PROJECT REPORT

ONLINE EMPLOYEE DATA HANDLING SYSTEM

SUBMITTED BY-

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CANDIDATE'S DECLARATION

I, hereby declare that the work which is being presented in this project report entitled "**ONLINE EMPLOYEE DATA HANDLING SYSTEM** " submitted as a part of the curriculum is an authentic record of my original work carried out under the guidance of Mrs. Mamta Meena, Sc-'D' of LASTEC, DRDO, Metcalfe House, Delhi-110054.

I have not submitted the matter embodied in this dissertation for the award of any other degree or diploma.

Date:____11/07/2019__ Aditya Kumar Hurkat

Place:____Metcalfe House, Delhi__

This is to certify that the above statement made by the candidate is correct to the best of my knowledge.

(MAMTA MEENA)

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ACKNOWLEDGEMENT

I avail this opportunity to express my profound sense of sincere and deep gratitude to those who have played an indispensable role in the accomplishment of the project work given to me by providing their willing guidance and help.

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ABSTRACT

Online Employee Data Handling System is a software that stores all the information regarding the personal records of employee from different divisions of the organization. It is an integrated package that gives administrative support right from Login, Storing and Editing the various records of an employee.

The purpose of my project" Online Employee Data Handling System" is to provide a graphical user interface to the user making entries for each employee at DRDO and replace the traditional method of writing down the entries and maintain a hard copy. This software makes the process simpler as well as many folds efficient at the same time. Moreover, it provides a login facility to the Administrator, thereby making the whole process well secured. It allows the user to have an upper hand by imparting his/her privileges. Specifically, the software provides two important functions, firstly to refine entries from thousands, and to search and edit also use it in future for security purposes.

ORGANIZATION PROFILE

DRDO was formed in 1958 from the amalgamation of the already functioning Technical Development Establishment (TDEs) of the Indian Army and the Directorate of Technical Development & Production (DTDP) with the Defence Science Organization (DSO).

DRDO at that time was a small organization with 10 establishments or laboratories. Over the years, it has grown multi-directionally in terms of the variety of subject disciplines, number of laboratories & achievements. Today, DRDO is a network of 53 laboratories which are deeply engaged in developing defense technologies covering various disciplines, like aeronautics, armaments, electronics, combat vehicles, engineering systems, instrumentation, missiles, advanced computing and simulation, special materials, naval systems, life sciences, training, information systems, and agriculture.

Presently, over 5000 scientists and about 25,000 other scientific, technical and supporting personnel back the Organization.

Several major projects for the development of missiles, armaments, and light combat aircraft, radars, electronic warfare systems, etc. are on hand and significant achievements have already been made in several such technologies.

The diversified activities in the areas such as physics, chemistry, applied mathematics, electronics, ballistics, explosives, physiology, food technology, and information science coupled with the sound infrastructure created in these areas have led to the establishment of a lot of independent laboratories/establishments including LASTEC.

LASER SCIENCE AND TECHNOLOGY CENTRE

Laser Science & Technology Centre (LASTEC) is the oldest laboratory in the Defence R&D Organization. It had its beginning in 1950 as Defence Science Laboratory (DSL) which was established as a nucleus laboratory with an objective to conduct research in frontier areas of physics, chemistry, and mathematics with a special focus on lasers and optoelectronics. DSL functioned from the National Physical Laboratory Campus. Later, in 1960, it was shifted to Metcalfe House. In 1982, the Laboratory moved to a new technical building in Metcalfe House Complex and was renamed as Defence Science Centre. The diversified activities of the Centre in the areas such as physics, chemistry, applied mathematics, electronics, ballistics, explosives, physiology, food technology, and information science coupled with the sound
infrastructure created in these areas has led to the establishment of a lot of independent laboratories/establishments including, DRDL, DLRL, HEMRL, TBRL, DFRL, SSPL, INMAS, DESIDOC, DIPAS, etc.

VISION AND MISSION OF THE ORGANIZATION

VISION-

Be a center of excellence in the field of lasers and their defense applications.

MISSION-

1. Develop high power laser sources and related technologies for directed energy applications.
2. Develop technologies and systems for laser support measures like CBRNE detectors, weapon locators, laser illuminators, etc.
3. Develop laser countermeasure systems, including non-lethal systems.
4. Carry out advanced directed research in the fields of lasers and photonics.

CHAPTER 1 INTRODUCTION

1.1 Introduction

Aim of this project is to create Employee Data Handling System that stores all the information regarding the personal records of each employee in the organization. It will become easier to store the records of all employees and manage to retrieve them without any difficulty. This software will provide a graphical user interface to the user making entries for each empoyee and replace the traditional method of writing down the entries and maintain a hard copy. This software makes the process simpler as well as many folds efficient at the same time. Moreover, it provides a login facility to the Administrator, thereby making the whole process well secured. It allows the user to have an upper hand by imparting his/her privileges.

1.2 Objectives

- To Create a Web-based online Employee Data Handling System.
- To manage all employee records.
- To provide easy accessibility to the records.
- To provide easy modification & deletion process of a particular record.

1.3 Justification of the study

We implement this system for better user experience. This system is very easy to access. Also for establishing real-time

communication, using modern and updated technology. So, the user can see the update without reload or refresh. This system will compatible with user devices such as PC, laptop, tab & smartphone. So the user can easily access the system anytime anywhere. This system is very simple & user-friendly so, any user can use this system easily.

CHAPTER 2 METHODOLOGY

2.1 Methodology

Agile Development Model

Fig. Agile Model

2.2 Justification of Methodology:

Agile development methodology provides opportunities to assess the direction of a project throughout the development life cycle. This is achieved through regular cadences of work, known as sprints or iterations, at the end of which teams must present a potentially shippable product increment. By focusing on the repetition of abbreviated work cycles as well as the functional product they yield, agile methodology is described as “iterative” and “incremental.” In waterfall, development teams only have one chance to get each aspect of a project right. In an agile paradigm, every aspect of development — requirements, design, etc. — is continually revisited throughout the life cycle. When a team stops and re-evaluates the direction of a project every two weeks, there’s always time to steer it in another direction.

2.3 Description of Methodology

The sequential phases are:

- **Requirement Gathering and analysis:** All possible requirements of the system to be developed are captured in this phase and documented in a requirement specification doc.

- **System Design:** The requirement specifications from the first phase are studied in this phase and system design is prepared. System Design helps in specifying hardware and system requirements and also helps in defining overall system architecture.

- **Implementation:** With inputs from system design, the system is first developed in small programs calledunits, which are integrated into the next phase. Each unit is developed and tested for its functionality which is referred to as Unit Testing.

- **Integration and Testing:** All the units developed in the implementation phase are integrated into a system after testing of each unit. Post integration of the entire system is tested for any faults and failures.

- **Deployment of the system:** Once the functional and nonfunctional testing is done, the product is deployed in the customer environment or released into the market.

- **Maintenance:** There are some issues that come up in the client environment. To fix those issues patchesare released. Also to enhance the product some better versions are released. Maintenance is done to deliver these changes in the customer environment.

All these phases are cascaded to each other in which progress is seen as flowing steadily downwards through the phases.

CHAPTER 3 TECHNOLOGY USED FOR THE PROJECT

3.1 HARDWARE REQUIREMENTS-

- Processor- Dual-core processor @ 1.65 GHz or above
- RAM- 256 MB or above
- Hard Disk- 40 GB or above
- Monitor- 14” VGA
- Mouse, Standard 104 enhanced keyboard

3.2 SOFTWARE REQUIREMENTS-

- Operating System- Windows7, Windows Vista
- Front end- CSS, JS, HTML
- Back end- SQL, PHP
- Editor- Sublime Text Editor
- Browsers- Google Chrome, Internet Explorer, Edge, Firefox
- Documentation- MS-Office

CHAPTER 4 ANALYSIS, DESIGN, AND DEVELOPMENT

4.1 DATABASE DESIGN

The objective here is to have the description of the database tables used in the system, the working of each program file and composing a data dictionary to list all the fields used in the records.

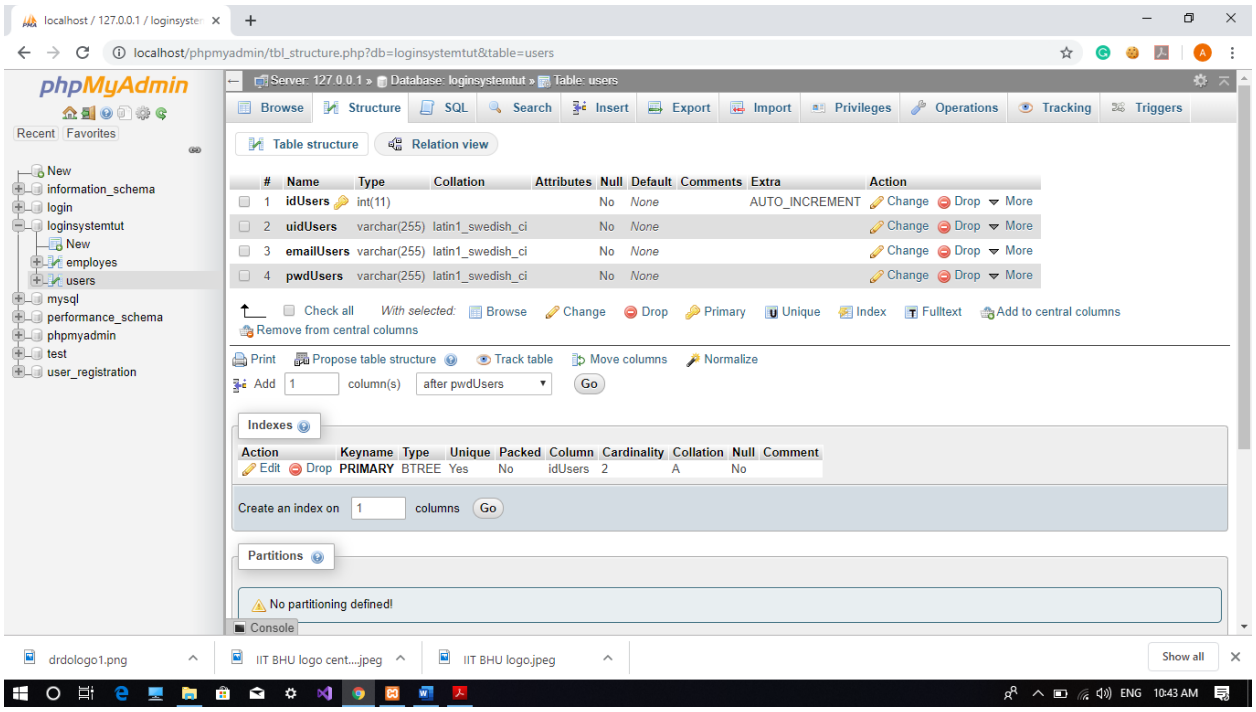
4.1.1 DATABASE TABLE DESIGN

In order to make the Employee Data Handling System online, various tables are created in the database. Considering the role of Employee, the below-mentioned tables are important. These tables consist of fields name, type, and size.

The tables are as follows:-

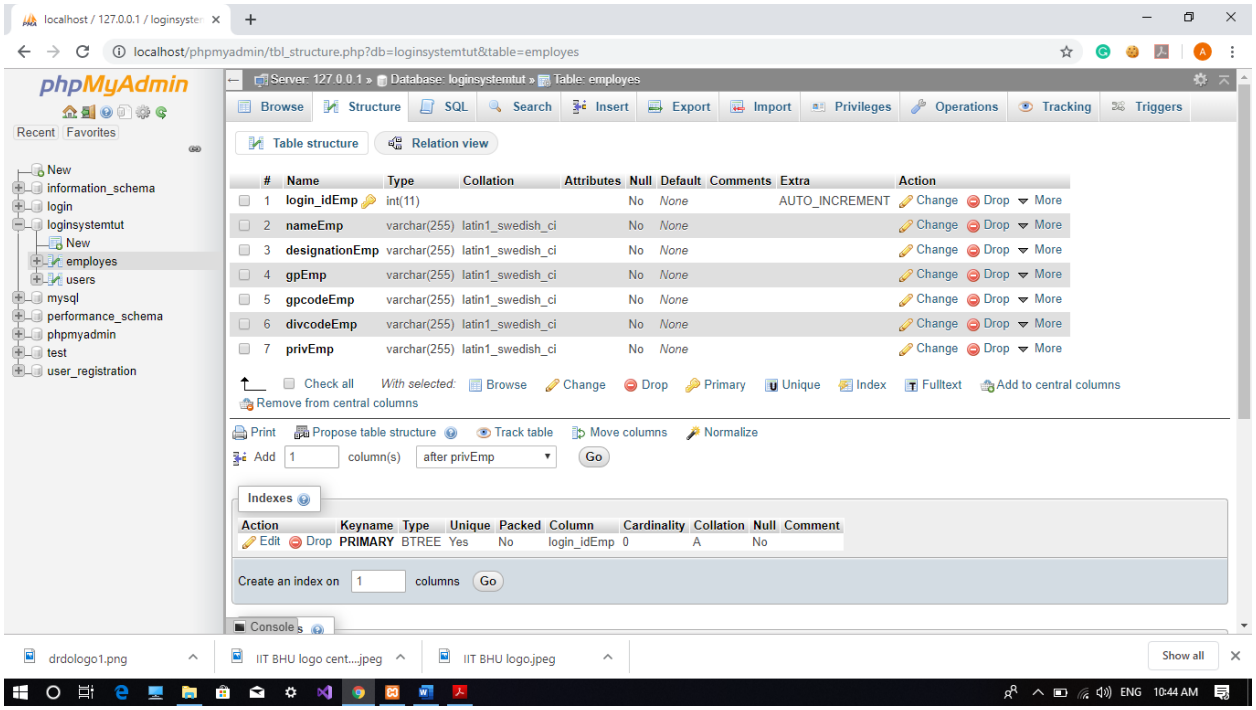
Users:

It contains information about the user who is able to log in, it has fields like ID, Username, Email, Password.



Forms:

It contains information about the form fields which are used for Employee record maintenance.



4.2 DESIGN

Software design is the process of implementing software solutions to one or more sets of problems. One of the important parts of software design is the software requirements analysis (SRA). It is a part of the software development process that lists specifications used in software engineering. We have thus described different forms of designs here.

4.2.1 UML DESIGN

UML stands for Unified Modeling Language which is used in software engineering. Although typically used in software engineering it is a rich language that can be used to model application structures, behavior, and even business processes. The different UML diagrams are as follows:

1. USE CASE DIAGRAM

A use case diagram at its simplest is a representation of a user's interaction with the system that shows the relationship between the user and the different use

cases in which the user is involved. A use case diagram can identify the different types of users of a system.

Use case diagrams are used to gather the requirements of a system including internal and external influences. These requirements are mostly design requirements. So, when a system is analyzed to gather its functionalities use cases are prepared and actors are identified.

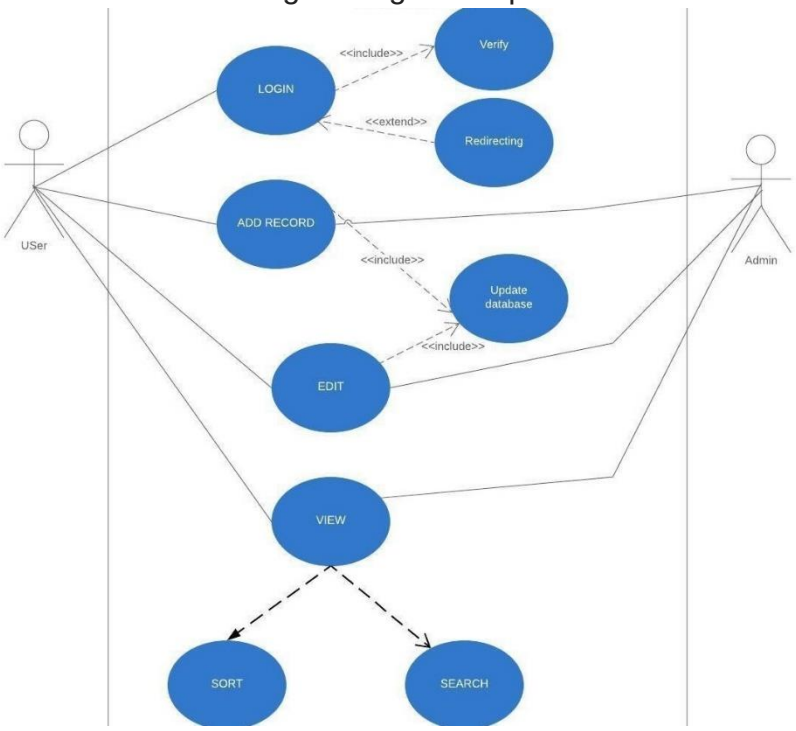
Now when the initial task is complete use case diagrams are modeled to present the outside view.

In brief, the purposes of use case diagrams can be as follows:

- Used to gather the requirements of a system.
- Used to get an outside view of a system.

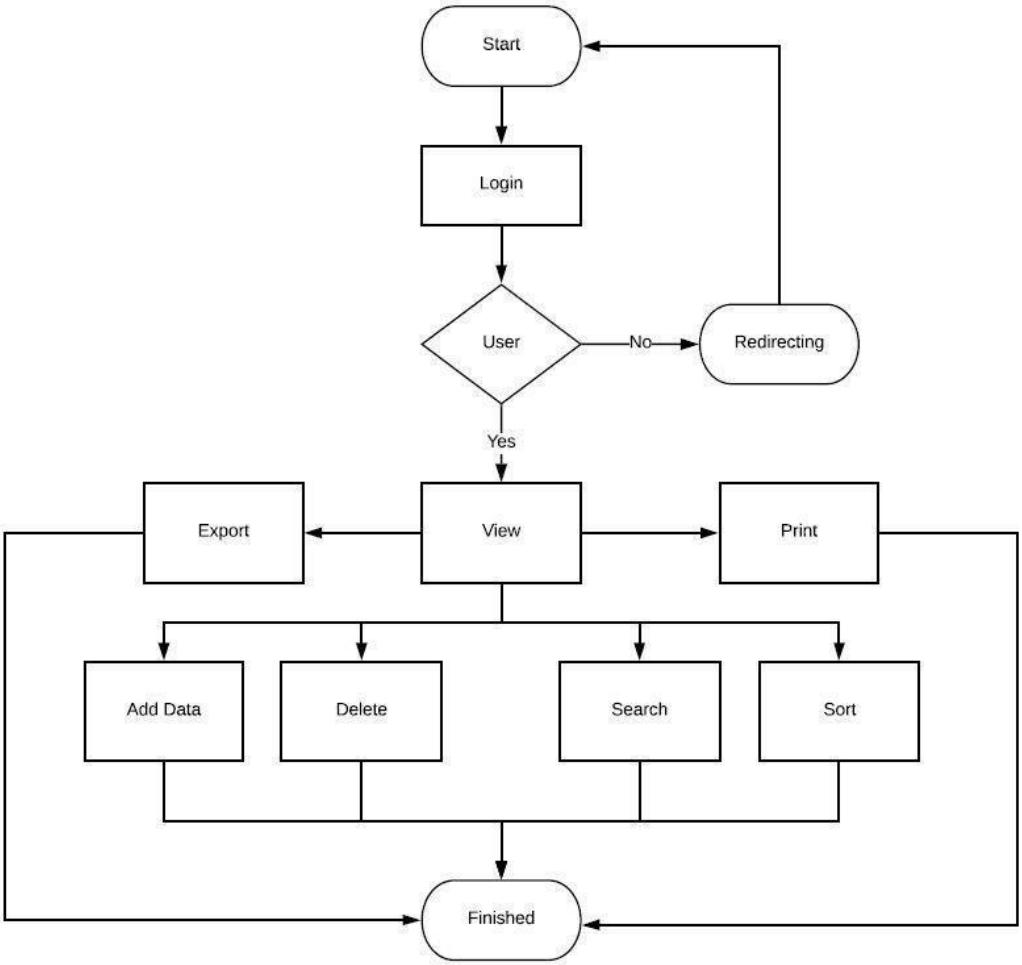
· Identify external and internal factors influencing the system.

· Show the interacting among the requirements are actors.



2. FLOWCHART

A flowchart is a type of diagram that represents a workflow or process. A flowchart can also be defined as a diagrammatic representation of an algorithm, a step-by-step approach to solving a task. The flowchart shows the steps as boxes of various kinds, and their order by connecting the boxes with arrows.



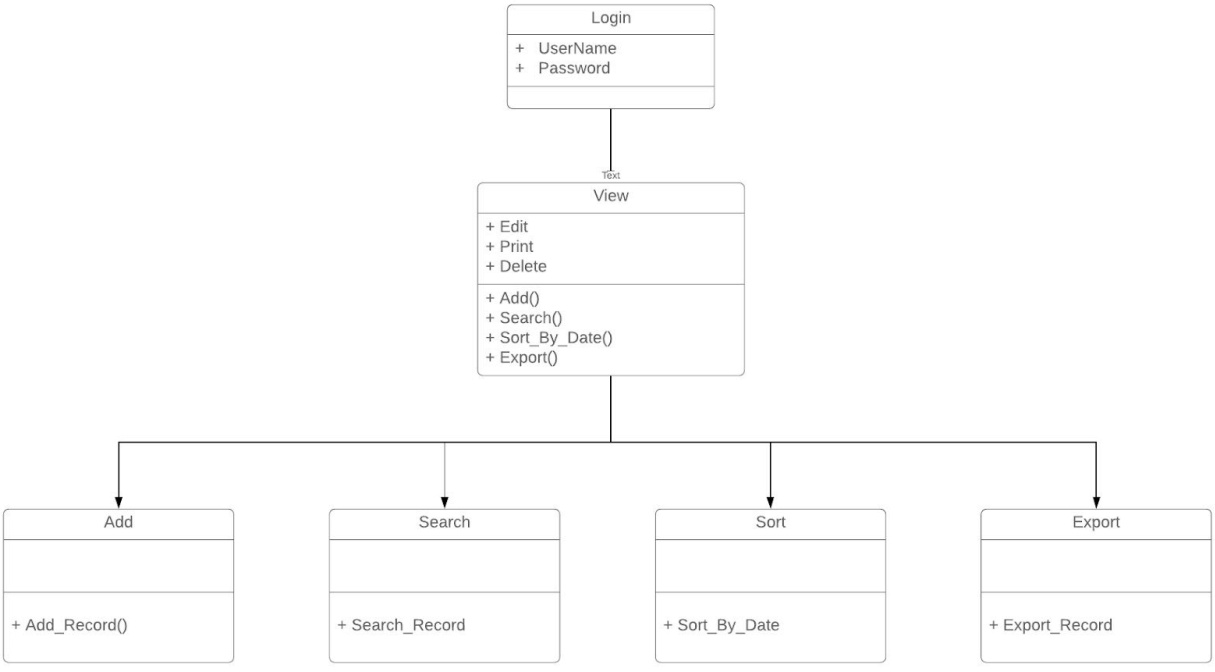
3. CLASS DIAGRAM

A class diagram in the Unified Modeling Language (UML) is a type of static structure diagram that describes the structure of a system by showing the system's classes, their attributes, operations (or methods), and the relationships among objects.

- The top part contains the name of the class.
- The middle part contains the attributes of the class. They are left-aligned and the first letter is lower case.

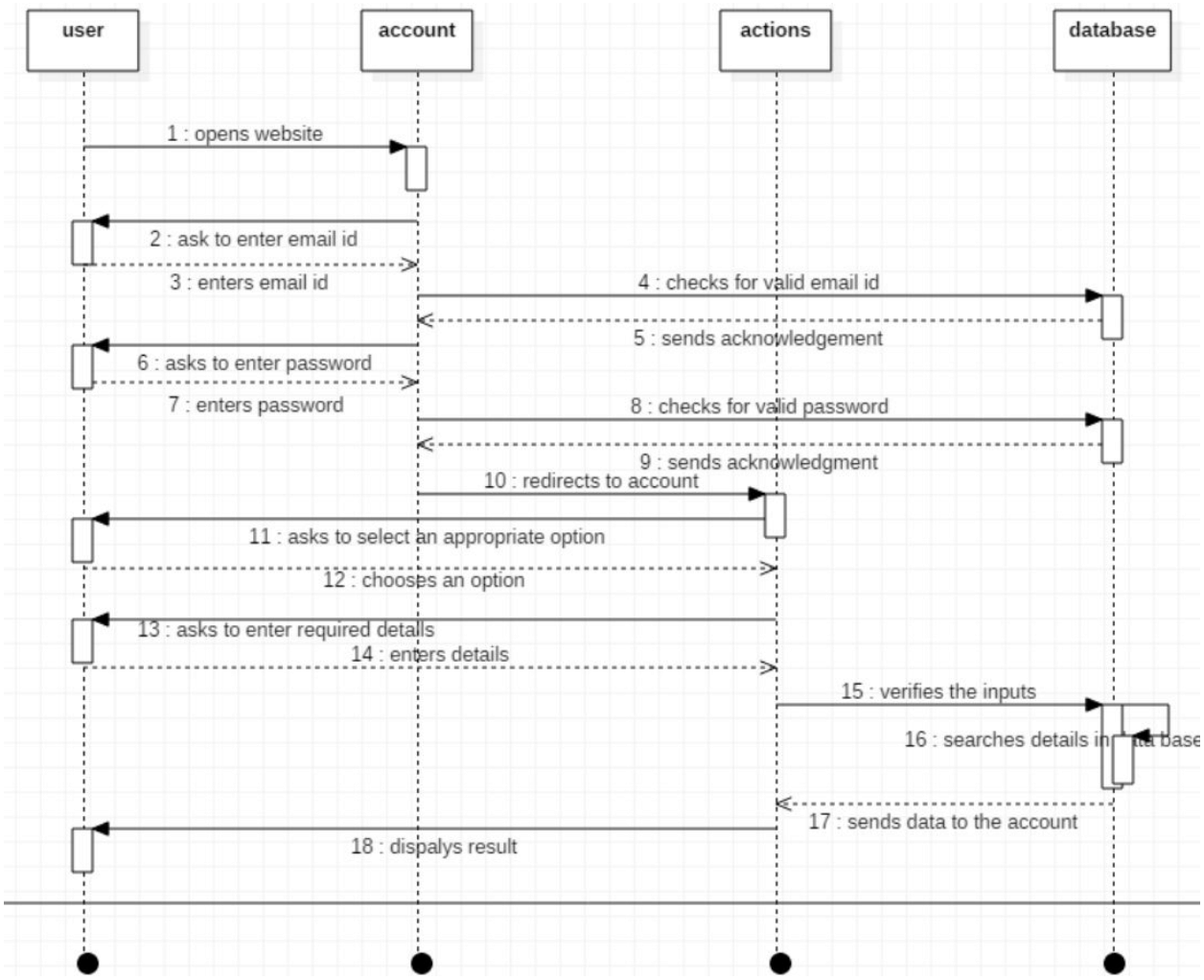
The bottom part gives the methods or operations the class can take or undertake. They are also left-aligned and the first letter is lower case.

The class diagram shows how different classes of the system interact and exchange messages in order to successfully implement the system.



4. SEQUENCE DIAGRAM

A Sequence diagram shows how processes operate with one another and in what order. A sequence diagram shows object interactions arranged in time sequence. It depicts the objects and classes involved in the scenario and the sequence of messages exchanged between the objects needed to carry out the functionality of the scenario.



CHAPTER 5 RESULT

5.1 System Interfaces

All the user interface of the front end is developed using CSS, JS, and HTML. While the back end is done using SQL and PHP language. A local server is hosted using XAMPP. And text editor used is the Sublime Text Editor.

5.2 Login Form for the Different Users

Only authorized user with the right user name and password has the right to access the services. When the wrong user name and password are used the System rejects access to the services and redirected back to the login page.

5.3 System Administration Home Page

The system administrator is able to access the records that were entered earlier and perform an action like Edit, Print and Delete records arranged using Diary Number. The administrator is able to search among the records for his or her ease. The entered record can also be sorted for a particular P&C Diary date. Finally, The administrator can export the whole database and download it into .xls format file. This page is also known as View page

5.4 Edit Page

The administrator can Edit any record from the View page by the reference of its diary number.

The changes made by the administrator will be updated.

CHAPTER 8 CONCLUSION AND REFERENCE

The main objective of the Empoyee Data Handling System is to automate the file storage system. Which was out by maintaining a record file manually earlier.

It focuses on creating an efficient and user-friendly interface for tracking the history of files and uploading and retrieval of letters from the database. It also has features like searching a particular record on the basis of a given diary or reference number, selecting records submitted on a particular day, printing, and deleting records very easily which was not possible manually.

8.1 FUTURE SCOPE

- This project can be implemented at various places like in schools, colleges, in companies, in various organizations, etc. to maintain the leave record of teachers, lecturers, and employees, etc.

- As this software is automated and reduces the paperwork one can easily submit his/her leave application easily.

- The software can be further be extended and new features/functions can be added as per the requirements.

- On using such software, one can reduce the paperwork to a minimum and automate the whole process.

8.2 REFERENCE

8.2.1 URL's USED

- http://google.com
- www.w3schools.com
- www.stackoverflow.com
- www.youtube.com
- geeksforgeeks.org

8.2.2 BOOK's USED

- Software design specification
- HTML, CSS, JS
- PHP
- SQL