



G.M.D. ARTS, B.W. COMMERCE & SCIENCE COLLEGE, SINNAR.

Department Of Computer Science

A Project Report on
“Employee Management System”

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Savitribai Phule Pune University 2022-2023

M.V.P. Samaj's.

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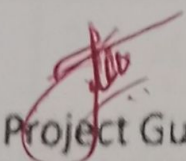
CERTIFICATE

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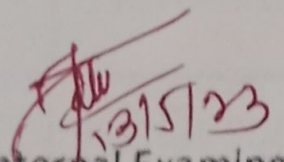
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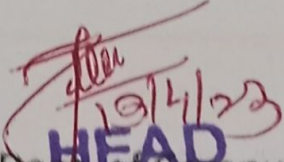
Student of B.Sc. Computer Science has satisfactory completed Project work on "Employee Management System", towards partial fulfillment of degree course affiliated to Savitribai Phule Pune University for the Academic Year 2022-2023 at G.M.D. ARTS, B.W. COMMERCE & SCIENCE COLLEGE, SINNAR.


Project Guide

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Internal Examiner




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Employee management system

ABSTRACT

This report includes a development presentation of an information system for managing the staff data within a small company or organisation. The System as such as it has been developed is called Employee ManagementSystem. It consists of functionally related GUI (application program) and database. The choice of the programming tools is individual and particular.

Keywords:

Information system, Database system, DBMS, parent table, child table, table fields, primary key, foreign key, relationship, sql queries, objects, classes, controls.

INTRODUCTION

This chapter gives a brief theoretical preview upon the database information systems and goes through the essence of the problem that should be resolved.

Most of the contemporary Information systems are based on the Database technology as a collection of logically related data, and DBMS as a software system allowing the users to define, create, maintain and control access to the database. The process of constructing such kinds of systems is not so simple. It involves a mutual development of application program and database. The application program is actually the bridge between the users and the database, where the data is stored. Thus, the well-developed application program and database are very important for the reliability, flexibility and functionality of the system. The so defined systems differentiate to each other and their development comprises a great variety of tasks to be resolved and implemented.

Information system suggests a computer technology to be used in order to provide information to users in an organisation (for instance), as for the purposes of data transformation into useful information; computer hardware and software are designed and used. A particular case is the Human Resources Information System development. These kinds of systems are responsible for storing data of the staff within an organisation and generating reports upon request.

Such a system could be integrated with other Information systems or modules Accounting Information System (AI) ± designed to transform financial data into information, or Management Information

System (MIS) that provides decision-oriented information to managers, and so. Organisations depend on Information Systems in order to stay competitive. Productivity, which is crucial to staying competitive, can be increased through better Information Systems.

2.1 MOTIVATION

The purpose of an employee management system is to help improve workforce productivity, identify ways to engage and retain talent, and alleviate administrative burdens for HR

professionals. Achieving greater efficiency through the use of technology can also help control costs and minimise compliance risks.

Worker management describes the process by which employers ensure optimal performance from their employees. This often requires a combination of traditional managerial techniques, like coaching and positive reinforcement, as well as state-of-the-art technology, which uses data to help monitor engagement trends, create workforce strategies and deploy them effectively.

2.2 PROBLEM STATEMENT

This report's documentation goes through the whole process of both application program and database development. It also comprises the development tools that have been utilised for these purposes.

Problem Discussion

This system should consist of an application program, on one hand, and a database(repository of data) on the other. The program should perform the basic operations upon the database as retrieving, inserting, updating and deleting data. Any Additional Functionality is a goal of a further module development. It is a kind of strategy to start the development from designing and constructing the database, as this structure will determine the further structure of the application program. The logical database model (tables, their content and the relationships between them) should respond to the given task and cover the basic requirements. The Interface of the program should be user-friendly, and the program should be as easy for use as it is possible. Both controls and forms should logically and functionally be related within the program and fully respond to the structure of the database. Another problem is establishing the connections with the database, every time, when query is needed to be performed upon it. Exception-handling should also be taken into account during the systems development due to eventual exceptions that may occur.

Report Overview

The overview and its subsections will turn the attention to the method for resolving the problem, the programming environments used for developing the system and the implementation of the operations performed upon the database.

- Overall Description
- Software Interface: User Interface

2.3 PURPOSE / OBJECTIVE GOALS

Employees are the backbone of any company; their management plays a major role in deciding the success of the organisation. Our QUEUE(our group name) understands this fact and therefore designed a unique and 100% functional employee management system. This system uses employee management software that helps in assembling, organising and managing the information of the employees as required by you. Every Organization has different employee management issues to be addressed, so we design customised employee information management system that could fit into your company requirement frame. Our QUEUE' suggests employee management system is not solely for big companies, but every organisation that requires managing of their HR needs or workforce. Employee management software makes easy for the employer to keep a track and check on the human resource department just by a click of the mouse from anywhere in the world thus making the work extremely easy for people having offices at different locations. It makes it easy to monitor the

workings of the employees and manage them. Employee information management helps in deciding the future management needs and any changes that have to be made for greater productivity. It keeps the records of the functions performed by the individual employee playing a vital role at the time of performance appraisal. Employee management software can carry out many functions like employee data analysis, employee monitoring, centralised employee database, management of the time sheet, etc.

2.4 LITERATURE SURVEY

Literature review consists of various sections that tell us about application and benefits of using this system.

2.5 SCOPE AND LIMITATIONS

In fixed scope, when you send us the enquiry, we determine the scope of work for your project upfront and give you pricing and timeline estimate upfront. Once you send us the enquiry, we analyse the same and reply to you with our understanding of your requirements along with the queries and suggestions. After we receive your clarifications, we finalise the scope of work, determine which technology will be used for this project and give you the timeline estimate. After we receive your approval on the pricing and timeline, we start with the project development which begins with requirement analysis by the technical team. Once the project is complete in the local system, we deploy the project. Subsequently our ³QUEUE team does the quality testing of your project and after their approval we ask you to test the functionalities and after approval, we close the project.

LIMITATIONS

The major limitations of the project are as follows:

- Due to the constraint of resources and time, the size of the project could not be increased.
- The project has been developed through utilising the records of the employees and other information available at certain organisations. The requirements gathered through various sources might not be properly reflected in the requirements analysis and the design documents due to limited knowledge and time.

3 SYSTEM ANALYSIS

Employee management system to be developed such that it is capable of marking attendance of each employee. Data of users should be secured and must be accessed easily whenever required. Data to be structured such that it can be reused. Proper management of holidays to be done, which is an important concern in calculating salary of employees. Applications should be capable of giving salary, total working hours, overtime, present days at the end of month in just a click

3.1 EXISTING SYSTEM

Existing employee management system in the organisation still uses the ordinary classical methods which are merely based on pen-paper to record the data of their employees. Large quantities of registers are to be maintained for this purpose which results in downright waste of time in generating reports searching for employee's records and loss of data if any file is lost. It is also an arduous task for organisations as it is an expensive process. However, somewhere new technologies such as web based systems, lot based systems are used but they also are costly and difficult to implement at some places. The other techniques that are in the market are dependent on facial recognition, biometric scan or card punching. But all of these require an external device to be installed in the working area, which is again a costly process and requires regular maintenance.

This project eliminates or reduces as much as possible the difficulties of the existing system and avoids errors while entering data. In comparison to the existing system it is cheaper, easy to implement, easy to use, no maintenance required, on time data and saves lots of time .

Disadvantages:

- Require external device, which is costly and require heavy maintenance -
Needs an extra manual effort.

3.2 SCOPE AND LIMITATIONS OF EXISTING SYSTEM

Scope

Computerised employee management system is a web based application that can be accessed from anywhere within an operating system by the authorised user. The system would be centrally managed and controlled which is designed to run on the organisation.

Our project EMS is an online application where we create a website to check Number of employees in each branch, Employees records, Tasks and time frame, attendance records, salary details, etc. The employees can submit their attendance, and the managers can check employee

attendance and his task details, applying for leave etc. Also Branch Manager can calculate and payouts salary to his employees. Project can be developed for online services by which any employee can see their details anytime and anywhere. Our system does not include: Allocating dorms to employees of the project can be developed with a centralised database so that the data storage and backup services will be easy.

Limitation

Lack of sufficient information about the existing system because employers are not voluntary to give such full information. Shortage of possible data collecting device and instrument. Such as sound recorder, digital camera. Financial problem. Missing of class when we gather the information. Shortage of time.

3.3. PROJECT PERSPECTIVE FEATURES

- **User- Friendly Interface. ...**
- **Time and Attendance Tracking. ...**
- **Performance and Productivity Tracking. ...**
- **Employee Scheduling. ...**
- **Employee Self-Service Portal. ...**
- **Automated Onboarding. ...**
- **Compliance Tracking. ...**
- **Security and Data Protection.**

3.4 STAKEHOLDERS

- Admin
- Employee

3.5 REQUIREMENT ANALYSIS

Functional requirements are the details and instructions that dictate how software performs and behaves. Typically, software engineers create and apply functional requirements to software during the development stages of a project to ensure their software is easy to use and operational. Functional requirements can vary in behaviours, features and protocols, depending on the user's industry. For example, a video game designer may use different functional requirements in software that focus on game design, while a teacher may use functional requirements that focus on student usability.

- Website
- Mobile app
- Customer management system
- Sales software
- Video game software

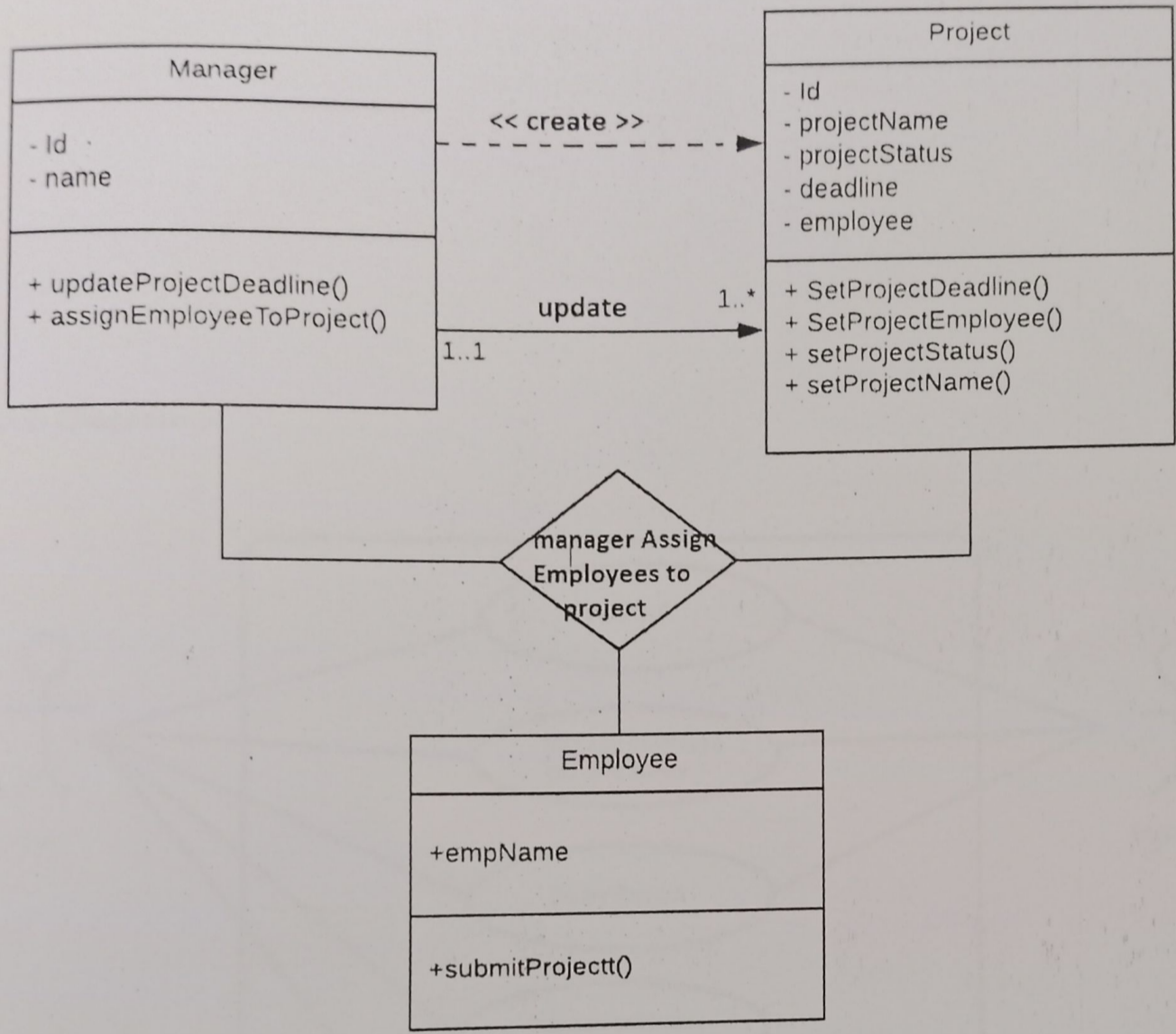
SYSTEM DESIGN

4.1 Design Constraints :

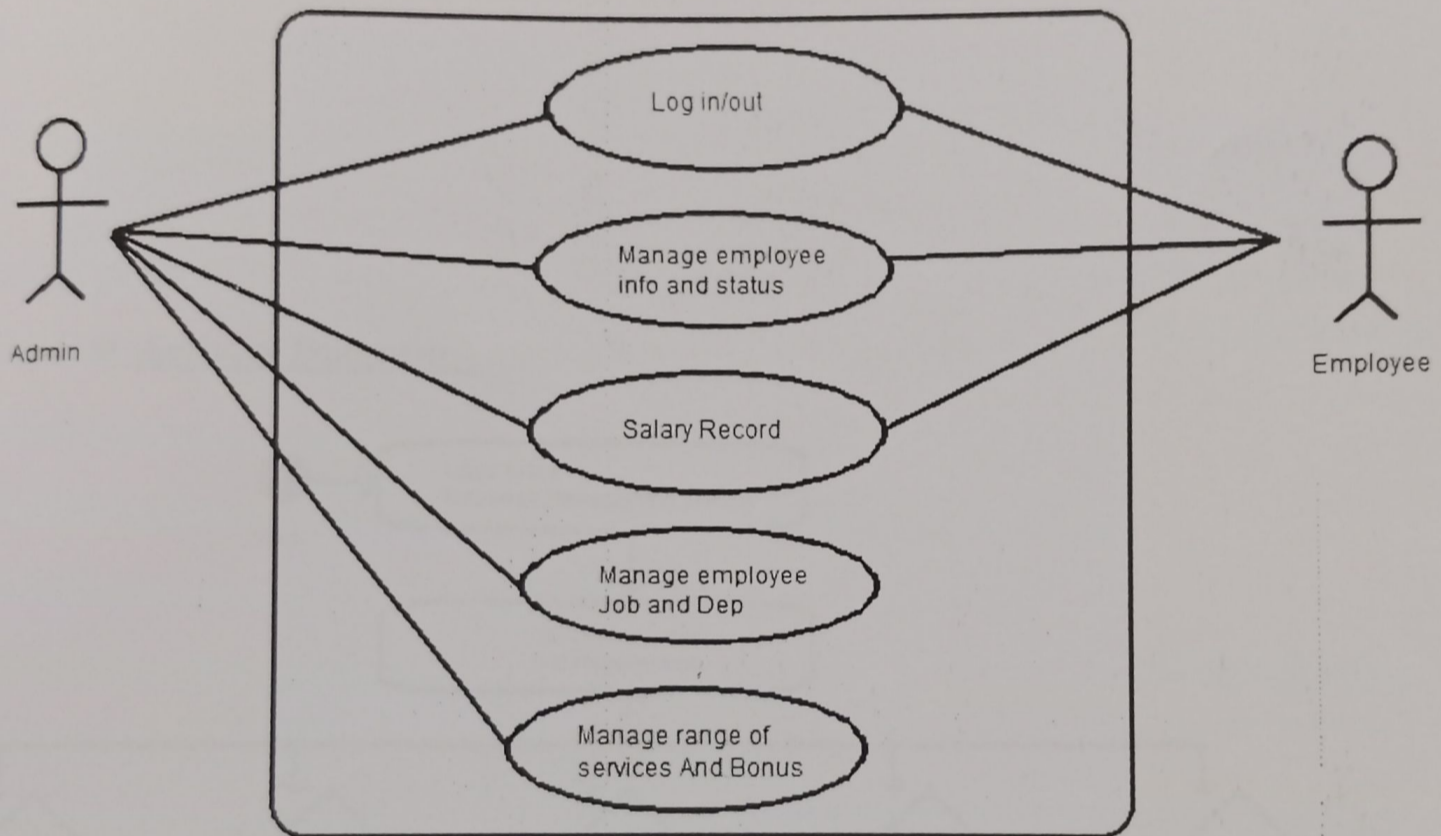
The logical model is Subject to review by both the management and the user who agree that the model does in fact reflect what should be done to solve the problem. System analysis is not a precise science. It is in fact more of an art, aided by scientific approach to find definition and recording data, gathering traditional structures is only one part of the system analysis, the next step is to examine the data, assess the situation and looking at the alternative

SYSTEM MODEL:

ER DIAGRAM:-

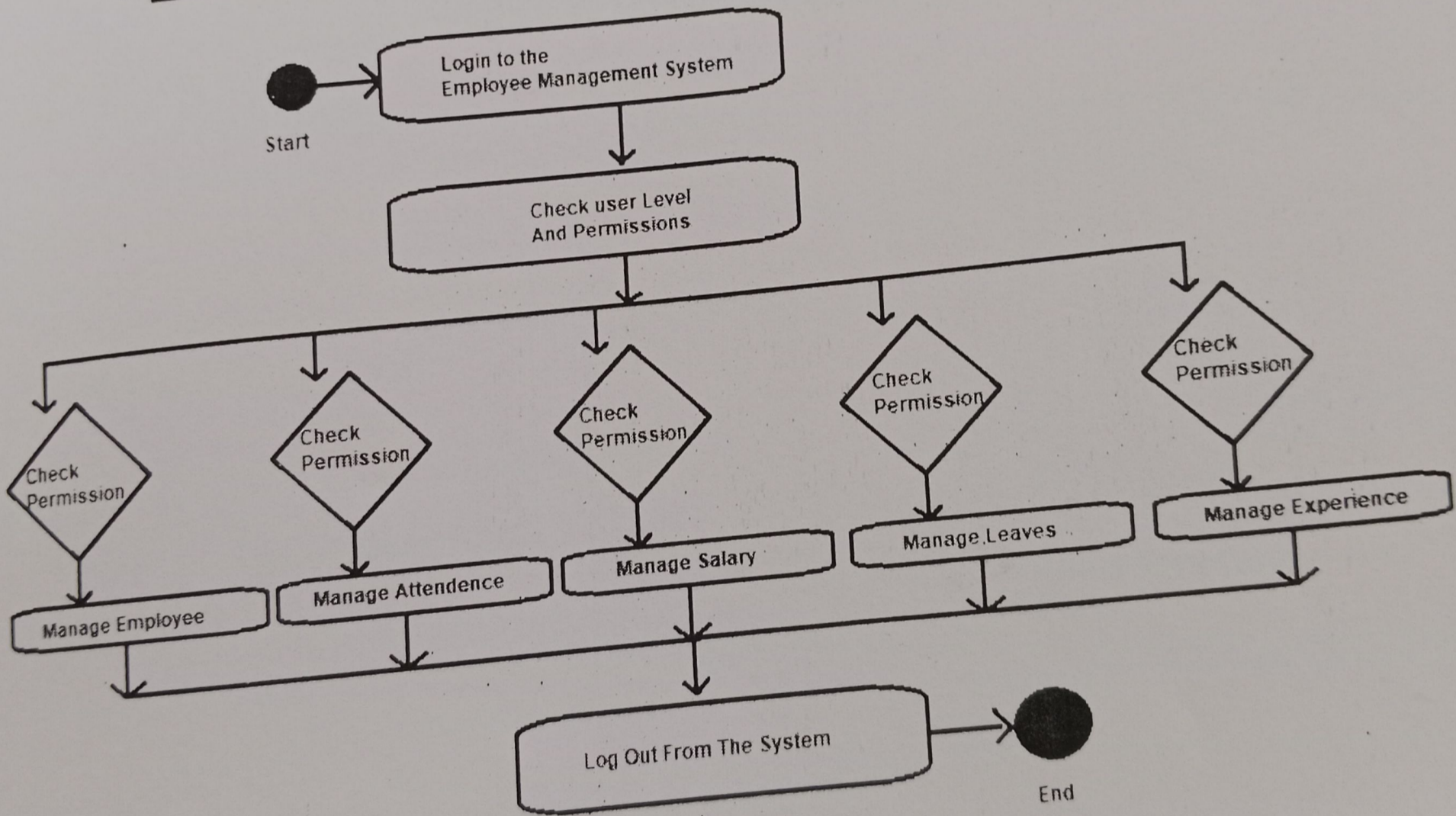


Class Diagram :-



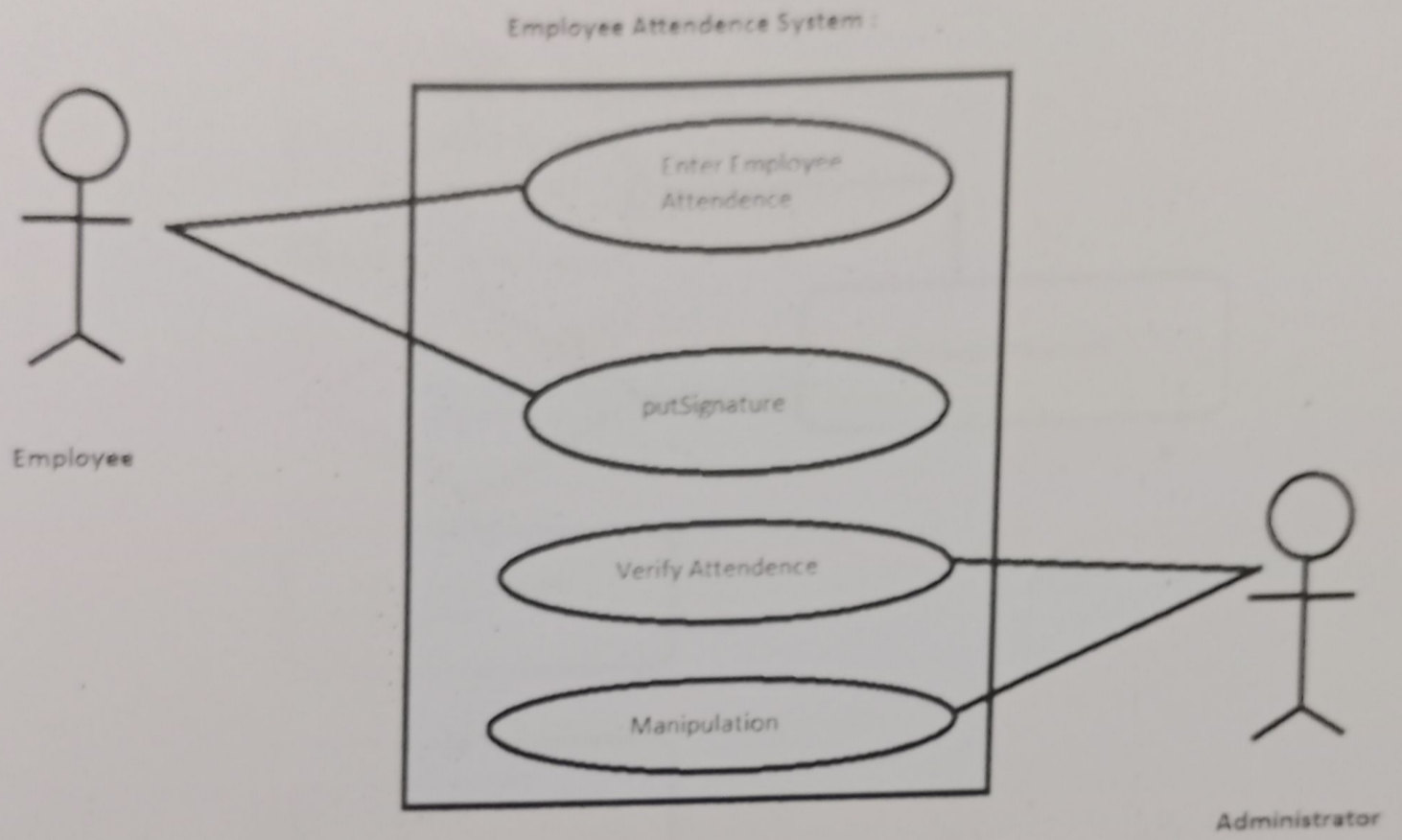
Case Diagram For Employee Management System

❖ Activity Diagram:-

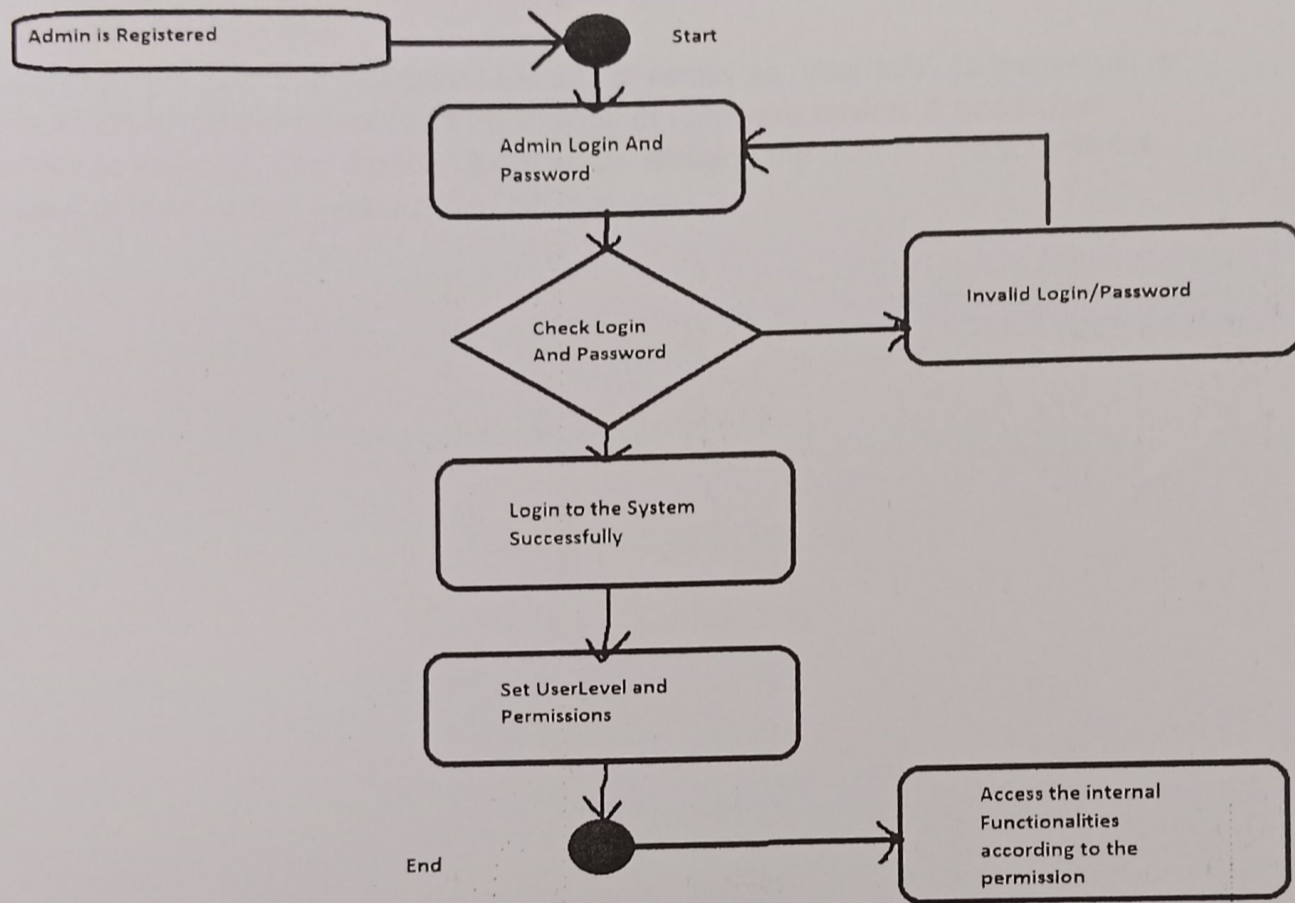


Activity Diagram for Employee Management System

❖ Case Diagram :



❖ Component Diagram:-



4.4 User interface:-

There are following User Interface:

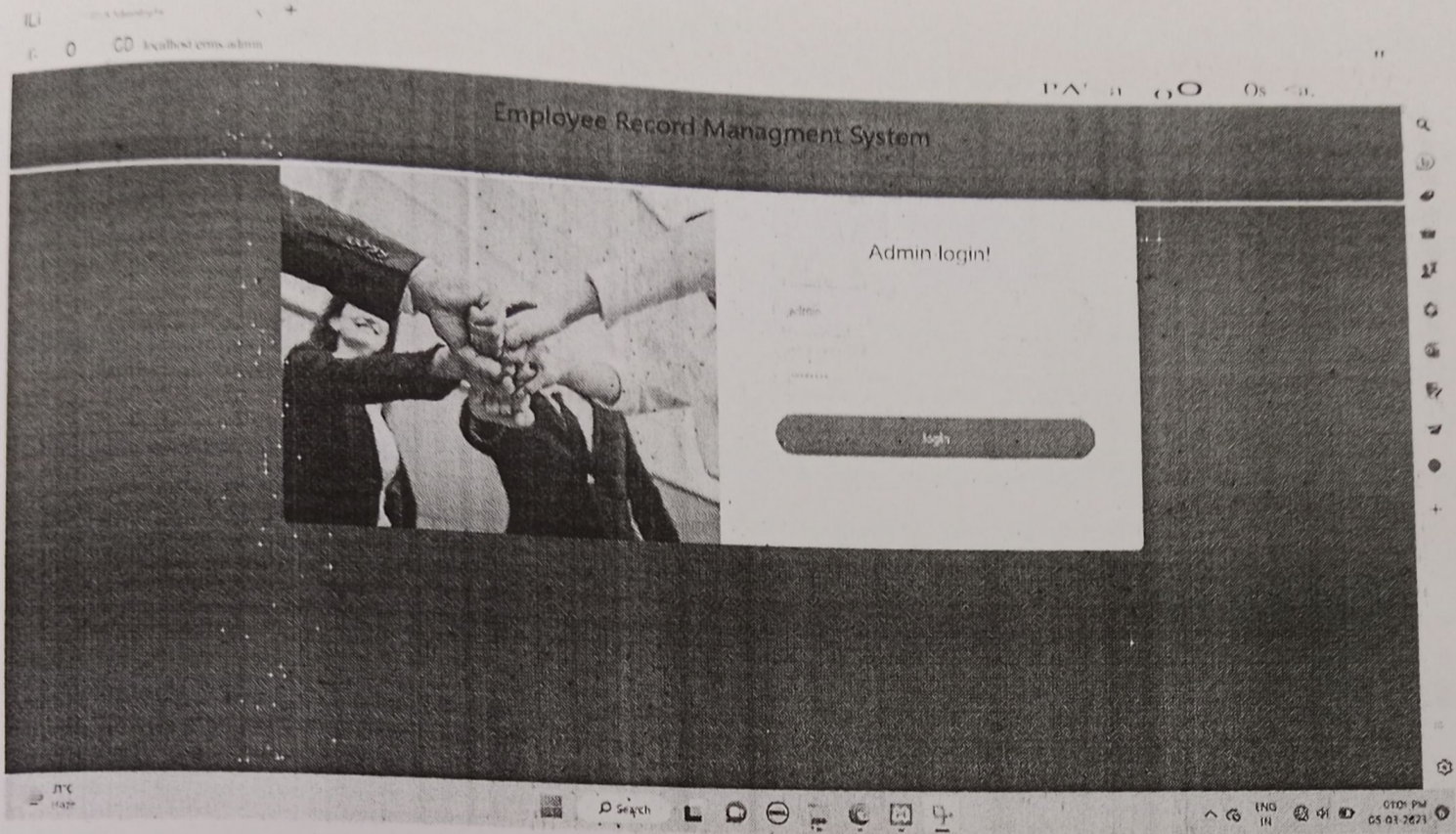
- Employee User Interface:

A User Interface, which is also called as "UI" or simply an "interface". Is the means in which a person controls a software application or hardware device. A good User Interface provides a "User friendly" experience, allowing the user to interact with the software or hardware in a natural and intuitive way.

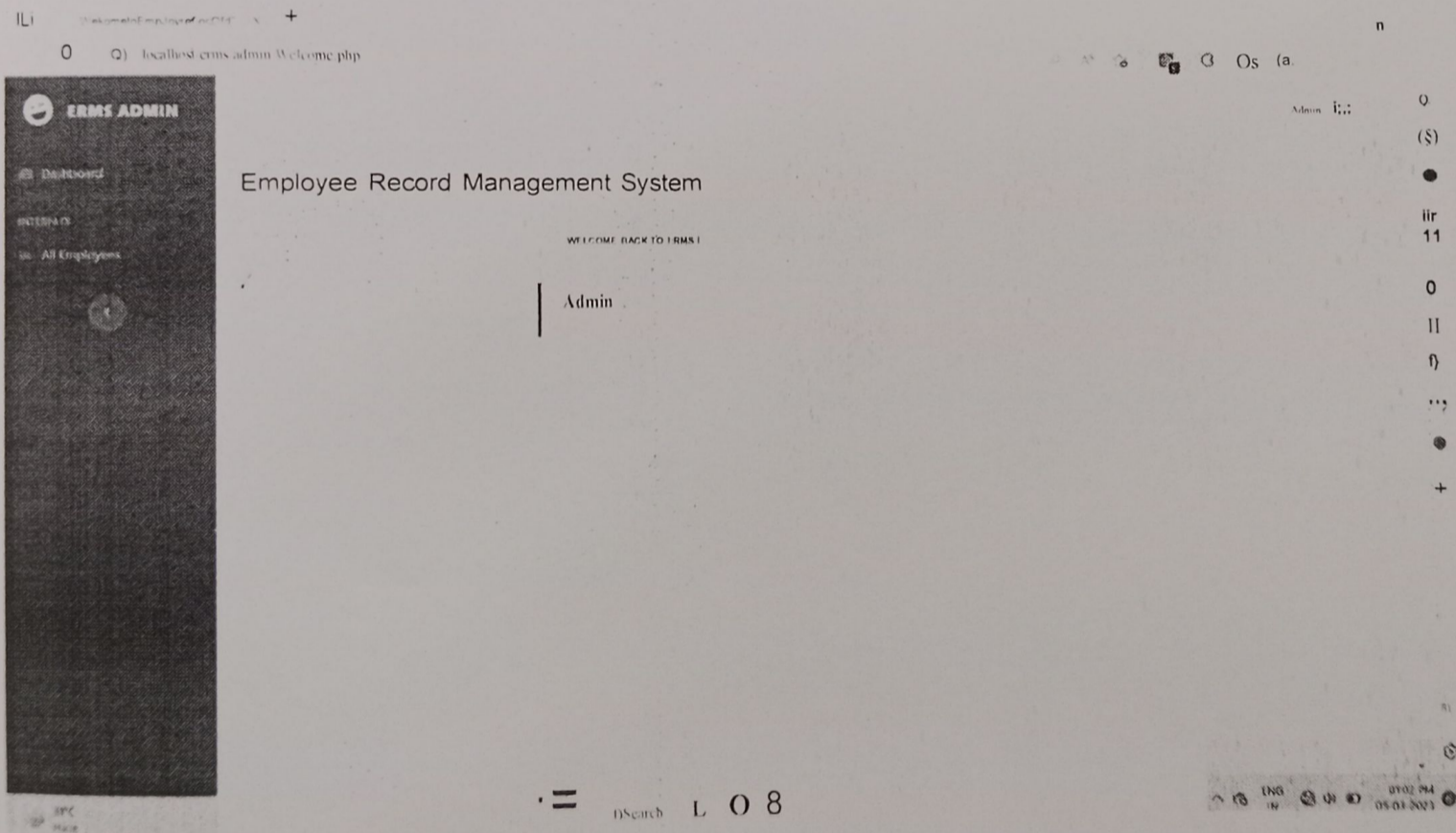
Employee Record Management System

USER SIGNIN USER SIGNUP ADMIN LOGIN

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➤ Admin Dashboard :



➤ All Employee Data :

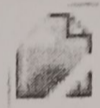
Employees Details

Emp No.	Emp Cate	Emp Name	Emp Last Name	Emp Email	Emp Contact No	Emp Joining Date	Action
81	Ragunath	Shilpa	Shilpa	shilpa@gmail.com			Edit Profile Details Edit Education Details Edit Experience Details Delete
82	11111111						Edit Profile Details Edit Education Details Edit Experience Details Delete
83	80745	Ganesh	Harna	hka@gmail.com			Edit Profile Details Edit Education Details Edit Experience Details Delete
84	1211	Khusi	Dev	hik@gmail.com			Edit Profile Details Edit Education Details Edit Experience Details Delete
85	8080	Dinesh	Kanishk	dinesh@gmail.com			Edit Profile Details Edit Education Details Edit Experience Details Delete
86	2111211	Toni	Usher	usher@gmail.com	1211567890	2018-10-08	Edit Profile Details Edit Education Details Edit Experience Details Delete

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Admin



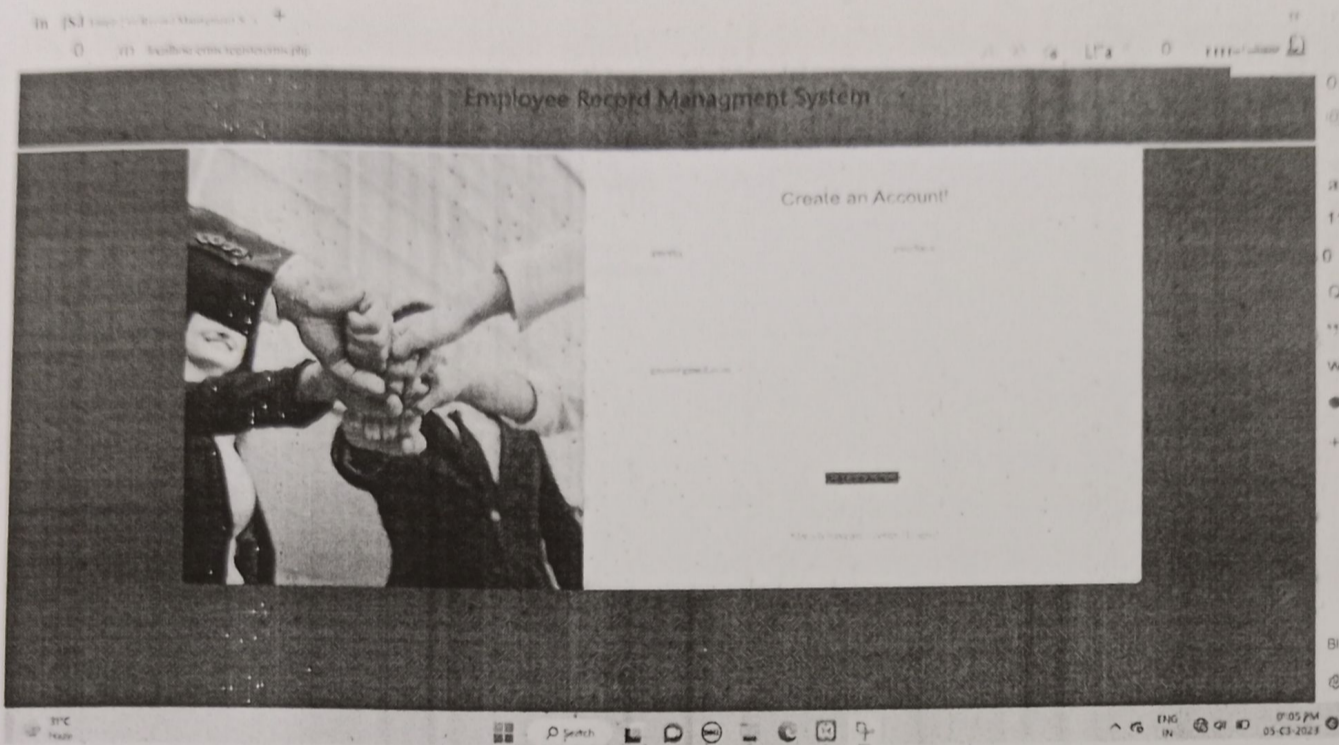
My Profile



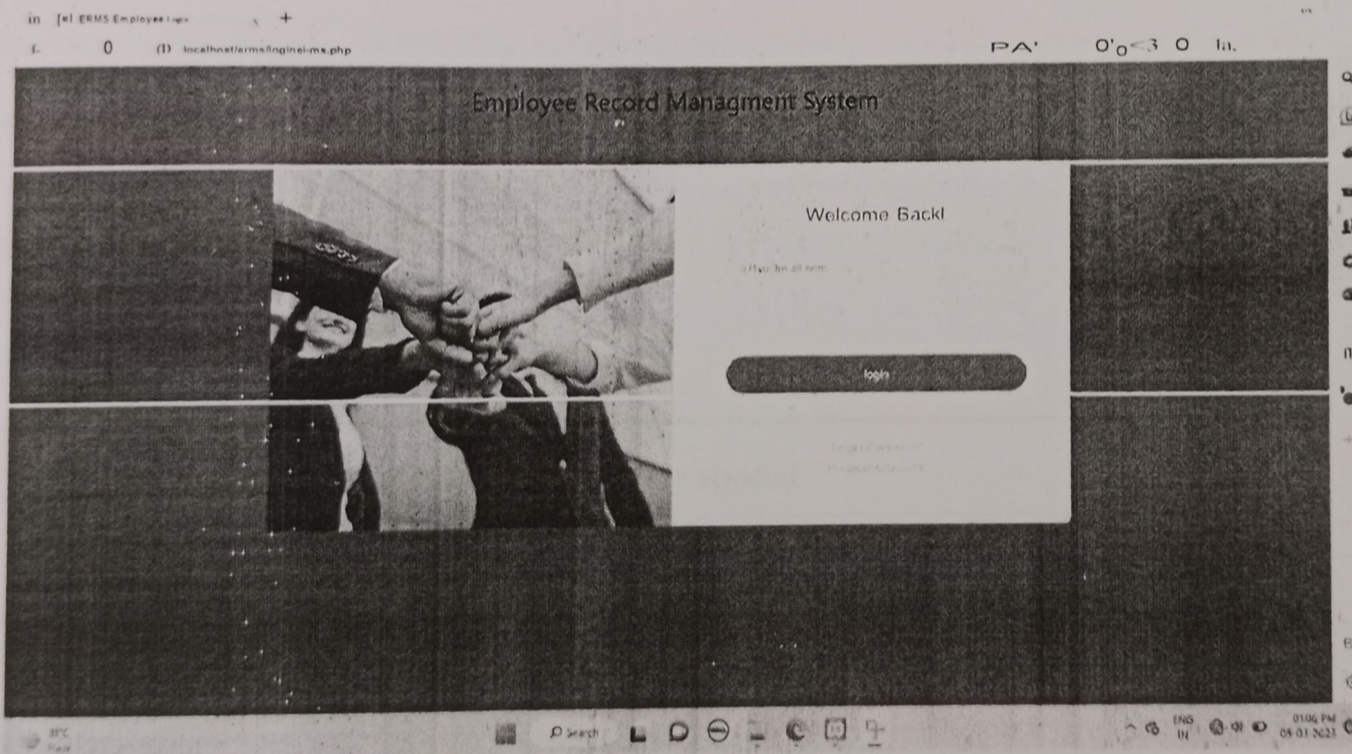
Change Password



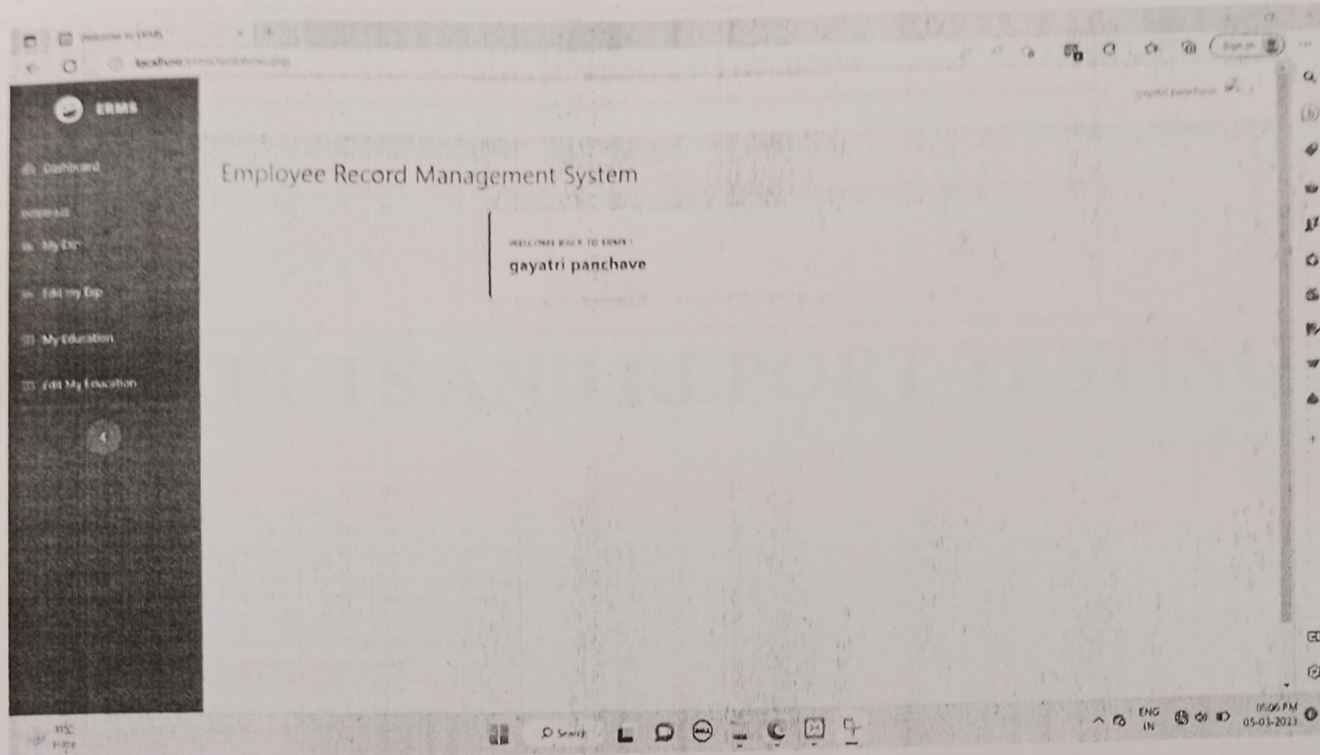
Logout



➤ User Login Form :



➤ User DashBoard :



5. IMPLEMENTATION DETAILS

5.1 Software and hardware specification:-

Software:-

Front End	Not any special
Back End	Microsoft Office Access
Operating System	Windows XP or Higher Version

Hardware:-

Processor	Pentium III or above
RAM	64 MB
HDD	10 GB

6. OUTPUTS AND REPORT TESTING

1. Unit Testing: -

Unit testing focuses verification effort on the smallest unit of software design the module. Using the detail design description as a guide, important control paths are tested to uncover errors within the boundary of the module. The relative complexity of tests and the errors detected as a result is limited by the constrained scope established for unit testing. The unit test is always white box oriented, and the step can be conducted in parallel for multiple modules.

Unit testing is normally considered an adjunct to the coding step. After source level code has been developed, reviewed, and verified for correct syntax, unit test case design begins. A review of design information provides guidance for establishing test cases that are likely to uncover errors. Each test case should be coupled with an asset of expected results.

Unit testing is simplified when a module with high cohesion is

designed. When only one function is addressed by a module, the number of test cases is reduced and errors can be more easily predicted and uncovered.

2. System Testing: -

Software is only one element of a larger computer based system. Ultimately, software is incorporated with other system elements (e.g. new hardware, information), and a series of system integration and validation tests are conducted. Steps taken during software design and testing can greatly improve the probability of successful software integration in the larger system.

A classic system testing problem is "finger pointing". This occurs when a defect is uncovered, and one system element developer blames another for the problem. Rather than including such nonsense, the software engineer should anticipate potential interfacing problems and design error handling paths that test all information coming from other elements of the system. Conduct a series of tests that simulate bad data or other potential errors at the software interface record the results or tests to use as "evidence" if finger pointing does occur participate in the planning and design of system test to ensure that software is adequately tested.

3. Integration Testing: -

A neophyte in the software world might ask a seemingly legitimate question once all modules have been unit-tested. If they all work individually, why do you doubt that they'll work when we put them together? The problem, of course, is putting them together – interfacing. Data can be lost across an interface; one module can have an inadvertent, adverse effect on another, sub functions, when combined, may not produce the desired major function; individually acceptable imprecision may be magnified to unacceptable levels; global data structures can present problems. Sadly, the list goes on and on.

Incremental integration is the antithesis of the "big bang" approach. The program is constructed and tested in small segments, where errors are easier to isolate and correct; interfaces are more likely to be tested completely, and a systematic test approach may be applied.

7. CONCLUSION AND RECOMMENDATION

This software/package is to meet the requirements of employee management.

It has been developed in php keeping in mind the specification of the system. The database of this system can also easily be ported in any other standard database with nominal change. The manager of office used to spare lot of time even after the normal office hours either at home or office for preparation of daily/weekly report and other necessary record. Now with the help of this system, the manager has the information on his fingertips and can easily prepare a record based on their requirements apart from daily/weekly reports. Finally, We can say that this system will not only automate the process but save the valuable time of the office manager, which can be well utilised by this institute. This will be an additional advantage and management of manpower based on their free time from his normal duty.

8. FUTURE SCOPE

This software can be able to support internetworking with a little advancement in coding. Then any user can upload the data to the school website and can view the data and all reports online from any part of the world. This can also be connected strongly with the internet. even if management wants, parents can view their child's record through an attractive and graphic rich website. They can also make their child's fee online.

This software can also be equipped with strong backup facilities to protect the important data and hence prevent any sort of problem which might occur due to lost of data.

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 - Visual Basic Black Book(Paperback)
 - Database Development in Visual Basic
 - *Teach Yourself Visual Basic 6 McGraw Hill*

THANK YOU !!!