you to put different elements into groups. Just as with component diagrams, these groupings are represented as file folders.

3.7 Use Case Diagram:

Use Case Diagram 1: Admin Side



Use Case Diagram 2: Employee Side



4 Design

4.1.1 Use Case Scenarios

1) Login :

Use case Id	USCS01
Use case name	Login
Pre-condition	User must Registered
Execution	Service can be access throughout email id and Password
Alternative	None

2) Manage Employee Data:

Use case Id	USCS02
Use case name	Manage Employee Data
Pre-condition	User must Registered
Execution	Service can be access throughout valid details
Alternative	None

3) Manage Salary Information:

Use case Id	USCS03
Use case name	Manage Salary Information
Pre-condition	Verified details of employee
Execution	Service can be access throughout valid details
Alternative	None

4) Generate Salary Slip:

Use case Id	USCS04
Use case name	Generate Salary Slip
Pre-condition	Verified details of employee
Execution	Service can be access throughout valid details
Alternative	None

5) View Report:

Use case Id	USCS05
Use case name	View Report
Pre-condition	User must Registered and Login
Execution	Service can be access throughout valid details
Alternative	None

6) Self attendance:

Use case Id	USCS06
Use case name	Self attendance
Pre-condition	User must Registered
Execution	Service can be access throughout valid details
Alternative	None

7) View Employee data

Use case Id	USCS07
Use case name	View Employee data
Pre-condition	User must registered and login
Execution	Service can be access throughout valid details
Alternative	None

4.2 Diagrams

4.2.1 Class Diagram

Class diagram is a static diagram. It represents the static view of an application. Class diagram is not only used for visualizing, describing, and documenting different aspects of a system but also for constructing executable code of the software application.

Class diagram describes the attributes and operations of a class and also the constraints imposed on the system. The class diagrams are widely used in the modelling of object-oriented systems because they are the only UML diagrams, which can be mapped directly with object-oriented languages.

Class diagram shows a collection of classes, interfaces, associations, collaborations, and constraints. It is also known as a structural diagram.

Purpose of Class Diagram:

The purpose of class diagram is to model the static view of an application. Class diagrams are the only diagrams which can be directly mapped with object-oriented languages and thus widely used at the time of construction, UML diagrams like activity diagram, sequence diagram can only give the sequence flow of the application; however class diagram is a bit different. It is the most popular UML diagram in the coder community

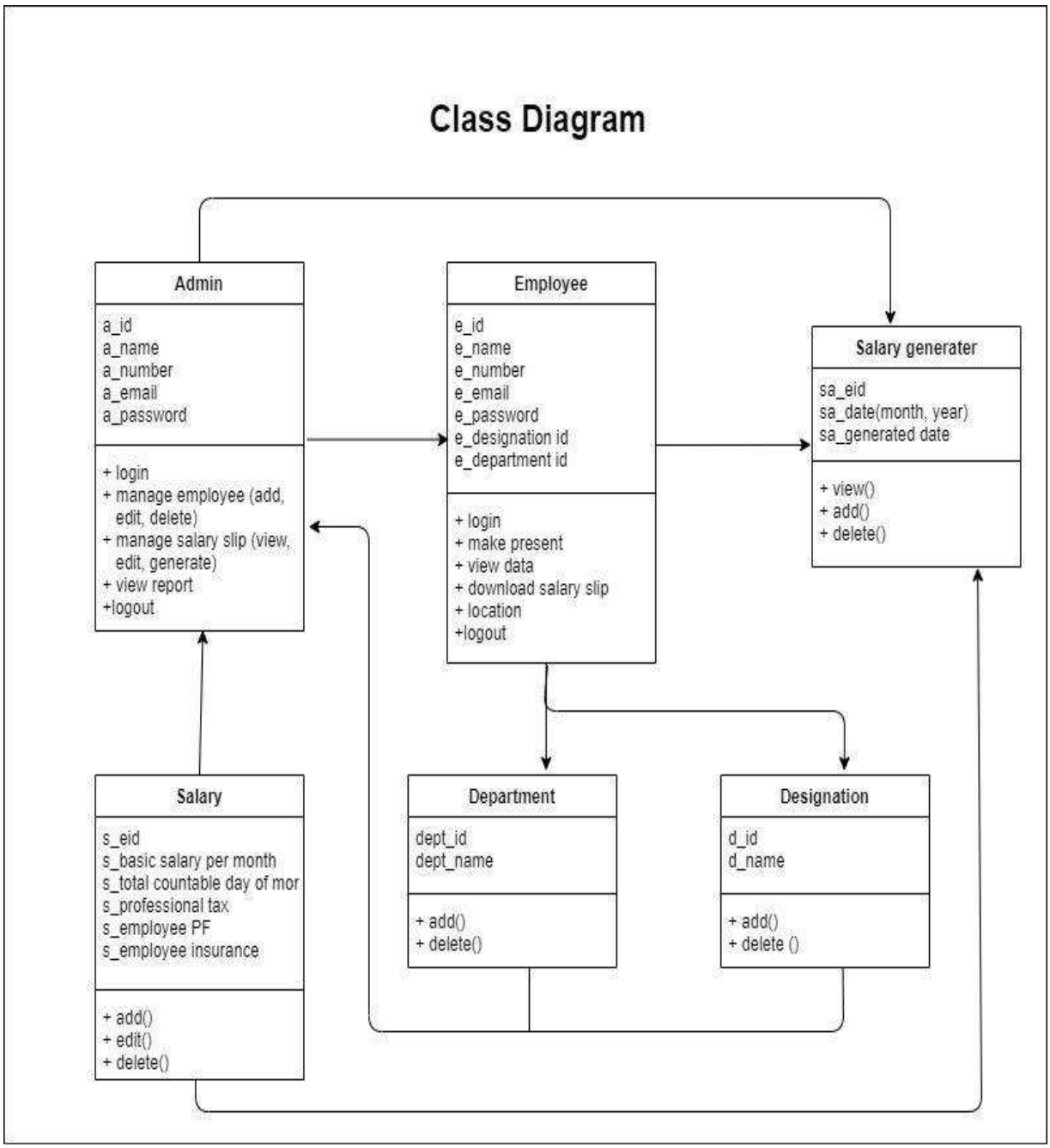
The purpose of the class diagram can be summarized as -

- Analysis and design of the static view of an application.
- Describe responsibilities of a system.
- Base for component and deployment diagrams.
- Forward and reverse engineering.

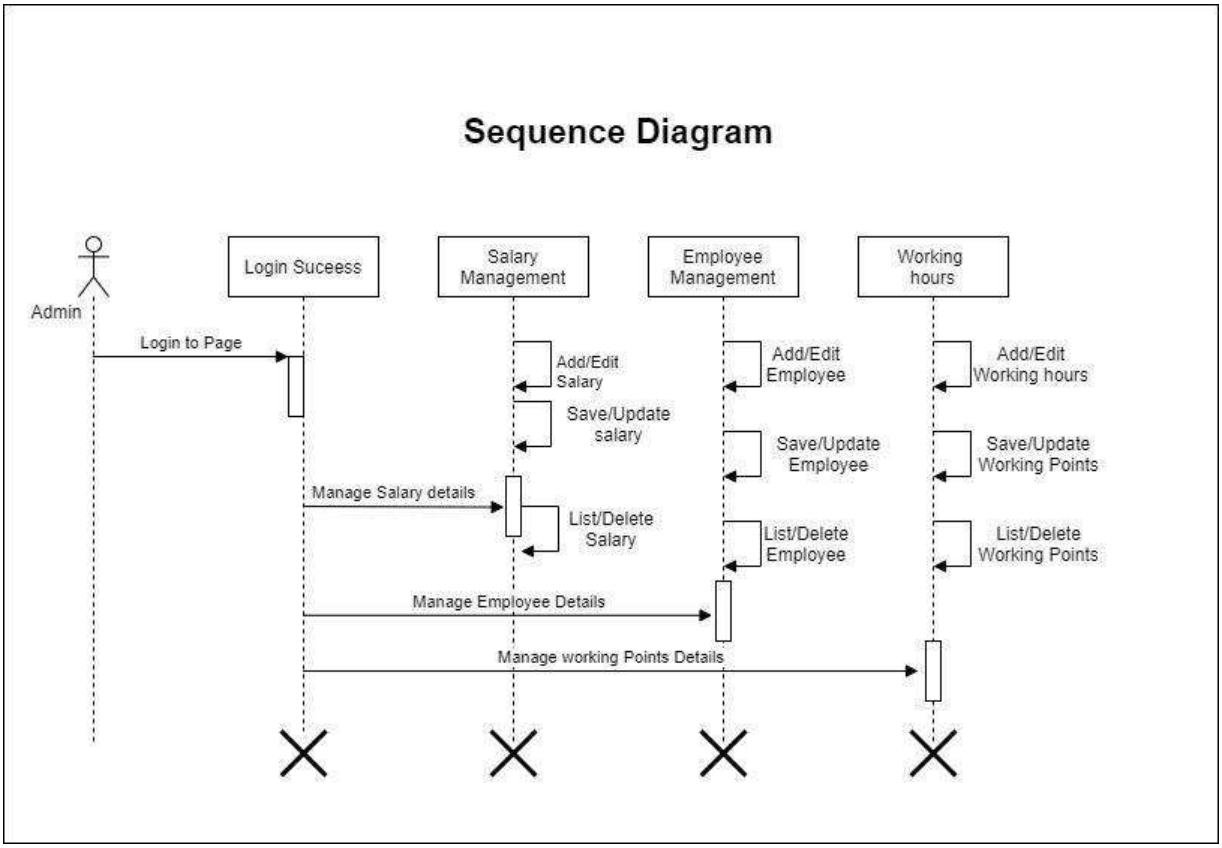
Use of class diagram:

- the static view of the system.
- Showing the collaboration among the elements of the static view.
- Describing describing the functionalities performed by the system.
- Construction of software applications using object oriented languages.

class diagram:



Sequence diagram:



Activity diagram:

Diagram 1:

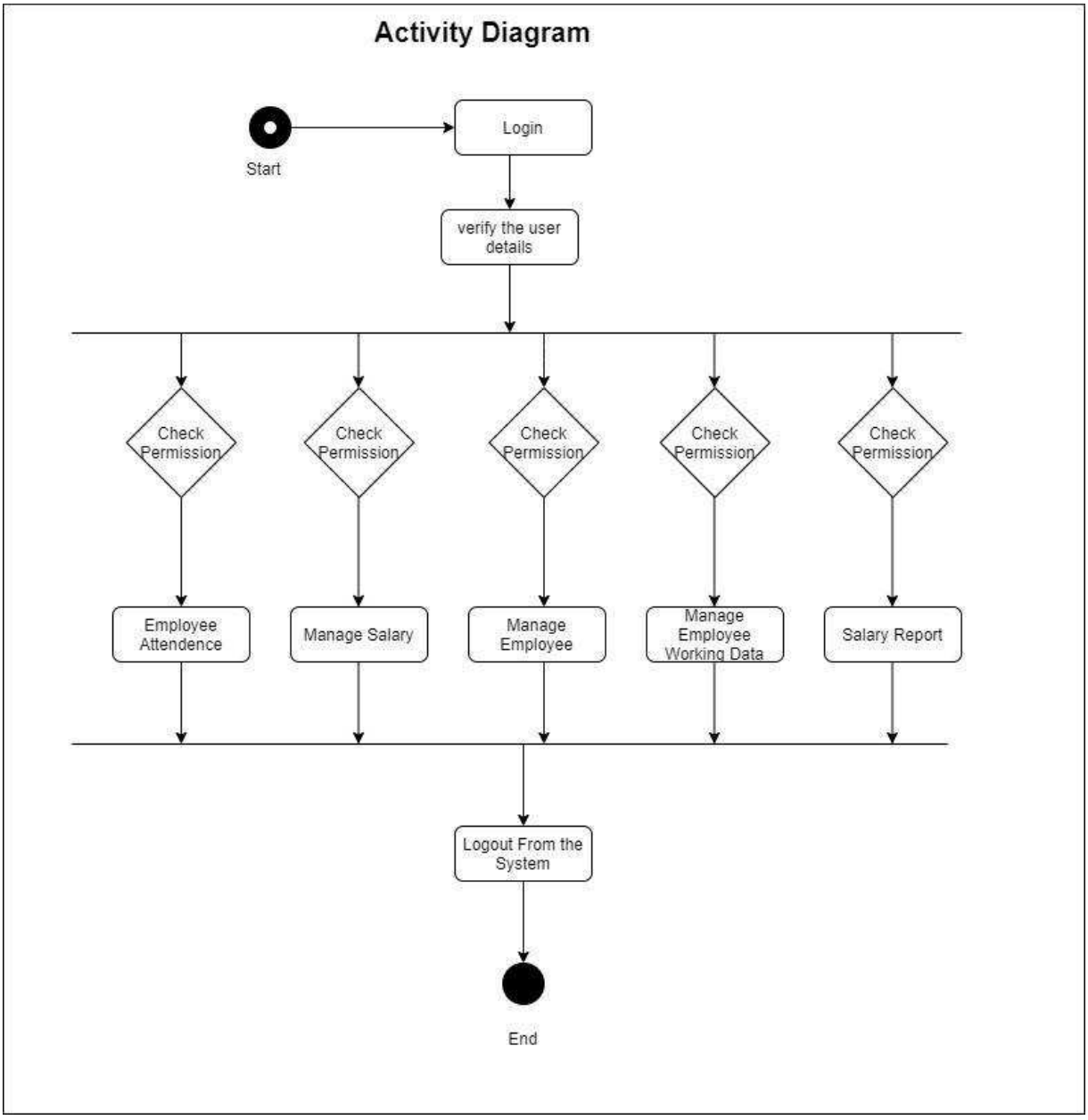
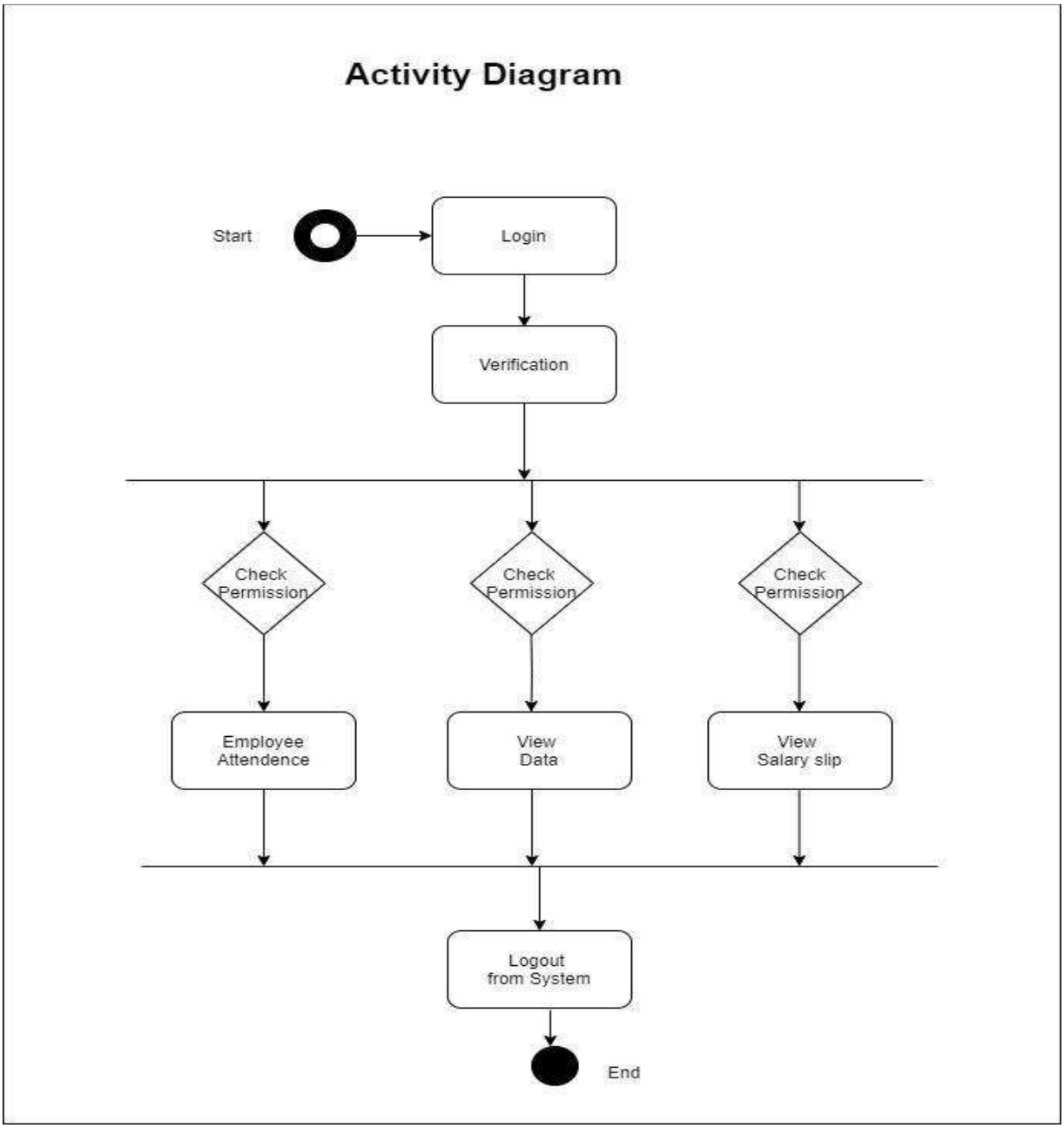


Diagram 2:


Activity Diagram
Start
Login
Verification
Check Permission
Check Permission
Check Permission
Employee Attendence
View Data
View Salary slip
Logout from System
End

Collaboration diagram:

Diagram 1 :

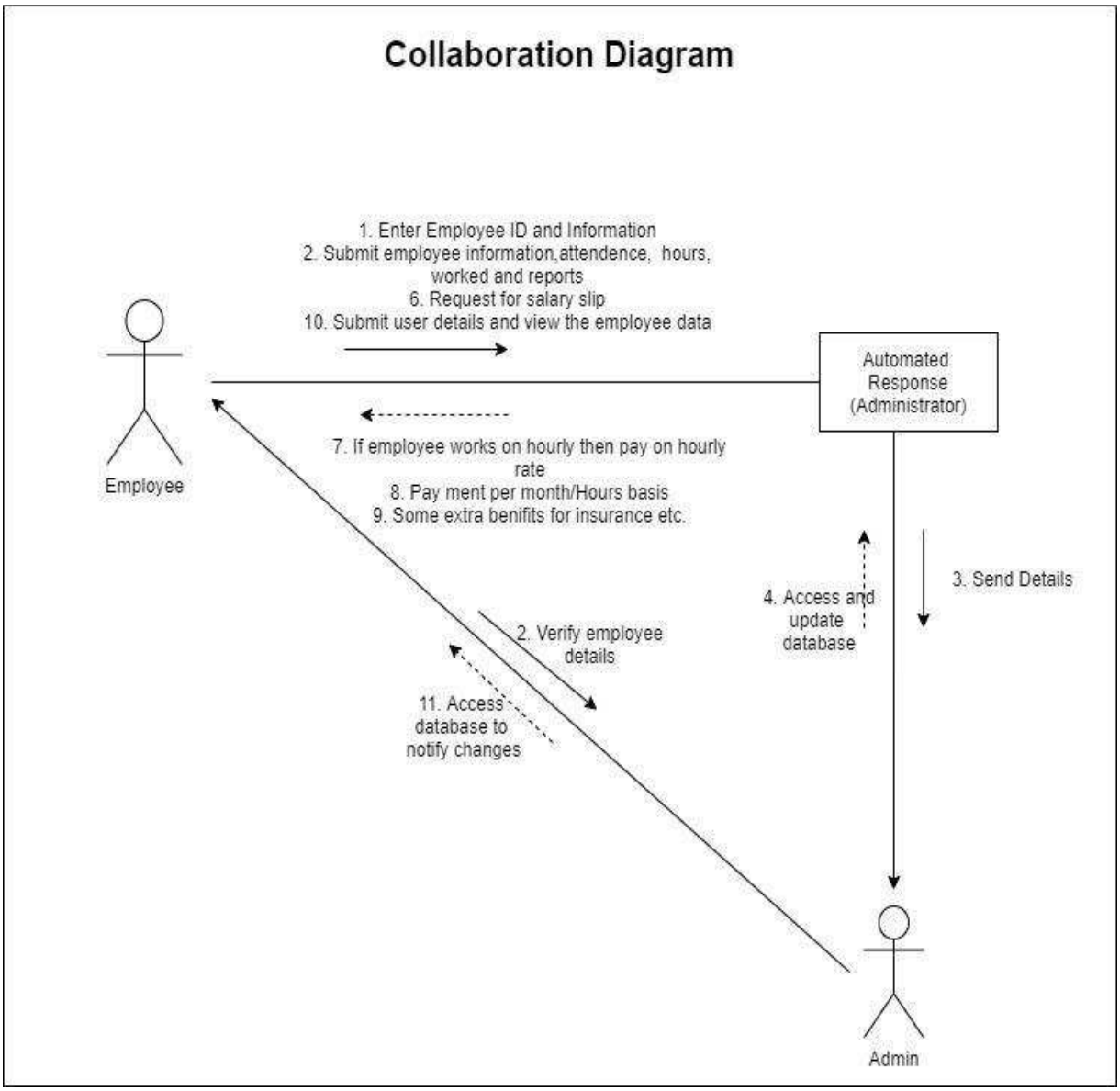
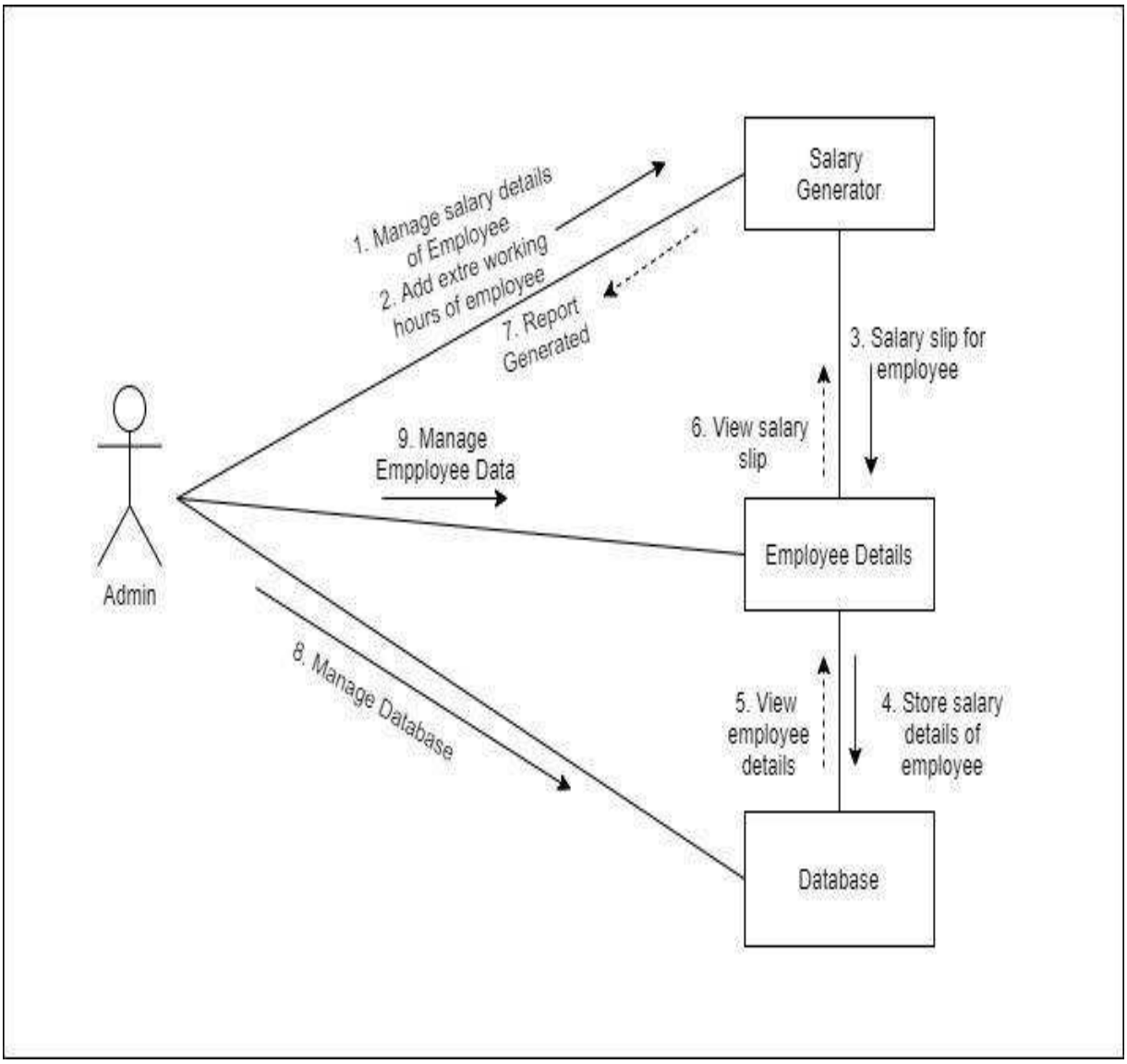
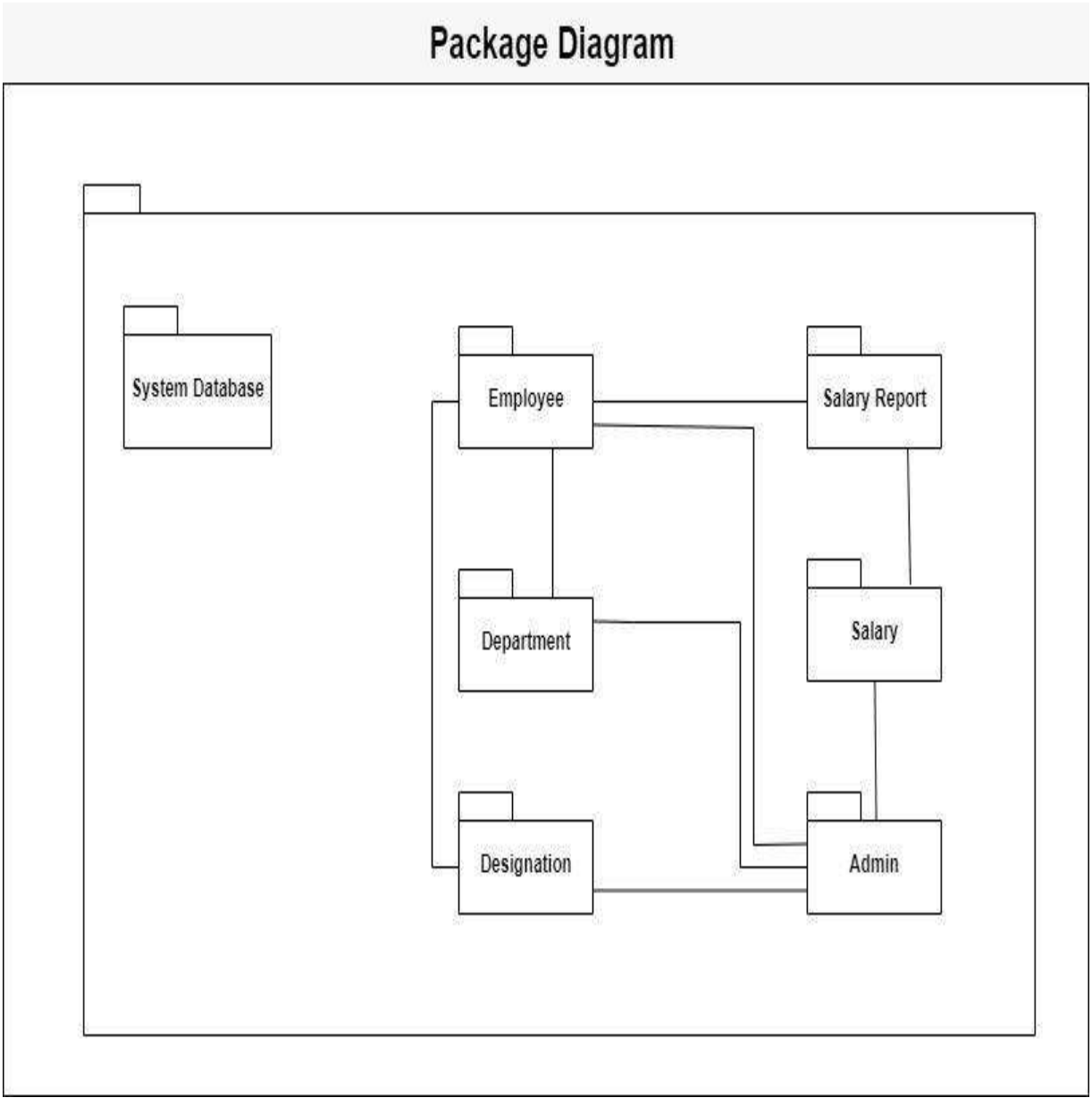


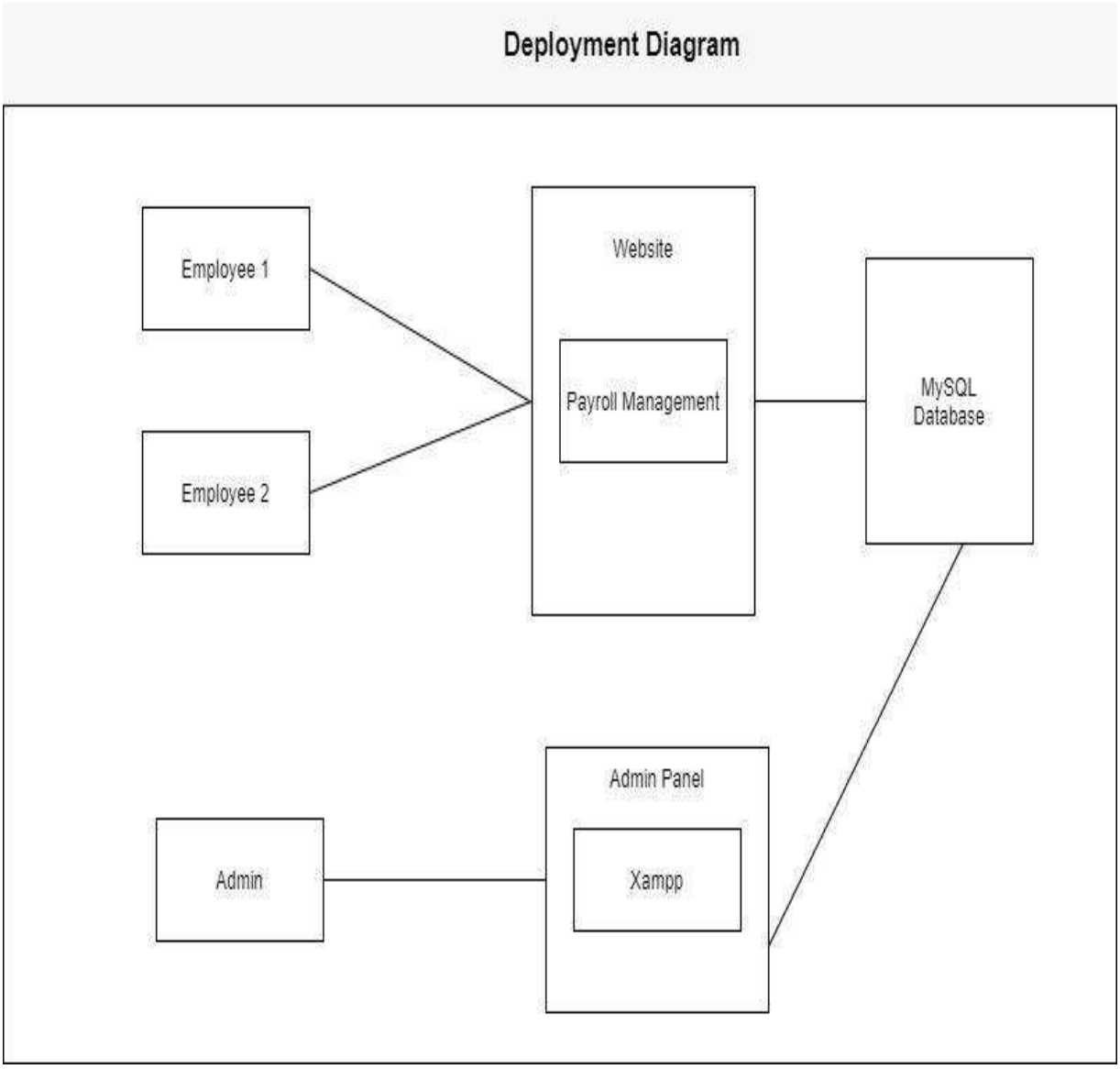
Diagram 2:


Salary Generator
1. Manage salary details of Employee
2. Add extre working hours of employee
7. Report Generated
3. Salary slip for employee
6. View salary slip
9. Manage Empployee Data
Admin
Employee Details
8. Manage Database
5. View employee details
4. Store salary details of employee
Database

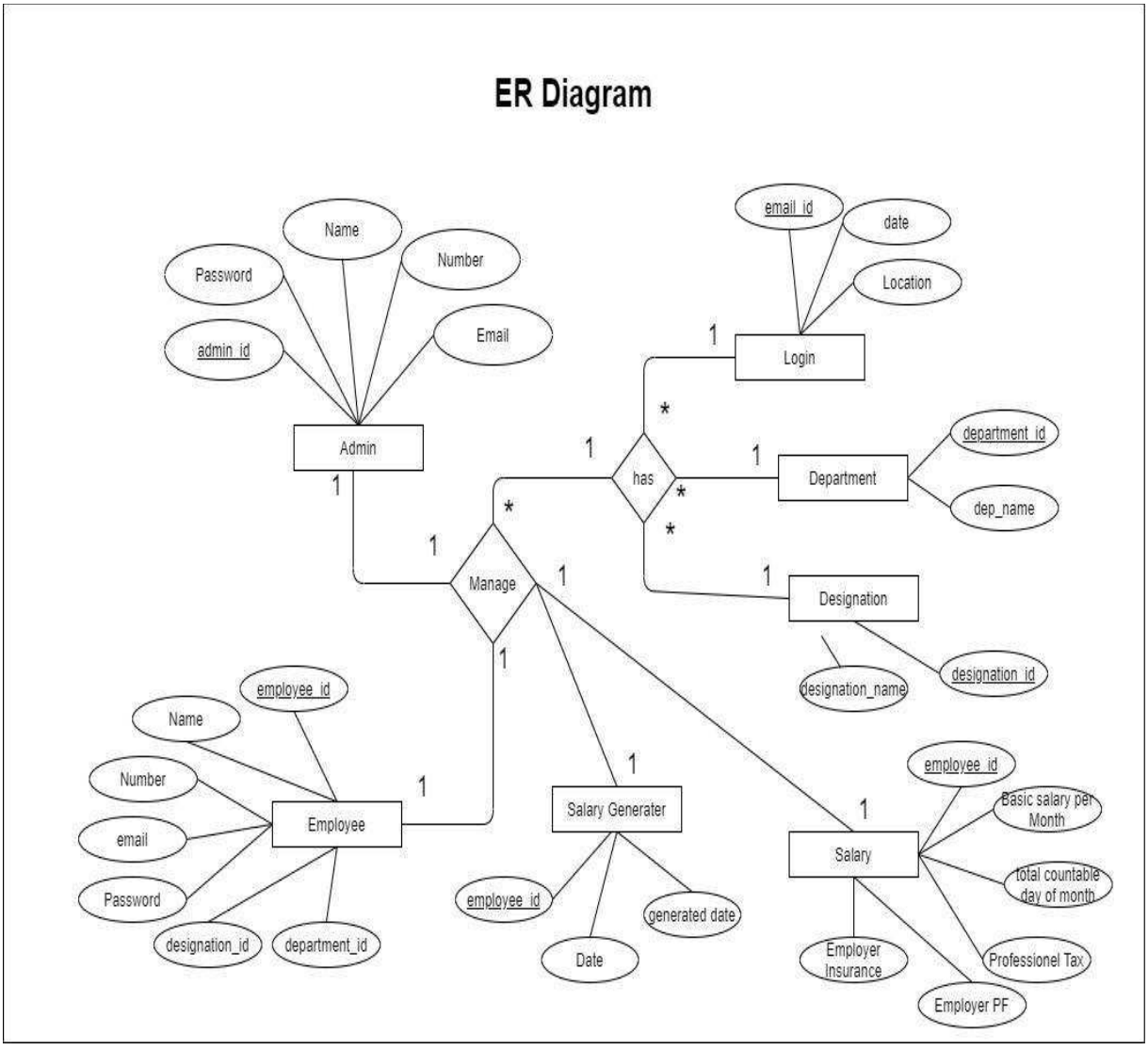
Package diagram:



Deployment diagram:



Entity Relationship Diagram:



Data Dictionary:

1) Table : pms_admin_details

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	adminId	int(11)			No	None		AUTO_INCREMENT	Change Drop More
2	adminName	varchar(1000)	utf8mb4_general_ci		No	None			Change Drop More
3	adminContactNumber	varchar(200)	utf8mb4_general_ci		No	None			Change Drop More
4	adminEmail	varchar(200)	utf8mb4_general_ci		No	None			Change Drop More
5	adminPassword	varchar(200)	utf8mb4_general_ci		No	None			Change Drop More

2) Table : pms_attendence_details

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	attendenceId	int(11)			No	None		AUTO_INCREMENT	Change Drop More
2	attendenceEmployeeId	int(11)			No	None			Change Drop More
3	attendenceStatus	int(11)			No	None			Change Drop More
4	attendenceDate	datetime			No	None			Change Drop More

3) Table : pms_department_master

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	departmentId	int(11)			No	None			Change Drop More
2	departmentName	int(11)			No	None			Change Drop More

4) Table : pms_designation_master

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	designationId	int(11)			No	None		AUTO_INCREMENT	Change Drop More
2	designationName	int(11)			No	None			Change Drop More

5) Table : pms_employee_details

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	employeeId	int(11)			No	None		AUTO_INCREMENT	Change Drop More
2	employeeName	varchar(1000)	utf8mb4_general_ci		No	None			Change Drop More
3	employeeContactNumber	varchar(200)	utf8mb4_general_ci		No	None			Change Drop More
4	employeeEmail	varchar(200)	utf8mb4_general_ci		No	None			Change Drop More
5	employeeDesignation	int(11)			No	None			Change Drop More
6	employeeDepartment	int(11)			No	None			Change Drop More
7	employeeLongitude	decimal(10,8)			No	None			Change Drop More
8	employeeLatitude	decimal(10,8)			No	None			Change Drop More
9	employeePassword	varchar(200)	utf8mb4_general_ci		No	None			Change Drop More

6) Table : pms_login_log

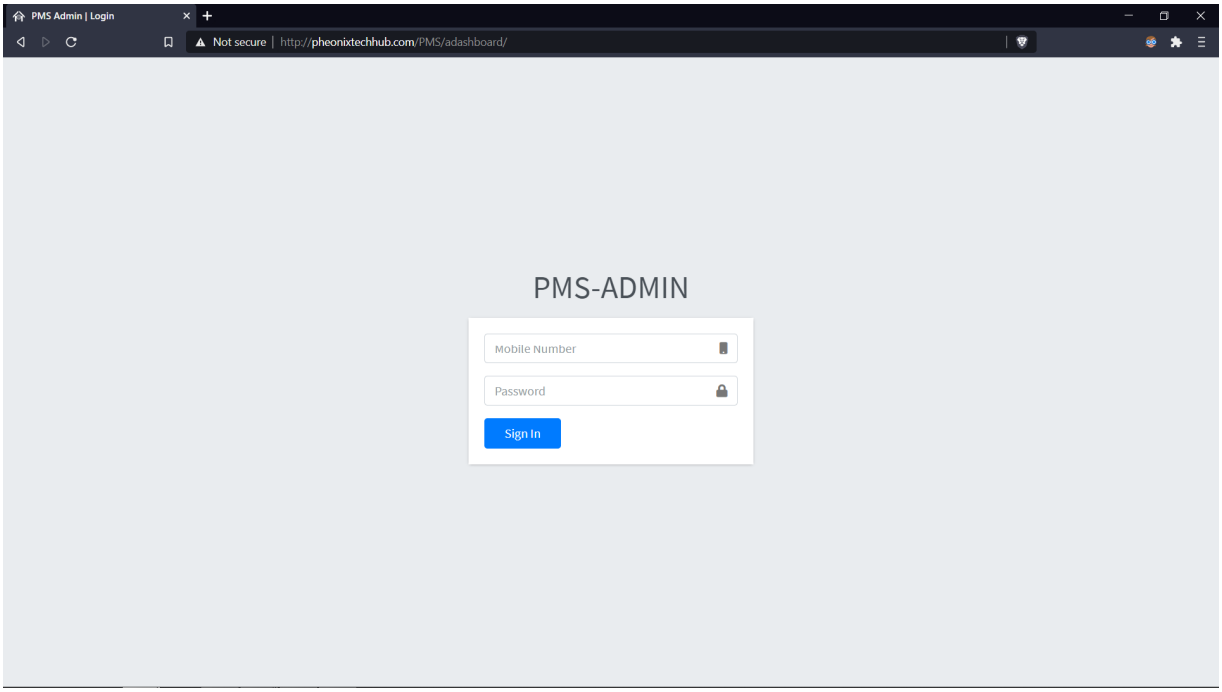
#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	loginlogId	int(11)			No	None			Change Drop More
2	loginlogEmployeeId	int(11)			No	None			Change Drop More
3	loginlogLongitude	decimal(10,8)			No	None			Change Drop More
4	loginlogLatitude	decimal(10,8)			No	None			Change Drop More
5	loginlogDate	datetime			No	None			Change Drop More

7) Table : pms_salary_details

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	salaryId	int(11)			No	None		AUTO_INCREMENT	Change Drop More
2	salaryBSPM	decimal(10,2)			No	None			Change Drop More
3	salaryTCDM	int(11)			No	None			Change Drop More
4	salaryPT	varchar(255)	utf8mb4_general_ci		No	None			Change Drop More
5	salaryPTType	varchar(255)	utf8mb4_general_ci		No	None			Change Drop More
6	salaryEPF	varchar(255)	utf8mb4_general_ci		No	None			Change Drop More
7	salaryEPFType	varchar(255)	utf8mb4_general_ci		No	None			Change Drop More
8	salaryEI	varchar(255)	utf8mb4_general_ci		No	None			Change Drop More
9	salaryEIType	varchar(255)	utf8mb4_general_ci		No	None			Change Drop More
10	salaryEmployeeId	int(11)			No	None			Change Drop More

8) Table : pms_salaryslip

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra	Action
1	salaryslipId	int(11)			No	None		AUTO_INCREMENT	Change Drop More
2	salaryslipEmployeeId	int(11)			No	None			Change Drop More
3	salaryslipMonthYear	int(11)			No	None			Change Drop More
4	salaryslipGeneratedDate	datetime			No	None			Change Drop More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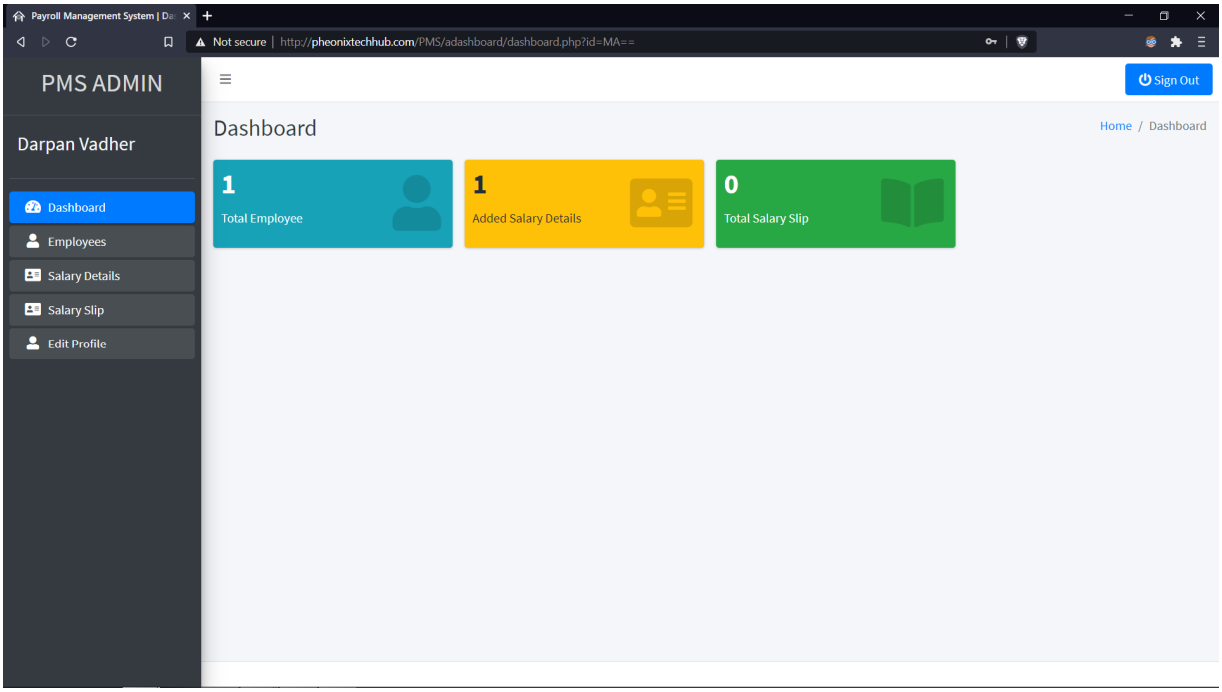
Mobile Number
Password
Sign In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Salary Slip
Edit Profile
Sign Out
Dashboard
Home / Dashboard
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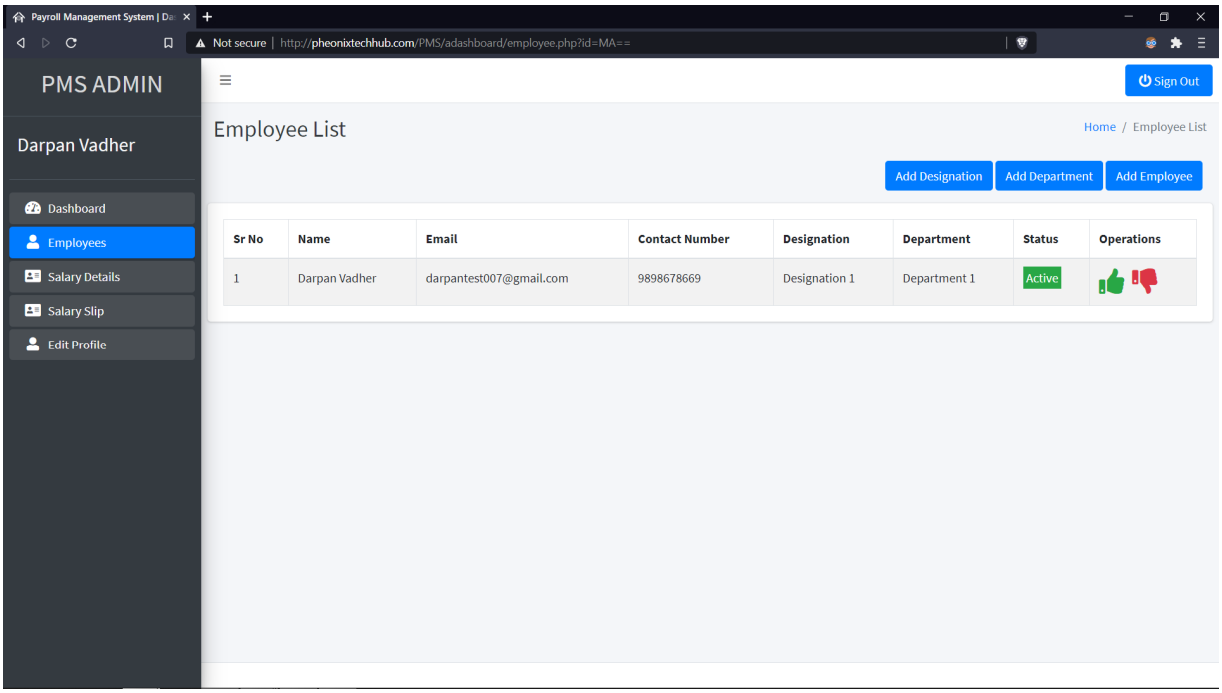
Total Employee
1
Added Salary Details
0
Total Salary Slip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Edit Profile
Sign Out
Employee List
Home / Employee List
Add Designation
Add Department
Add Employee
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Status
Operations
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darpantest007@gmail.com
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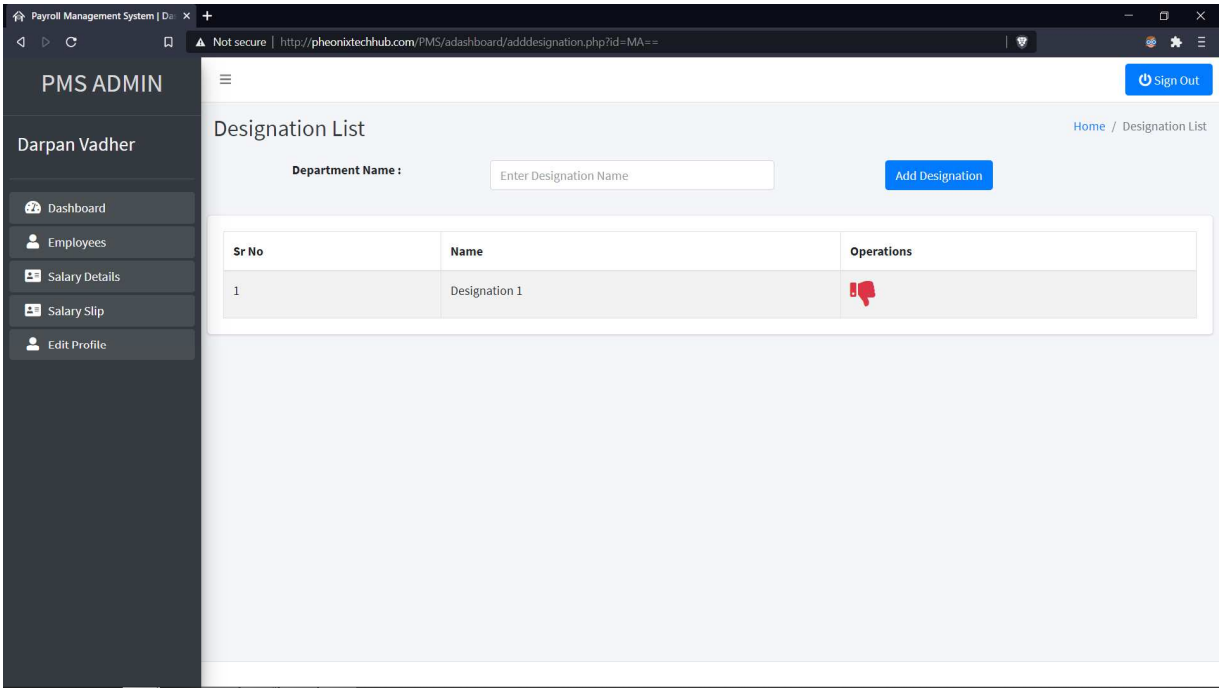
Department 1
Active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Employees
Salary Details
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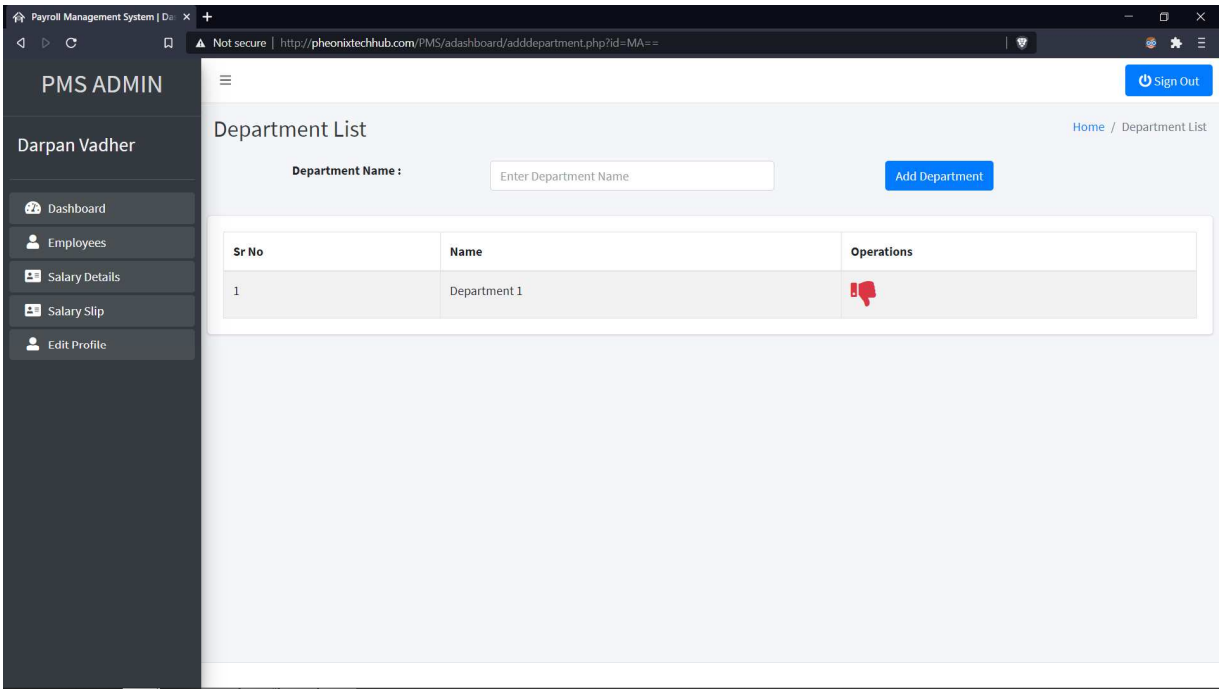
Department Name :
Enter Designation Name
Add Designation
Sr No
Name
Operations
1
Designation 1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Employees
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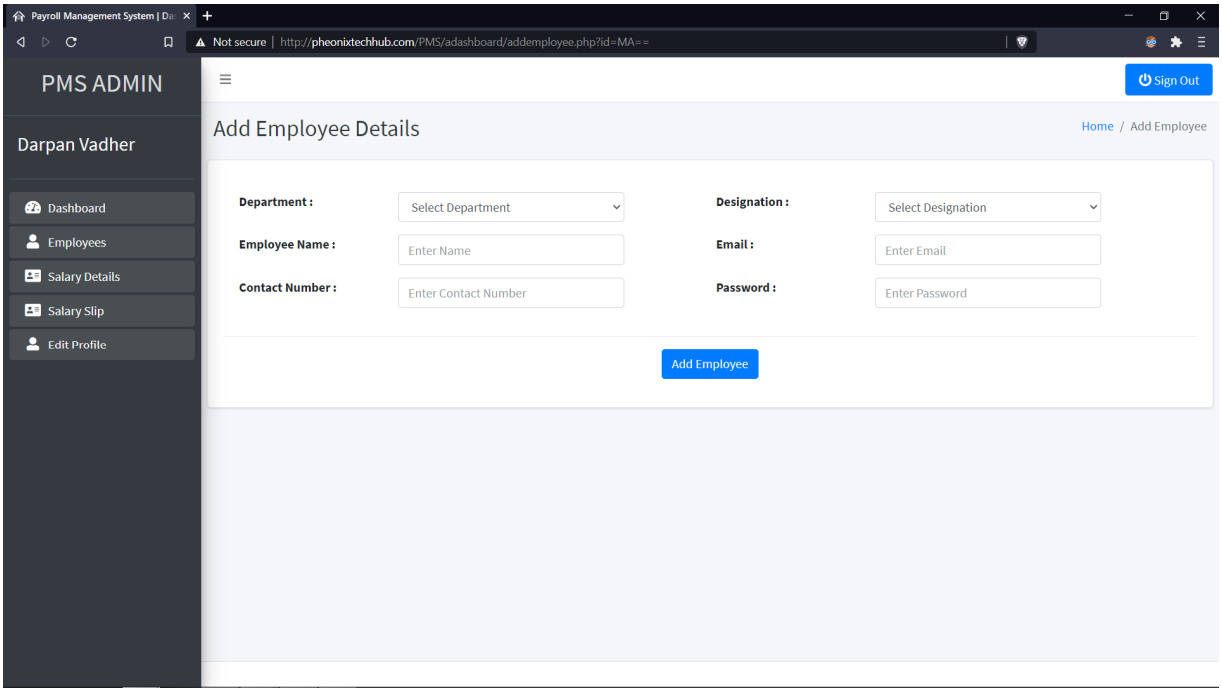
Salary Slip
Edit Profile
Sign Out
Department List
Home / Department List
Department Name :
Enter Department Name
Add Department
Sr No
Name
Operations
1
Department 1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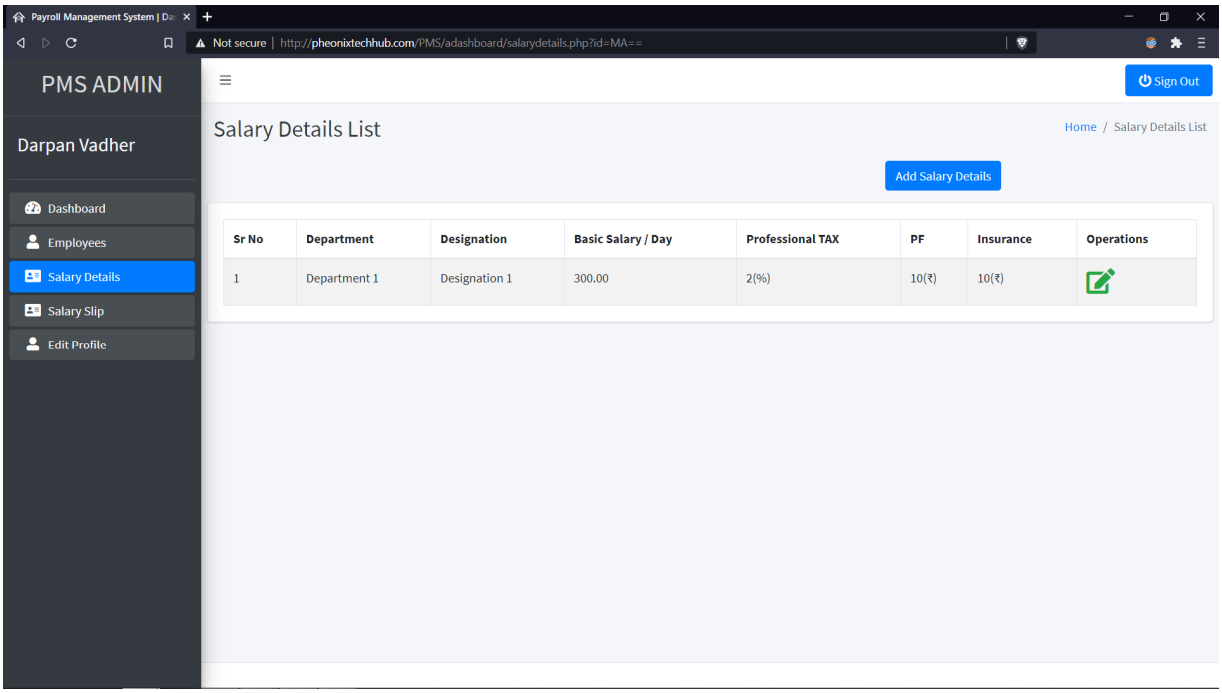
Darpan Vadher
Dashboard
Employees
Salary Details
Salary Slip
Edit Profile
Sign Out
Add Employee Details
Home / Add Employee
Department :
Select Department
Designation :
Select Designation
Employee Name :
Enter Name
Email :
Enter Email
Contact Number :
Enter Contact Number
Password :
Enter Password
Add Employee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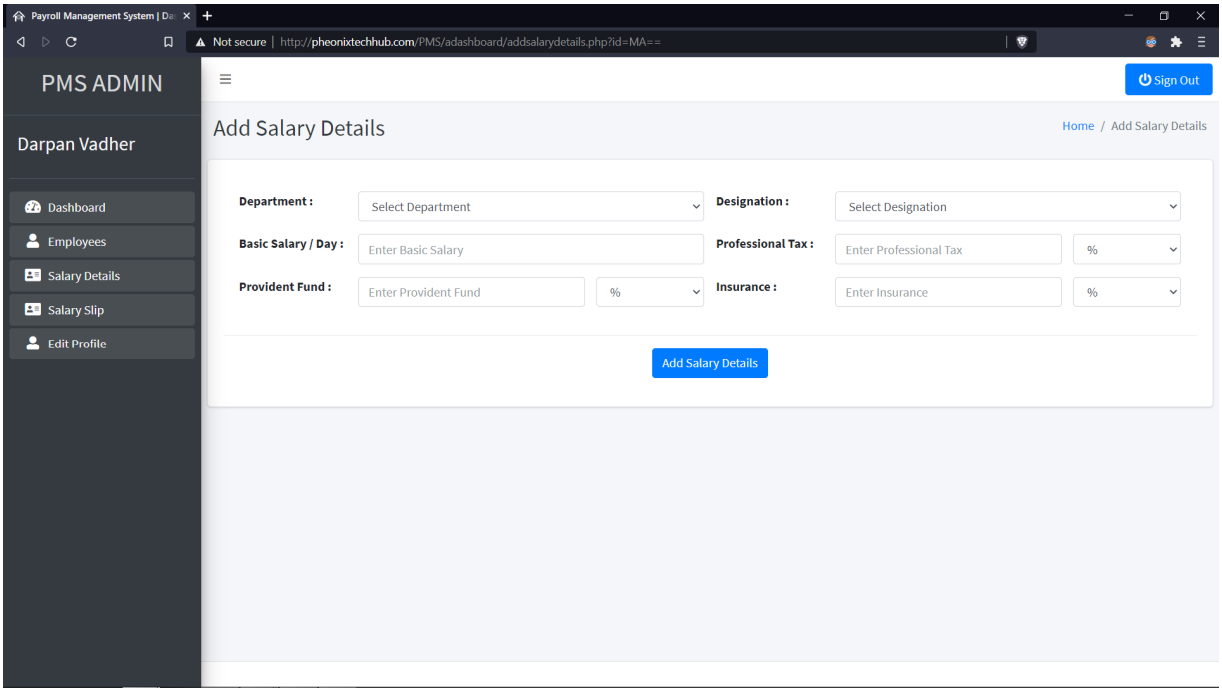
Employees
Salary Details
Salary Slip
Edit Profile
Sign Out
Salary Details List
Home / Salary Details List
Add Salary Details
Sr No
Department
Designation
Basic Salary / Day
Professional TAX
PF
Insurance
Operations
1
Department 1
Designation 1
300.00
2(%)
10(₹)
10(₹)


Payroll Management System | Da
Not secure | http://pheonixtechhub.com/PMS/adashboard/addsalarydetails.php?id=MA==
PMS ADMIN
Darpan Vadher
Dashboard
Employees
Salary Details
Salary Slip
Edit Profile
Sign Out
Add Salary Details
Home / Add Salary Details
Department :
Select Department
Designation :
Select Designation
Basic Salary / Day :
Enter Basic Salary
Professional Tax :
Enter Professional Tax
%
Provident Fund :
Enter Provident Fund
%
Insurance :
Enter Insurance
%
Add Salary Details

6 . Testing

6.1 Testing Strategy

- In our scenario test strategy is used to test the functionality of our system. We have to use to cover all scenarios. Main focus is on Functional Testing. In Functional Testing test case are used to test the application interface
- In our system testing is going to be done at individual module level. Each module will be undergone to Unit Testing and expected result is supposed to be same as actual result.

6.1.1 Admin Login

Test Case ID	TC001
Test Case Summary	This test case was conducted for checking Admin login.
Related Requirement	RS001
Prerequisite	Admin must be registered in system.
Test Procedure	1. Enter the Admin First Name, Email and password. 2. Check the First Name, Email & Password correct or not. 3. Click on login button.

Table 1: Test Case of Admin Login

6.1.2 User Login

Test Case ID	TC002
Test Case Summary	This test case was conducted for checking User login.
Related Requirement	RS002
Prerequisite	User must have to register into the system.
Test Procedure	4. Enter the User First Name, Email and password. 5. Check the First Name, Email & Password correct or not. 6. Click on login button.

Table 2: Test Case of User Login

7 . Future enhancement

- **In Future We Improve Our System Security.**
- **In Future We Add New Function according to company's requirement.**
- **In Future We Add Some bill payment options for employees.**

8 . Bibliography

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