



**K.S.K.W. ARTS, SCIENCE & COMMERCE  
COLLEGE, CIDCO, NASHIK - 8.**

University Name

Savitribai Phule Pune University

Project Name

***EMPLOYEE DATABASE AND PAYROLL MANAGEMENT  
SYSTEM***

In practical fulfillment of the requirement of the  
Degree of Bachelors of Computer Science {BCS}.

Project Completed By

PAGARE DEVENDRA RAUF (21)

PATIL DEEPIKA SHAMJI (22)

Under the Supervision of

PROF. A.D. BHANDARE

Lecture Dept. of Computer Science

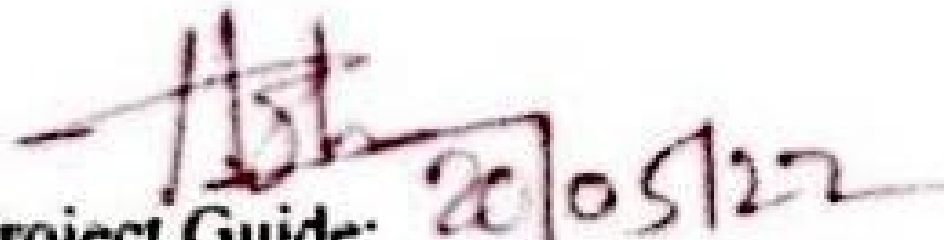


**K.S.K.W. Arts, Commerce & Science College, Cidco,  
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Department of Computer Science  
ACADEMIC YEAR 2021-2022.

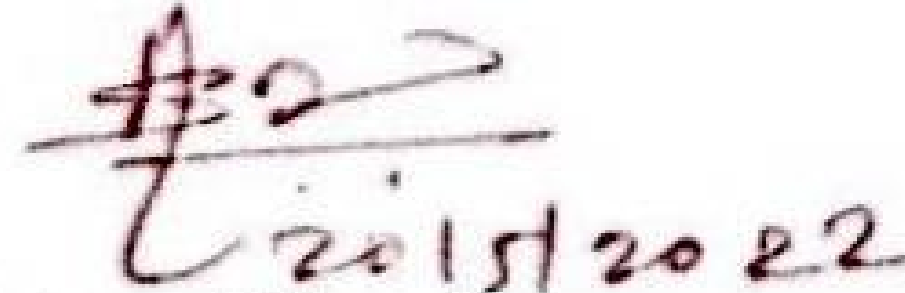
**CERTIFICATE**

This is to certify that the Project Title "*Employee Database and Payroll Management System*" has been successfully Completed by: **Pagare Devendra Babu AND Patil Bhushan Sham** in partial fulfillment of the requirements of Third year B.Sc. Computer Science to Savitribai Phule University for the academic year 2021-2022.

  
Project Guide: 20/05/22

Prof. A.D. Bhandare

  
Head of the Department:

  
Internal Examiner: 20/05/2022

  
External Examiner: 20/05/22



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## CONTENTS

TOPICS	PAGE NO.
1. Abstract	05
2. Introduction	06
3. Purpose	07-08
4. Feasibility Study	09
5. Modules	10
6. Software And Hardware Requirment Specification	11
7. Features of Payroll Management System	12
8. Entity Relationship Diagram(E R)	13
9. Sequence Diagram	14
10. Use Case Diagram	15
11. Activity Diagram	16
12. Class Diagram	17
13. Deployment Diagram	18
14. Output Screen Display	19
15. Database Tables	20-22
16. Conclusion	23
17. Bibliography	24



## ABSTRACT:

- ❖ "Employee Database And Payroll Management System" is designed to make the existing manual system automatic with the help of computerised equipment and full-edged computer software, fulfilling their requirements, so that their valuable data and information can be stored for a longer period with easy access and manipulation of the same.
- ❖ The required software is easily available and easy to work with. This web application can maintain and view computerised records without getting redundant entries.
- ❖ The project describes how to manage user data for good performance and provide better services for the client.



## INTRODUCTION

- A. The proposed project "Employee Database and Payroll Management System" has been developed to overcome the problems faced in the practicing of manual system. This software is built to eliminate and in some cases reduce the hardships faced by the existing system. Moreover this system is designed for particular need of the company to carry out its operations in a smooth and effective manner.
  
- B. This web application is reduced as much as possible to avoid errors while entering data. It also provides error message while entering invalid data. It is user-friendly as no formal knowledge is required to use the system.
  
- C. Human resource challenges are faced by every organization which has to be overcome by the organization. Every organization has different employee and payroll management needs. Therefore I have design exclusive Employee and payroll Management System that are adapted to the organization's Managerial Requirements.



## ❖ PURPOSE

- A. The purpose of this document is to describe the functionality and specifications of the design of a web application for Managing Employees and their payroll
- B. The expected audiences of this document are the developers and the admin of the web application.
- C. Now with the help of this system the admin has the information on his finger tips and can easily prepare a good record based on their requirements.
- D. Finally, we can say that this system will not only automate the process but save the valuable time of the manager or the admin, which can be well utilized buy his institute.
- E. This will be an additional advantage and management of power based on their free time from his normal duty.



### EXISTING SYSTEM: -

1. Lack of security of data.
2. More man power.
3. Time consuming.
4. Needs manual calculations

### PROPOSED SYSTEM: -

1. Security of data
2. Ensure data accuracy.
3. User friendliness and interactive.
4. Minimum time required.



## FEASIBILITY STUDY

### ❖ **TECHNICALLY FEASIBLE:**

- This software is very much technically feasible. This software is very much concerned with specifying equipment and the software will successfully satisfy almost all the admin's requirements.
- The technical need for this system may vary considerably but might include:
  - a. The facility to produce output in a given time.
  - b. Response time under certain conditions.
  - c. Ability to process data at a particular speed.

Therefore, the basic input/output of data is identified. So, the project can easily be build up and it will also be technically feasible.

### ❖ **ECONOMIC FEASIBLE:**

- The project is very much financially feasible. The implementation and development cost of this software under the reach of any college.
- Moreover, it requires some training for the use. So, training cost can be neglected and the resources of this software are very much available. It also reduces the labour and extra cost to be paid for labour. So indeed, it is financially feasible.



## ➤ MODULES:

### ➤ ADMIN

The Admin gets logged in by valid username and password. Admin can add new Employee, add new Department, add new Pay Grade for the employees. Admin can set the 'from' and 'to' date worked by an employee in a department with specific pay grade. The admin can generate an automated monthly salary of an employee. The admin can view all the past records of any recorded employee.

### ❖ ADVANTAGES

- It is cost effective as the user control the web application himself and does not go for professional service.
- It saves time as it speeds up every aspect of the employee database management and payroll process with a range of automated features.
- It is secure as the employee database and the payroll process is managed by the admin in house rather than sending private information to a third party.
- Validating procedures and checks restrict user from making mistakes.
- The software is easy to use and is user friendly so no expertise is required.
- The calculations are automated so no chance of error.

### ❖ DISADVANTAGES

- It requires an internet connection.
- It requires large database



## ❖ SOFTWARE AND HARDWARE REQUIREMENT SPECIFICATION

### ➤ **AVAILABLE TECHNOLOGIES:**

- Front End: HTML, PHP,
- DBMS: MySQL
- Web Server: Apache server
- Operating System: Windows, Linux

### ➤ **TOOLS USED:**

- Operating System: Windows 10
- Editor Used: Apache server for MySQL

### ➤ **HARDWARE USED:**

- Processor: Intel core i3
- RAM: 2GB
- Hard Disk: 1TB



## ❖ FEATURES OF PAYROLL MANAGEMENT SYSTEM:

- Easy to use.
- It is completely secure.
- It is completely controlled by admin.
- This system is easily compatible with most of the web browsers.
- It is very interactive and saves time.
- Reduces paper works.
- Calculations are automated so it is highly accurate.
- Admin can view all the records whenever necessary with ease.

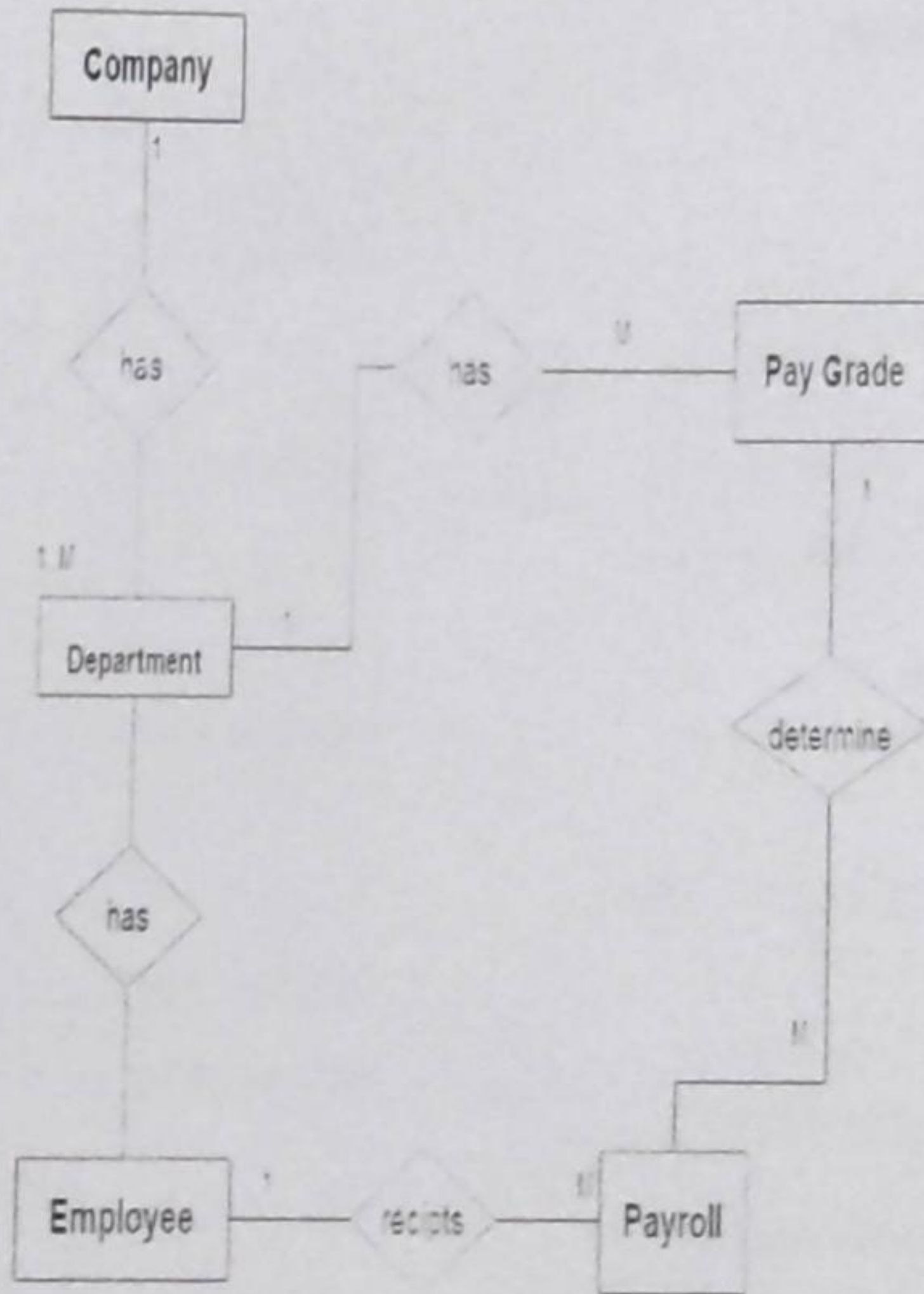
## ❖ FUTURE SCOPE OF THE WORK:

- The option to print the records In future.
- I intend to add a leave structure in the future.
- I would like to implement a regular backup mechanism to back up the employee database to avoid disasters.
- The system can be developed in such a way that its existing features can be modified to better versions.



### ➤ E-R DIAGRAM

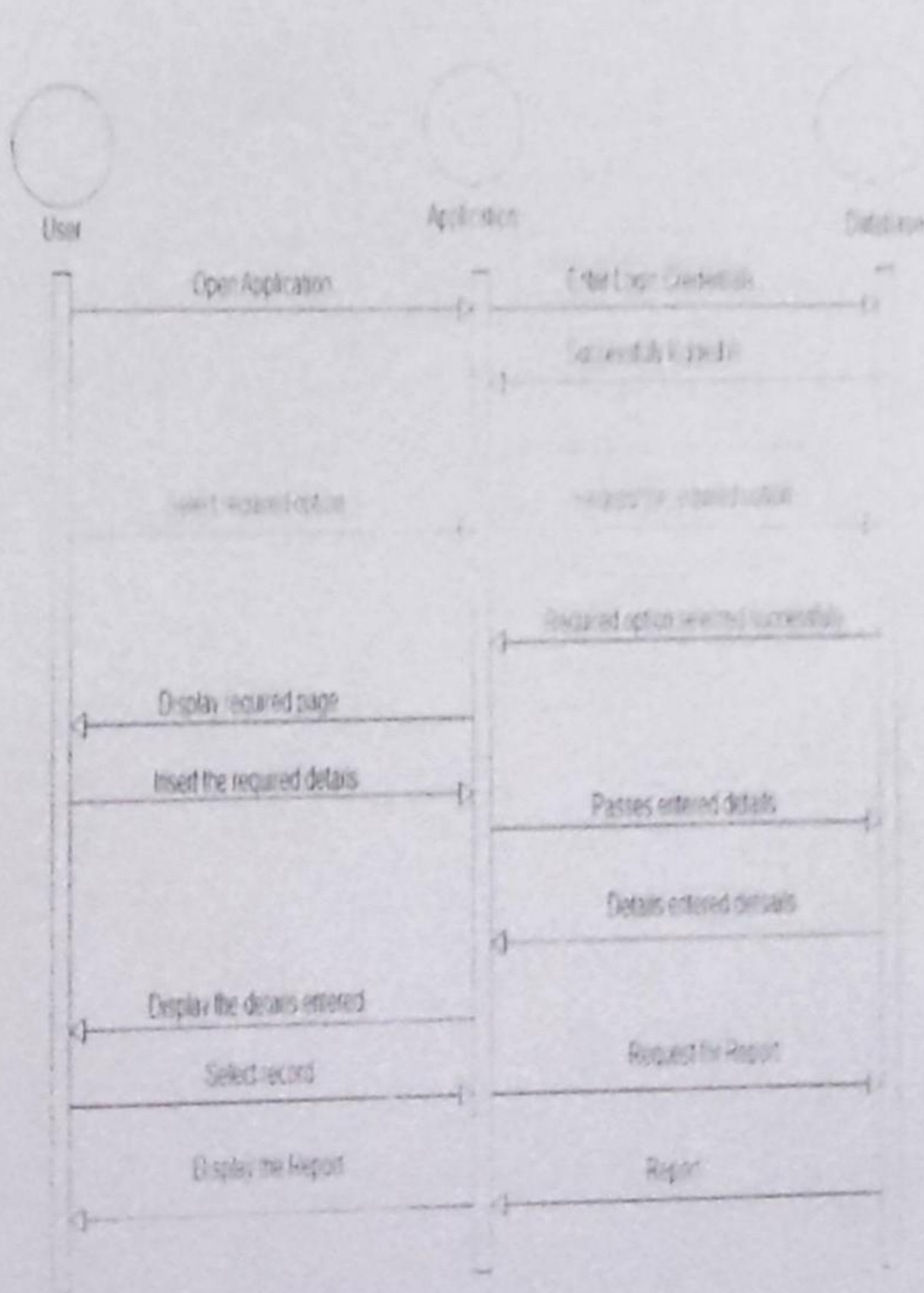
E . R . DIAGRAM





## ➤ SEQUENCE DIAGRAM

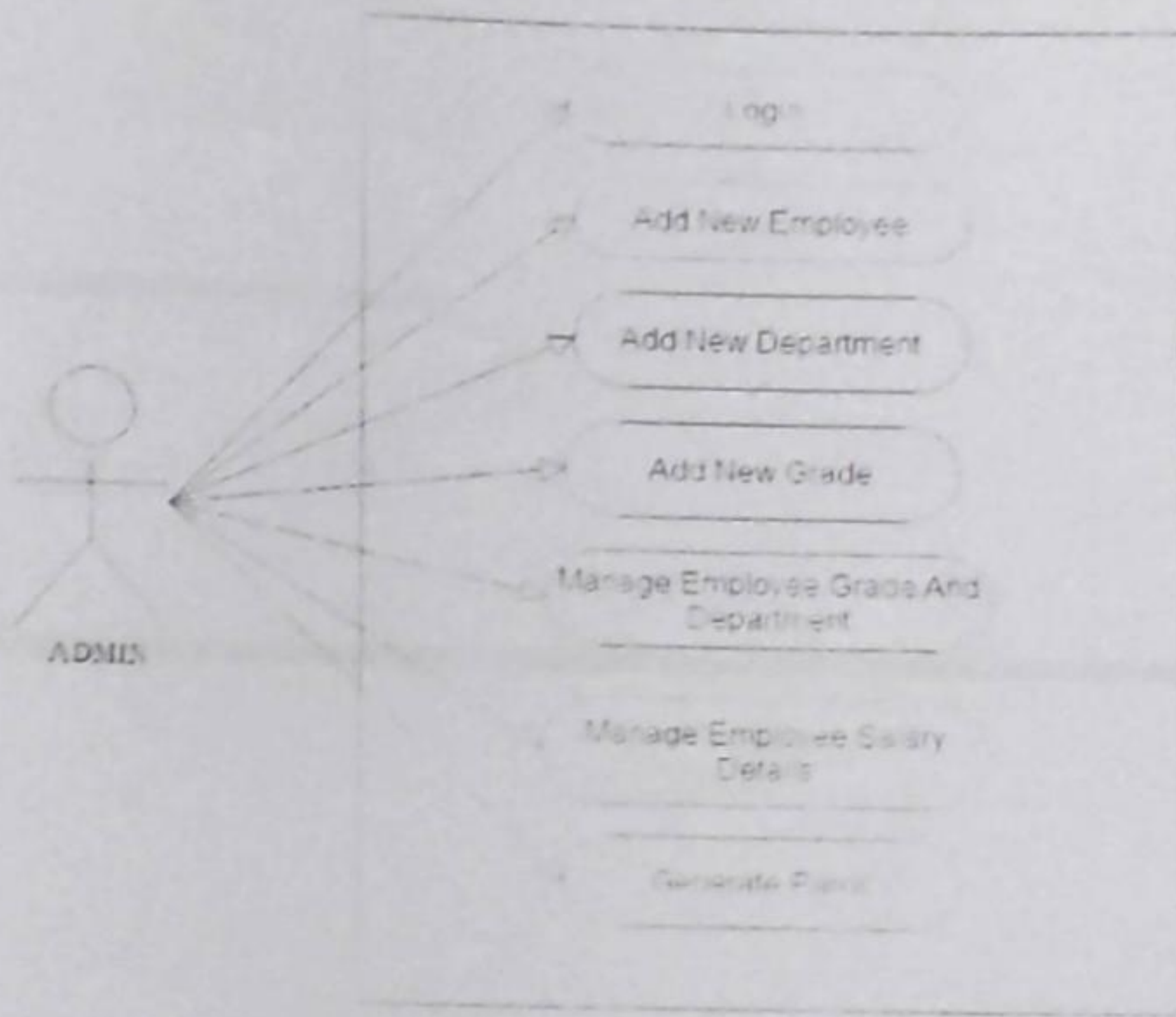
SEQUENCE DIAGRAM





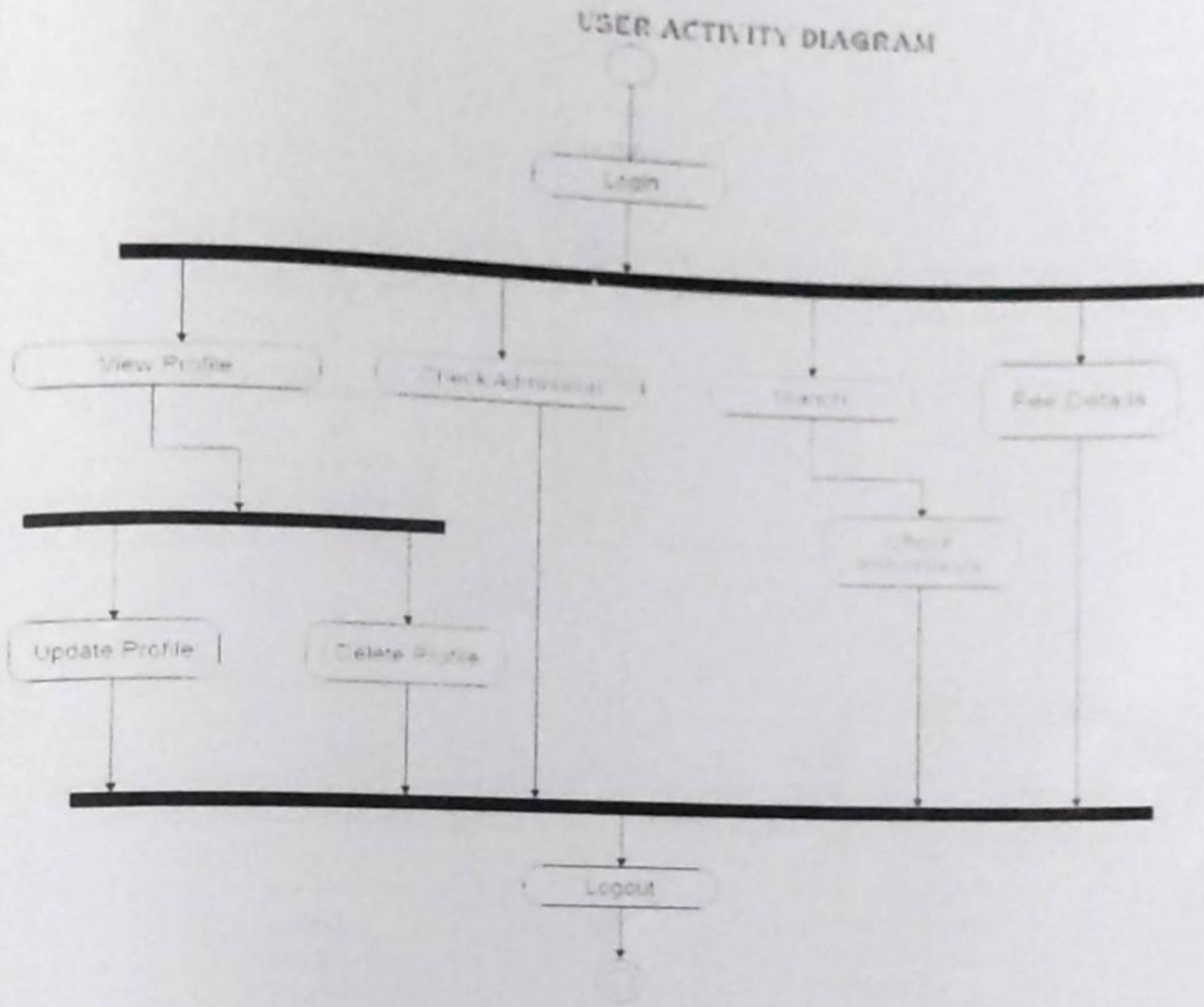
## ➤ USE-CASE DIAGRAM

USE CASE DIAGRAM



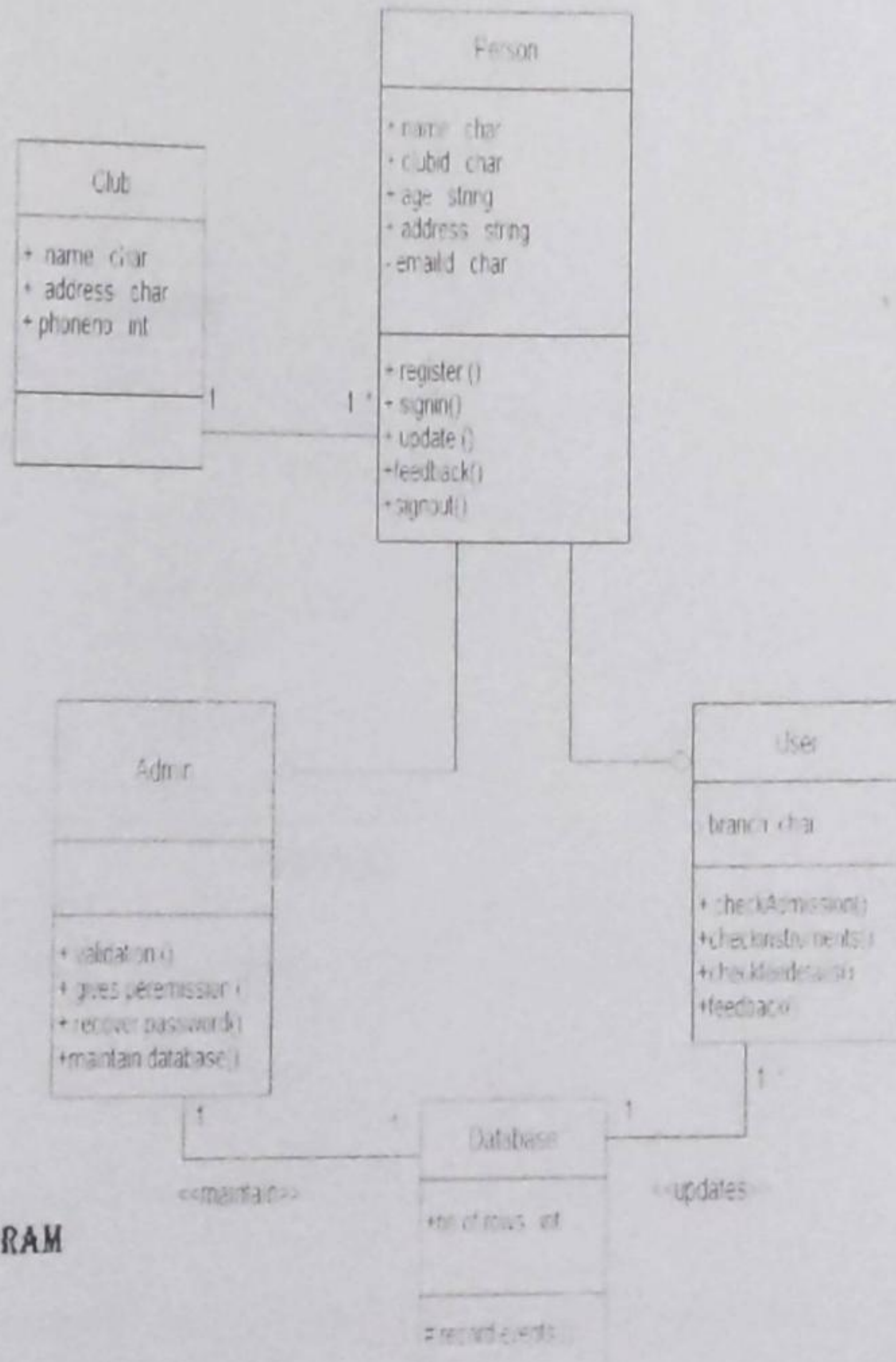


# ➤ ACTIVITY DIAGRAM





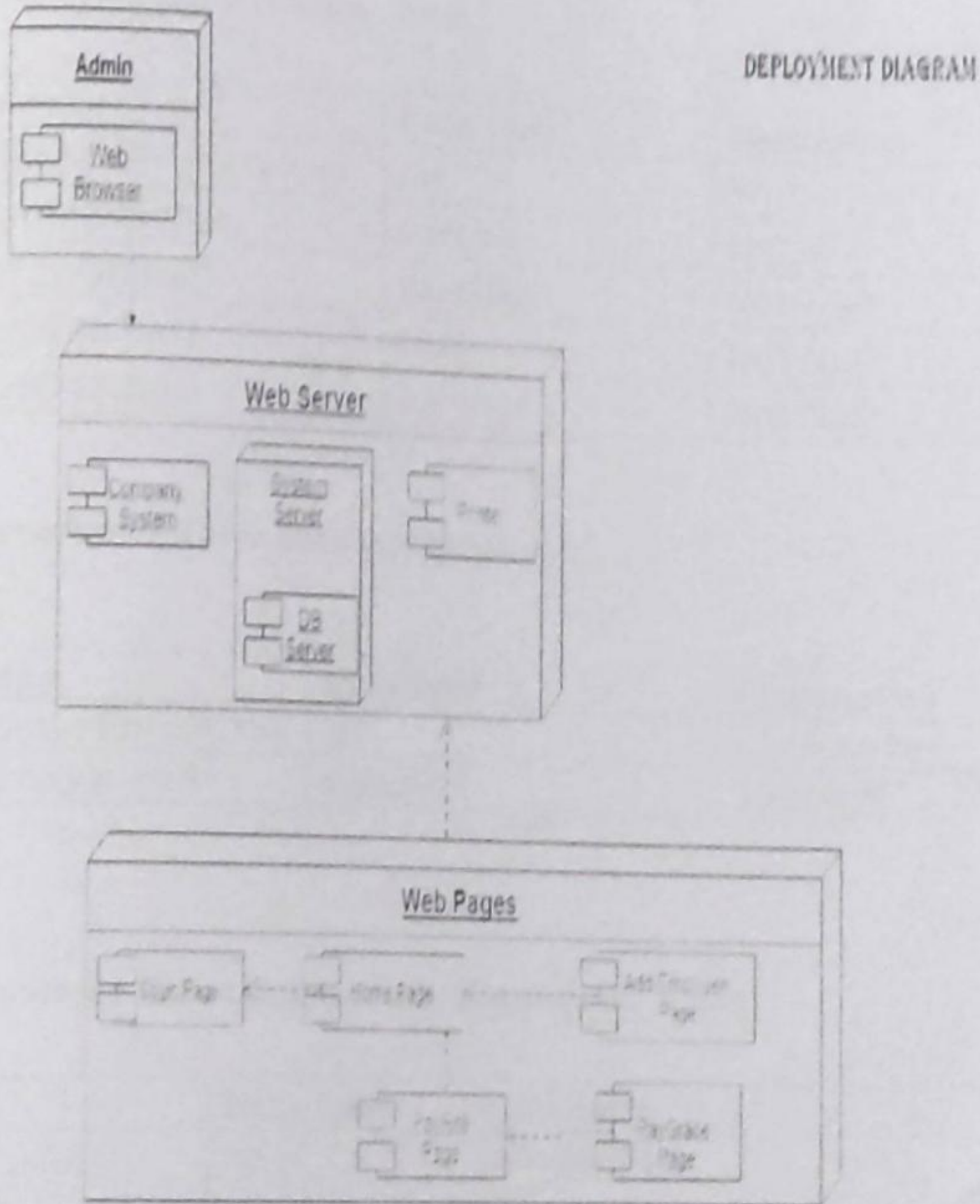
### ➤ CLASS DIAGRAM



CLASS DIAGRAM



# ➤ DEPLOYMENT DIAGRAM







## DATABASE TABLE

- User Table Database Structure:

Field Name	Data Type	Description
user_id(int) – Primary Key	int	Primary key
user_name(varchar)	varchar	Not Null
password(varchar)	varchar	Not Null
email_id(varchar)	text	Not Null
usertype(varchar)	varchar	Not Null

- Department Table Database Structure:

Field Name	Data Type	Description
dept_id(int) – Primary key	int	Primary key
dept_name(varchar)	varchar	Not Null

- Employee Grade Details Table Database Structure:

Field Name	Data Type	Description
transaction_id(int)- Primary Key	int	Primary Key
emp_id(int)	int	Not Null
emp_dept_id(int)	int	Not Null
emp_grade_id(int)	int	Not Null
emp_from_date(date)	date	Not Null
emp_to_date(varchar)	varchar	Not Null



- Employee Salary Details Table Database Structure:

Field Name	Data Type	Description
transaction_id(int) -Primary Key	Int	Primary Key
emp_id(int)	Int	Not Null
emp_salary_month(vvarchar)	Vvarchar	Not Null
emp_salary_year(vvarchar)	Vvarchar	Not Null
emp_salary_eimbursment_date(datetime)	Datetime	Not Null
emp_dept_id(int)	Int	Not Null
emp_grade_id(int)	Int	Not Null
emp_basic(int)	Int	Not Null
emp_da(int)	Int	Not Null
emp_ta(int)	Int	Not Null
emp_hra(int)	Int	Not Null
emp_ma(int)	Int	Not Null
emp_bonus(int)	Int	Not Null
emp_pf(int)	Int	Not Null
emp_pt(int)	Int	Not Null
emp_gross(int)	Int	Not Null
emp_total_salary(int)	Int	Not Null

- Employee Table Database Structure:

Field Name	Data Type	Description
emp_id(int) – Primary Key	Int	Primary Key
emp_title(vvarchar)	Vvarchar	Not Null
emp_name(vvarchar)	Vvarchar	Not Null
emp_dob(date)	Date	Not Null
emp_doj(date)	Date	Not Null
emp_address(vvarchar)	Vvarchar	Not Null
emp_city(vvarchar)	Vvarchar	Not Null
emp_pincode(int)	Int	Not Null
emp_mobile_no(int)	Int	Not Null
emp_state(vvarchar)	Vvarchar	Not Null
emp_mail_id(vvarchar)	Vvarchar	Not Null
emp_pan_no(vvarchar)	Vvarchar	Not Null
emp_upload_pan()		Not Null



- Grade Table Database Structure:

Field Name	Data Type	Description
grade_id(int) – Primary Key	int	Primary Key
grade_name(varchar)	Varchar	Not Null
grade_short_name(varchar)	Varchar	Not Null
grade_basic(int)	Int	Not Null
grade_ta(int)	Int	Not Null
grade_da(int)	Int	Not Null
grade_hra(int)	Int	Not Null
grade_ma(int)	Int	Not Null
grade_bonus(int)	Int	Not Null
grade_pf(int)	Int	Not Null
grade_pt(int)	Int	Not Null





# OUTPUT SCREEN DISPLAY

The screenshot displays three distinct panels of the software interface:

- Top Panel:** A search or filter form with fields for 'Employee ID' and 'Employee Name', and buttons for 'Search' and 'Clear'.
- Middle Panel:** A vertical list of action buttons: 'Add New Employee', 'Add New Department', 'Add New Grade', 'Employee Grade Details', 'Request Monthly Salary', and 'Generate Report'.
- Bottom Panel:** A form titled 'WELCOME GRADE DETAILS' with fields for 'Employee ID', 'Employee Name', 'Department', 'Grade', 'Salary', and 'Status'. It includes a 'Generate Report' button.



WELCOME

### EMPLOYEE REPORT DETAILS

Department Name

WELCOME

### GRADE DETAILS

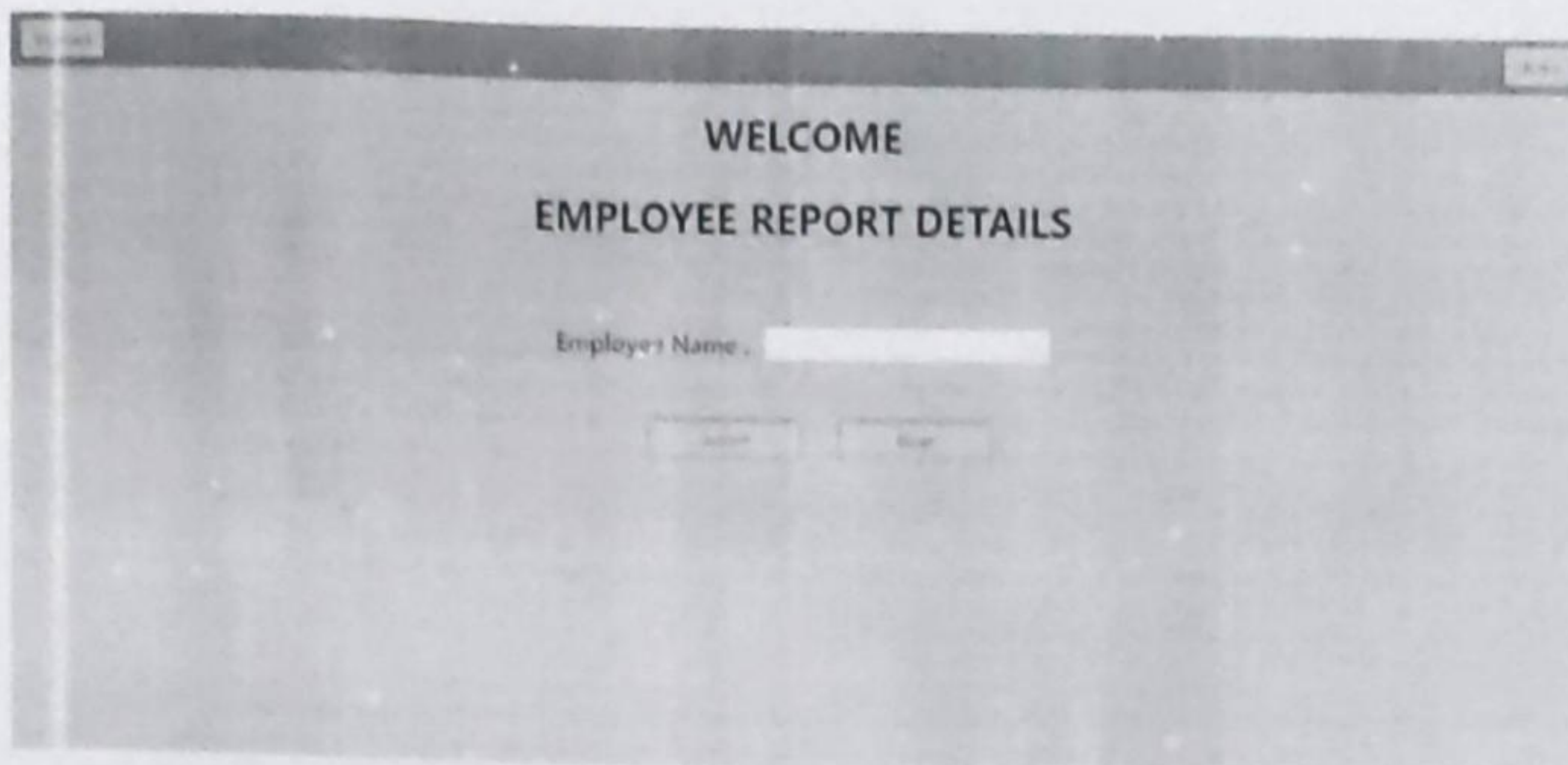
Grade Name	<input type="text"/>	Grade Description	<input type="text"/>
Min	<input type="text"/>	Max	<input type="text"/>
Grade Interval	<input type="text"/>	Grade Step	<input type="text"/>
Grade Minimum	<input type="text"/>	Grade Maximum	<input type="text"/>
Grade Step	<input type="text"/>		

WELCOME

### GRADE DETAILS

Employee ID	<input type="text"/>	Employee Name	<input type="text"/>
Employee Grade	<input type="text"/>	Employee Salary	<input type="text"/>
Employee Status	<input type="text"/>	Employee Position	<input type="text"/>
Employee Department	<input type="text"/>	Employee Location	<input type="text"/>
Employee Title	<input type="text"/>	Employee Job Code	<input type="text"/>
Employee Role	<input type="text"/>	Employee Job Title	<input type="text"/>
Employee Job Code	<input type="text"/>	Employee Job Title	<input type="text"/>





### ➤ **CONCLUSION:**

This project is built keeping in mind that it is to be used by only one user that is the admin. It is built for use in small scale organization where the number of employees is limited. According to the requested requirement the admin can add, manipulate, update and delete all employee data in his organization. The admin can add new departments and delete them. The Admin can also add predefined pay grades for the employees. The required records can be easily viewed by the admin anytime time he wants in an instant. The payment of the employee is based on monthly basis. Numerous validations implemented would enable the admin to enter accurate data. The main objective of this framework is to save time, make the system cost effective and management records efficiently.



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