Employee Appraisal Management System

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Absract: An easy-to-implement project that can assist the business in assessing employee performance based on job completion is the Employee Appraisal Management System. Admin and Employee are the two user types in this system. The system user in charge of managing the system's critical data, including the personnel roster, department list, designation list, and tasks allocated to staff, is known as the admin side. The database and all saved data are accessible to the administrator. Users of the system who can only access the tasks and submit their progress are referred to as the Employee side. The administrator will be able to see how each work is completed by the staff.

2.1.1. Flowchart

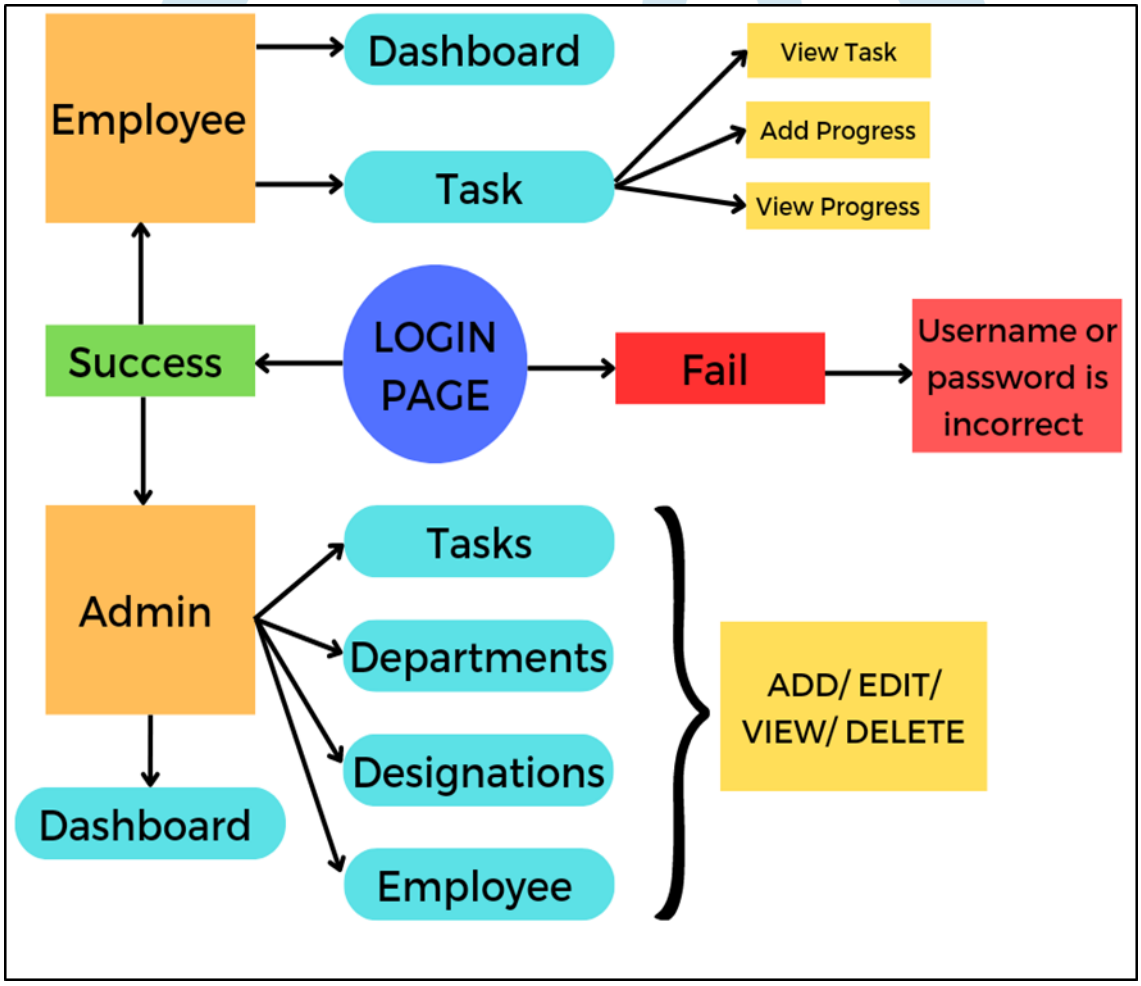

Fig 2.1.1 Flowchart

2.2 Objective

An intern's goals are to work for the company and gain personal knowledge. I also maintained the same goal. I concentrated on all they had taught me to get ready for work. Throughout three months, I used my programming expertise and abilities to help with the creation, upkeep, and enhancement of web-based applications that were given to me. The company wanted to employ me as a resource to help them with chores, new improvements, and web-based

application maintenance. Their goal was to help me at every turn by offering the appropriate direction and strategy whenever I got stuck.

2.3 Scope

The main goals and objectives of an employee appraisal management system project are to give managers an environment to monitor progress, create objectives and goals, and review and analyze their workers' performance using predetermined criteria. According to the needs of the company, the project's scope may change, however it often consists of the following elements:

i. **Goal-setting:** The method enables managers to establish objectives and goals for their staff members and monitor their advancement toward those targets.
ii. **Manage Employees:** The system gives managers the ability to see, add, update, and remove employee details at any time.
iii. **Manage Departments:** The system gives the administrator the ability to inspect, add, edit, and delete departments at any moment.
iv. **Manage Designations:** The system gives the administrator complete control over the designations, enabling them to examine, add, modify, and remove them as needed.

2.4 Technology and Literature Review

2.4.1. Technology

2.4.1.1. Frontend & Backend Detail

These are the components and tools required for developing the front-end and back-end of the website. These consist of open-source resources and software.

- HTML/ HTML5
- CSS/ CSS3
- BOOTSTRAP 5
- PHP
- MYSQL

2.4.2. Literature Review

Venclova Katerina, Salkova Andrea, Kolackova Gabriela (2013): The article focuses on the techniques employed by Czech agricultural firms for employee performance appraisals. The article's initial section examines the theoretical foundations of the term "formal appraisal" and the employee performance appraisal methods as reported by experts from the Czech Republic and other countries. Additionally, the study offers staff performance rating procedures that are thought to be pertinent for Czech agricultural firms, based on a questionnaire study. In addition to examining the correlations between different qualitative attributes, the goal of this article is to ascertain the state of formal employee appraisal in a sample group of agricultural firms. According to Czech and international specialists, the most commonly used approaches are predefined goal-based performance appraisal, predefined standard outcome-based performance appraisal, and assessment interviews. Based on a questionnaire survey, the report also offers staff performance rating procedures that are thought to be pertinent for Czech agricultural firms. This paper's goals are to ascertain the state of formal employee appraisal in a sample of agricultural firms and look into the connections between different qualitative attributes. The most widely used methods of workforce performance review in agricultural firms are predefined goal-based evaluations of performance, preset standard outcome-based performance appraisal, and assessment interviews, the study's findings indicate. These techniques are especially popular with agricultural businesses because the outcomes may be extended to other facets of HRM, like staffing plans and incentive schemes. [1]

Ashima Aggarwal, Gour Sundar Mitra Thakur (2013): The authors reviewed the procedures for performance reviews. The following performance appraisal approaches—as well as their advantages and disadvantages—are discussed: ranking, graphic rating scale, critical incident, narrative essays, management by objectives, assessment centers, and 360 degrees. Organizations utilize both the conventional and contemporary methods for evaluating employee performance. To evaluate the effectiveness and efficiency of their workforce, organizations use a performance appraisal system. A framework for performance appraisal is necessary since every person approaches their work in a different way. Benefits of performance appraisal include workplace performance, communication goals, potential estimation, and employee counseling. Following the study, the authors came to the conclusion that it is difficult to

determine whether methodology is superior because it depends on the size and structure of the organization. Every methodology has benefits and drawbacks. [2]

Rocio de Andres, Jose Luis Garcia-Lapresta, Jacinto Gonzalex-Pachon (2010): The author investigated how performance is assessed using distance function techniques. A company's promotion, pay, and layoff policies are among the many decisions made based on an employee's productivity and efficiency, which are evaluated through performance reviews. Once this process was limited to the executive staff, it has evolved into an evaluation process that incorporates feedback from numerous reviewers, managers, partners, customers, and staff members themselves (360-degree technique). Reviewers examine several indicators related to a worker's assessment of performance in this kind of procedure. The research's authors suggested an assessment approach that involves a variety of reviewer groups during their assessment procedure. Reviewers' understanding of the employee under evaluation varies, thus it seems reasonable to offer a flexible framework that allows them to express their judgments on numerous finite scales according to their expertise. In the end, each employee will have a worldwide appraisal created for them, which the management team can utilize to decide on a human resource strategy. In this manner, the authors proposed a method for combining personal appraisals into a framework measure to produce an overall assessment for every worker. In this case, the underlying optimization issues can be reduced to a somewhat straightforward Extended Goal Programming formulation. [3]

Anastasios D. Diamantidis, Prodromos Chatzoglou (2018): It emphasizes, in particular, how important it is for job environments, organizational climates, adaptability, and intrinsic motivation to have management support when determining EP. Specifically, EP, organizational culture, and work environment are all negatively impacted when management does not encourage employees' efforts. This effect, along with a decline in the proactivity of the workforce, results in a lower degree of adaptation and, eventually, poor job performance. In a similar vein, a poor work environment influences EP either directly or indirectly. A "passive stance" toward difficult and stressful work situations and employers' degrees of adaptability result from a lack of desire to take initiative during performing the job (e.g., employees not confront problematic job-related situations creating obstacles to solving them and resulting in reduced job performance). To both directly and indirectly impact their workers' job performance levels, this assistance should be provided to them on a personal level as well as through enhancing the workplace culture and environment. Managers should therefore ideally determine and manage the level of staff support per their knowledge of the business environment and strategic planning of the company. Furthermore, managers mustn't underestimate the impact that training culture has on EP. According to this concept, employee skill flexibility, proactive behavior, and adaptability—factors that can either directly or indirectly influence EP—are strongly influenced by training culture, even though performance may not be immediately impacted by it. For them to ascertain the training outcomes (good and/or negative) for both employees and the company, managers need also take into account the organizational climate features of the organization and the interpersonal interactions among employees while organizing their training programs. [4]

2.5 Internship Planning (Weekly Report)

Week:1	
Time Period:	From: 06-02-2023 to 10-02-2023
Task to be performed:	
During the starting day of internship, we followed the roadmap of developer and started learning from scratch. Building a website, we need to learn many languages and scripts which is used for front-end as well as back-end. So, first week I learned about HTML basic level such as formatting, links, images, favicon, colors, tags, etc. with layout responsive symbols, emojis, charset. Also performed many tasks based on the learning. Also covered HTML Forms with different attributes, and media.	

Week:2	
Time Period:	From: 13-02-2023 to 17-02-2023
Task to be performed:	
We started with CSS in the second week. CSS is the language we use to style the HTML document. It describes how HTML elements should be displayed. In CSS we started from its syntax and different types of CSS (Internal, External and Inline). Moving forward with Selectors, Comments, Colors, Background, Border, Margins, Padding, Box Model, Text,	

Fonts, Icons, Links, Lists, Tables, Align, Navigation Bars, Dropdown, Gallery, Forms, Layout, Opacity, etc.

Week:3	
Time Period:	From: 20-02-2023 to 24-0-2023
Task to be performed:	
Learning all the basic concepts of CSS, we stepped in Advanced CSS with extra style tags in gradient, color, effects, web fonts, 2D-3D transformation, Animations, Tooltips, Style Images, Buttons, Pagination, Media Queries. We also started with Bootstrap. Bootstrap is the most popular HTML, CSS, JavaScript framework for developing responsive, mobile-friendly websites. We covered Bootstrap Grid System, Tables, Images, Alerts, Buttons, Pager, Dropdowns, Navbars, forms, Carousel, etc.	

Week:4	
Time Period:	From: 27-02-2023 to 03-03-2023
Task to be performed:	
By the 4th week, we covered fundamental topics of HTML, CSS and Bootstrap and started with JavaScript. JavaScript is the world's most popular programming language of the Web. We started JavaScript with types of JavaScript (either written in HTML page or external JavaScript) and different JavaScript display possibilities (*innerHTML, document.write(), window.alert(), console.log()*). Moving forward with JS Syntax, Comments, Variables, Let, Constants, Operators (Arithmetic, Assignment, Comparison, Logical, Bitwise, and Ternary), Datatypes (in brief), Functions, Objects and Events.	

Week:5	
Time Period:	From: 06-03-2023 to 10-03-2023
Task to be performed:	
During this week, we looked JS Data types in detail and some of the JS methods and functions. Starting with Strings, String Methods, String Search, Numbers, Number Methods, Number Properties, BigInt, and moved on to arrays. In Arrays, we also learned Array methods, array sort. JS Date, Date format, JS Math, Random, Boolean was also covered during this period.	

Week:6	
Time Period:	From: 13-03-2023 to 17-03-2023
Task to be performed:	
During this week, we delved deeper into JavaScript by learning about functions and scope. We also learned about arrays and objects, and how to manipulate the Document Object Model (DOM) using JavaScript. We practiced creating event listeners and handling user interactions. We also learned about debugging techniques and how to use the browser console to debug our code. We covered more advanced topics such as closures, callbacks, and arrow functions. We also learned about new features introduced in ES6, such as let/const, template literals, and destructuring. We also learned about error handling and how to handle errors in our code.	

Week:7	
Time Period:	From: 20-03-2023 to 24-03-2023
Task to be performed:	
During this week, we started learning PHP, a server-side scripting language used primarily for web development. We embarked on this learning journey to enhance our programming skills and improve our ability to develop dynamic websites and web applications. In our journey, we have covered the basics of PHP, including syntax, data types, variables, and operators. We have also learned about functions, conditional statements, and loops, which are	

essential building blocks of any programming language. We are practicing by writing simple PHP scripts, focusing on understanding the logic behind programming.

Week:8	
Time Period:	From: 27-03-2023 to 31-03-2023
Task to be performed:	
During the 8th week of our PHP learning journey, our team explored the advanced concepts of Arrays and Forms. We started by understanding the basics of arrays and the different types of arrays available in PHP, including indexed arrays, associative arrays, and multidimensional arrays. We also learned about sorting arrays and the various sorting techniques available in PHP. Moving on, we delved into PHP Form Handling, where we learned how to create forms using HTML and PHP, and how to submit form data to a PHP script for processing. We covered the different methods of form submission, including GET and POST methods, and their advantages and disadvantages. We also learned about PHP Form Validation, which is an essential aspect of form handling. We learned how to validate form data using PHP's built-in functions and how to create custom validation functions to ensure data accuracy and prevent security breaches.	

Week:9	
Time Period:	From: 03-04-2023 to 07-04-2023
Task to be performed:	
In this week of learning, we focused on MySQL, an open-source relational database management system. We learned the basics of SQL, how to set up and configure a MySQL database, create and manage tables, manipulate data with SQL queries, ensure data consistency with transactions, and optimize performance using indexing, query optimization, and partitioning techniques. By the end of the week, we had a solid understanding of how to build robust and scalable applications that require efficient data storage and retrieval.	

Week:10	
Time Period:	From: 10-04-2023 to 14-04-2023
Task to be performed:	
During the 10th week, we started working on database connectivity. PHP can easily connect to MySQL using XAMPP, an open-source web development platform that provides an easy-to-install Apache server, PHP, and MySQL database. We can then create a new PHP file and include the necessary code to connect to MySQL. After establishing the connection, we can perform database operations such as querying, inserting, updating, and deleting data using PHP's built-in MySQL functions. Overall, PHP connectivity with XAMPP MySQL is a straightforward process that allows developers to create dynamic and interactive web applications.	

Week:11	
Time Period:	From: 17-04-2023 to 21-04-2023
Task to be performed:	
We began working on the frontend of our application. We started by designing the user interface and creating wireframes to outline the layout and functionality of each page. From there, we began building out the HTML structure and adding CSS styles to create a visually appealing and responsive design. Our team worked closely together to ensure a cohesive and user-friendly experience for our application's users. We plan to continue refining and improving the frontend as we move forward in development.	

Week:12	
Time Period:	From: 24-04-2023 to 28-04-2023
Task to be performed:	

We made significant progress by connecting the database to the frontend of our application. We began by configuring the database and creating the necessary tables and relationships to store and retrieve data. Then, we integrated the database into our frontend using a server-side language PHP, allowing us to interact with the database and perform CRUD (Create, Read, Update, Delete) operations directly from the frontend. This integration has enabled us to build powerful and dynamic web applications that can store and retrieve data quickly and efficiently. We plan to continue refining our database integration to ensure the best possible performance and user experience.

Table: 2.5 Internship Planning

2.6 Internship Scheduling (Gantt Chart)

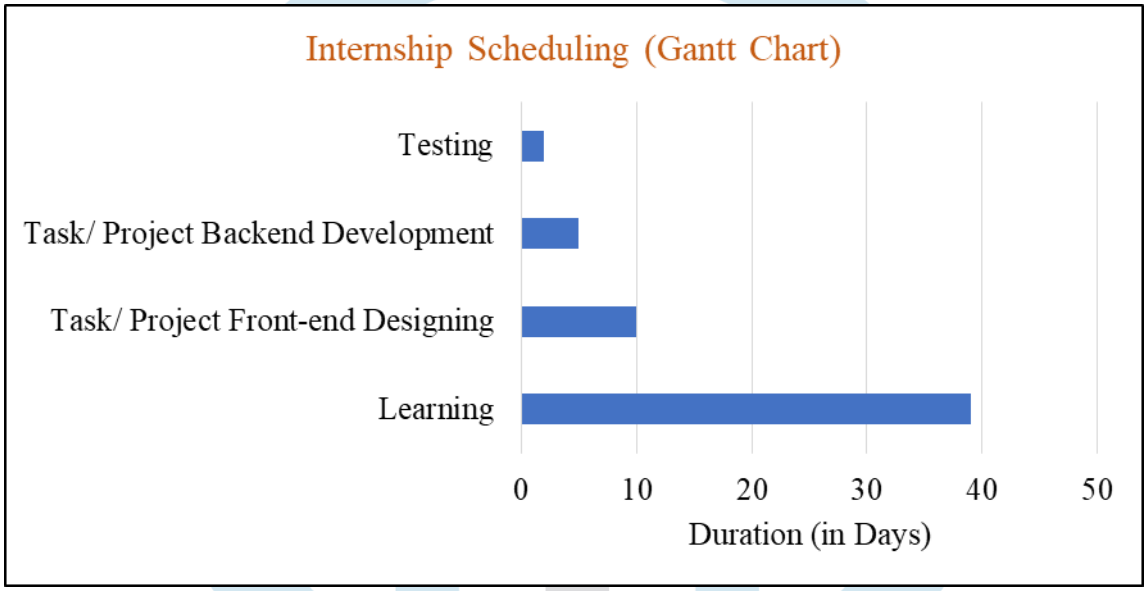

Fig 2.6 Internship Scheduling

2.7 Software and Hardware Requirement

2.7.1. At Developer Side

During system development, I have design dynamic website interfaces, create website functions and a database system, edit, add, delete employee details, so it has a set of software and hardware requirements.

Hardware Used	Software Used
• Intel Dual Core Processor • 1 TB Hard Disk Drive • 8 GB RAM • O.S.- Windows 10.1	• VS Code • MySQL Database

Table: 2.7.1 Developer Side

2.7.2. At System User's Side

The following is the requirements for the system users including members and administrators:

Hardware Used	Software Used
• Intel Pentium 4 Processor • 20 GB Hard Disk Drive	• Browser (IE 7.0 or above, Mozilla Firefox, Google Chrome)

• 256 MB RAM • O.S.- Windows XP, 7, 8, 10.1	• Browser must be JavaScript enabled.

Table: 2.7.2 User's Side

3. SYSTEM ANALYSIS

3.1. System Analysis

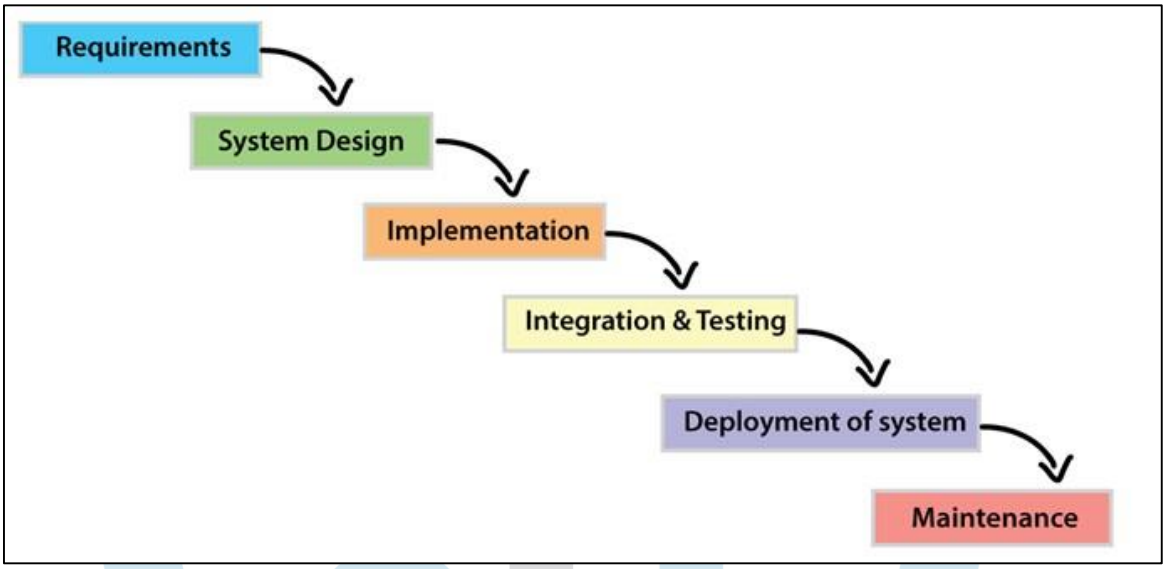

Fig. 3.1 System Design

The sequential phases in Waterfall model are –

- **Requirement Gathering and analysis** − This phase involves capturing all potential requirements for the system that has to be constructed and documenting them in a requirement specification document.
- **System Design** − This step involves studying the need specifications from the previous phase and creating the system design. The system architecture as a whole is defined and hardware and system requirements are specified with the aid of this system design.
- **Implementation** − Using information from the system design, the system is first created as a collection of discrete programs known as units that are combined at this step. Unit testing is the process of developing and testing each unit to ensure it functions as intended.
- **Integration and Testing** − Following each unit's testing, all the units created during the implementation phase are combined into a system. The entire system is tested for errors and malfunctions after integration.
- **Deployment of system** − Following the completion of both functional and non-functional testing, the product is either released into the marketplace or implemented in a customer environment.
- **Maintenance** − Occasionally, problems arise in the client setting. Patches are published to address certain problems. Better versions of the product are also released to improve it. To implement these modifications in the client environment, maintenance is carried out.

3.2. Features of New System/ Proposed System

3.2.1. Structure of the Project

➢ **Before Login**
- Login Page

➢ **After Admin Login**
- Dashboard
- Manage Tasks
  - Add New Tasks
  - Edit Tasks
  - Delete Tasks

- Manage Department
  - Add New Department
  - Edit Department
  - Delete Department
- Manage Designations
  - Add New Designations
  - Edit Designations
  - Delete Designations
- Manage Employees
  - Add New Employee
  - Edit Employee's Data
  - Delete Employee's Data
- Review tasks performed by employees
- Logout

➢ **After Employee Login**

- Dashboard
- Add task progress
- Logout

4. SYSTEM DESIGN

4.1. SYSTEM DESIGN AND METHODOLOGY

4.1.1 List Main Modules/ Components/ Process

Following a thorough examination, the system was found to have the following modules and roles.

- Admin
- Employees

4.1.1.1 Admin

The is the super user of this application. Only admin have access into this admin page. Admin may be the owner of the organization. The admin has all the information about all the employees and about all appraisals.

This module is divided into different sub-modules.

- **Manage Tasks**
- **Manage Departments**
- **Manage Designations**
- **Manage Employees**
- **Review Tasks**

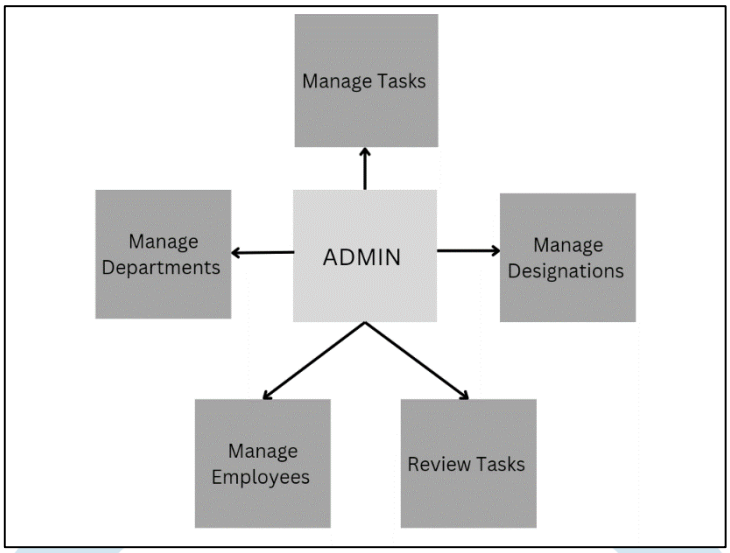

Fig 4.1.1.1 Admin

4.1.1.1.1. Manage Tasks

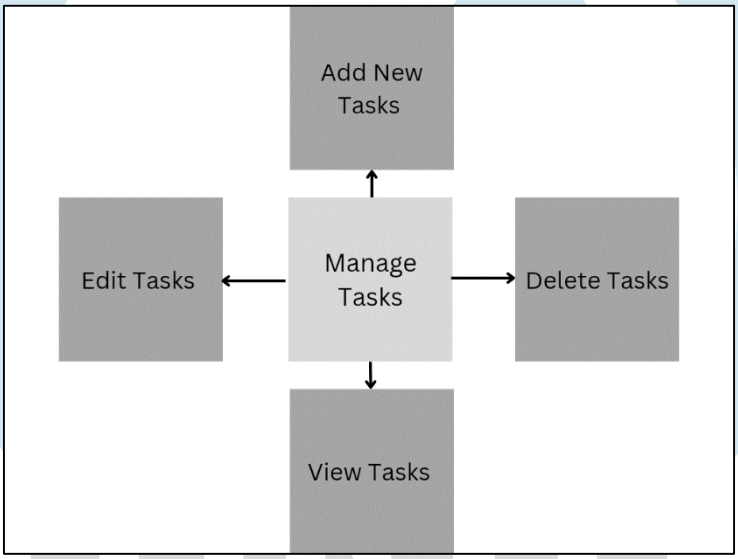

Fig 4.1.1.1.1 Manage Tasks

- **Add New Tasks**: Only admin is having the privilege to add a new task and assign it to employee.
- **Edit Tasks:** Admin can alter the tasks, like the due date, etc.
- **Delete Tasks:** Admin has privilege to delete the tasks.
- **View Tasks:** Admin can view all the tasks assigned to employees.

4.1.1.1.2. Manage Departments

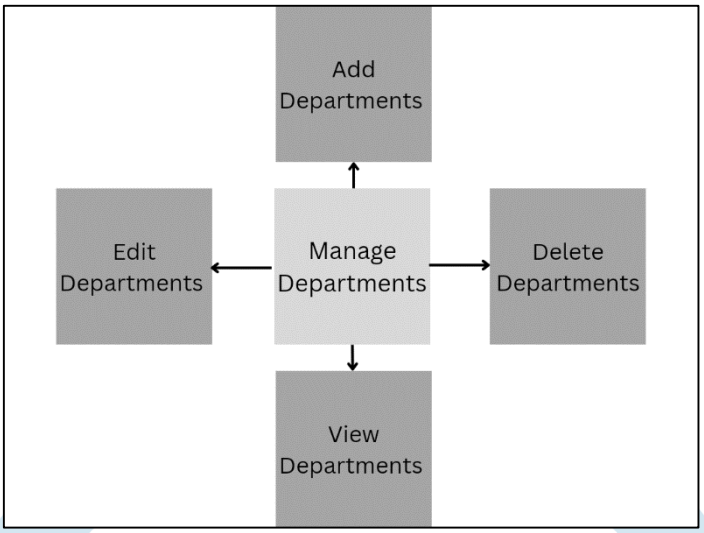

Fig 4.1.1.1.2 Manage Departments

- **Add New Departments**: Admin can add new departments and assign it to employee.
- **Edit Departments:** Admin can make changes in the Department details.
- **Delete Tasks:** Admin has privilege to delete any departments.
- **View Tasks:** Admin can view all the departments.

4.1.1.1.3. Manage Designations

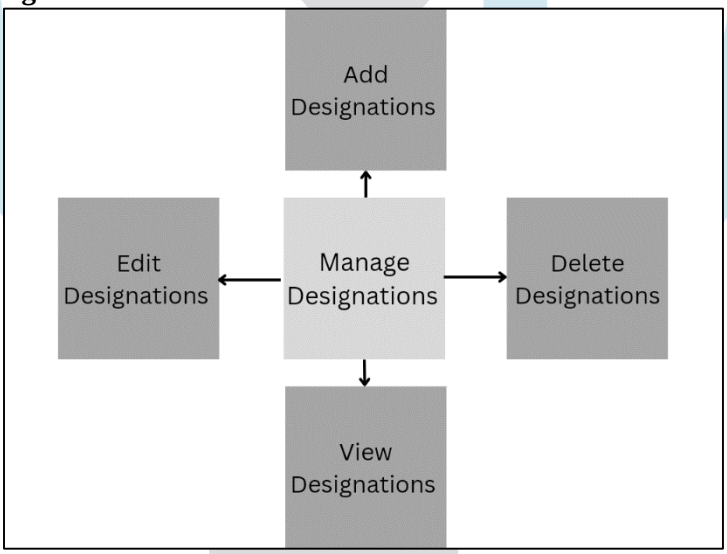

Fig 4.1.1.1.3 Manage Designations

- **Add New Designations**: Admin can add new designations.
- **Edit Designations:** Admin can make any changes in the designation.
- **Delete Designations:** Admin can delete any designations.
- **View Designations:** Admin can view all the designations.

4.1.1.1.4. Manage Employees

- **Add New Employee**: Only admin is having the privilege to add a new employee detail.
- **Edit Employees:** Admin can edit employee details like, employee's name, employee's designations, etc.
- **Delete Employee:** Admin has privilege to delete the employee records.
- **View Tasks:** Admin can view all the list of employees.

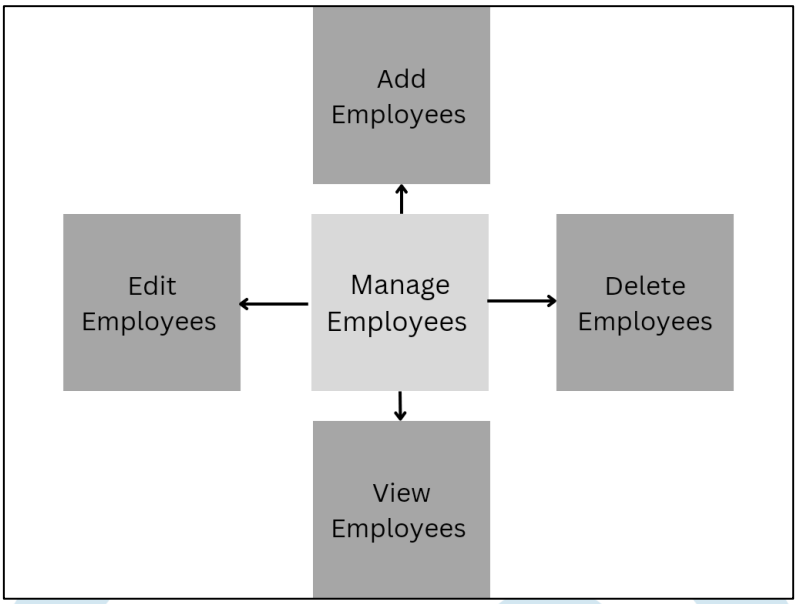

Fig 4.1.1.1.4 Manage Employees

4.1.1.1.5. Review Tasks

Admin can regularly check the progress of the tasks assigned to their employees.

4.1.1.2 Employee

A new user will be registered in the system by providing essential details in the system. This registration task will be performed by admin.

- **Login**: The employee must login with his/ her login ID and password to the system once their registration is done by admin.
- **Tasks**: The tasks which are assigned by admin will display here and employee can view their task and add their progress in task.

4.1.1.3 Functional Requirement Modules

➢ **Login Module –** This module is provided for administrator and employees

- Input – User id and password
- Process – After entering login id and password by user, process of validation occurs to identify whether login id and password is available in database or not.
- Output – Registered user can access website.

➢ **Administrator Module –** In order to access the system, the administrator has been provided a password and login ID. The authority to update the database and confirm users' registration is granted to the administrator.

- Input – Login id and password.
- Process – Process of validation will occur.
- Output – Administrator will maintain the database and will distribute tasks to employees and review it.

➢ **Employee Module** – A password and login ID are given to the employee so they can access the system. Employees can view their allocated tasks and update them on their progress.

- Input- User Id and Password.
- Process- Process of Validation will occur.
- Output- Only genuine employee can access their tasks assigned by the admin.

4.2. DATABASE DESIGN

4.2.1. Data Flow Diagram

4.2.1.1 Login DFD

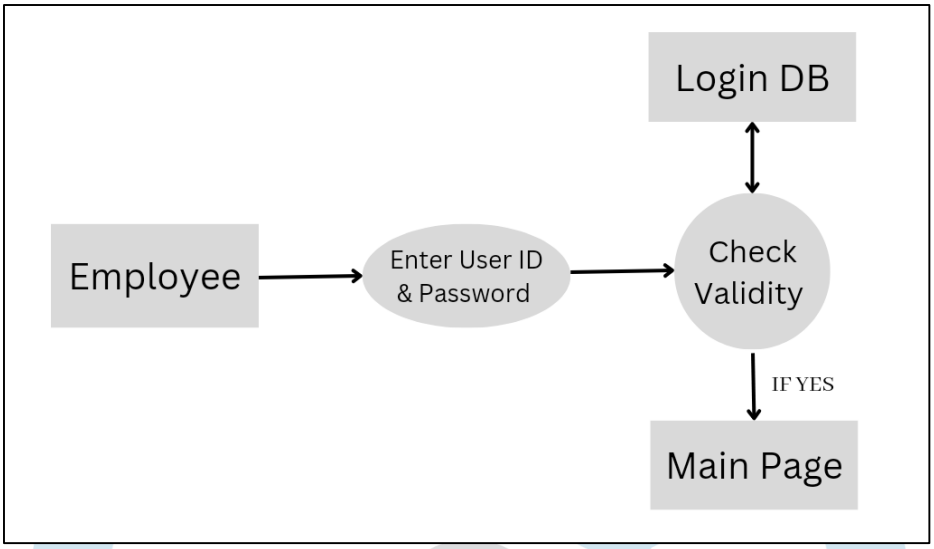

Fig 4.2.1.1 Login DFD

4.2.1.2 Admin DFD

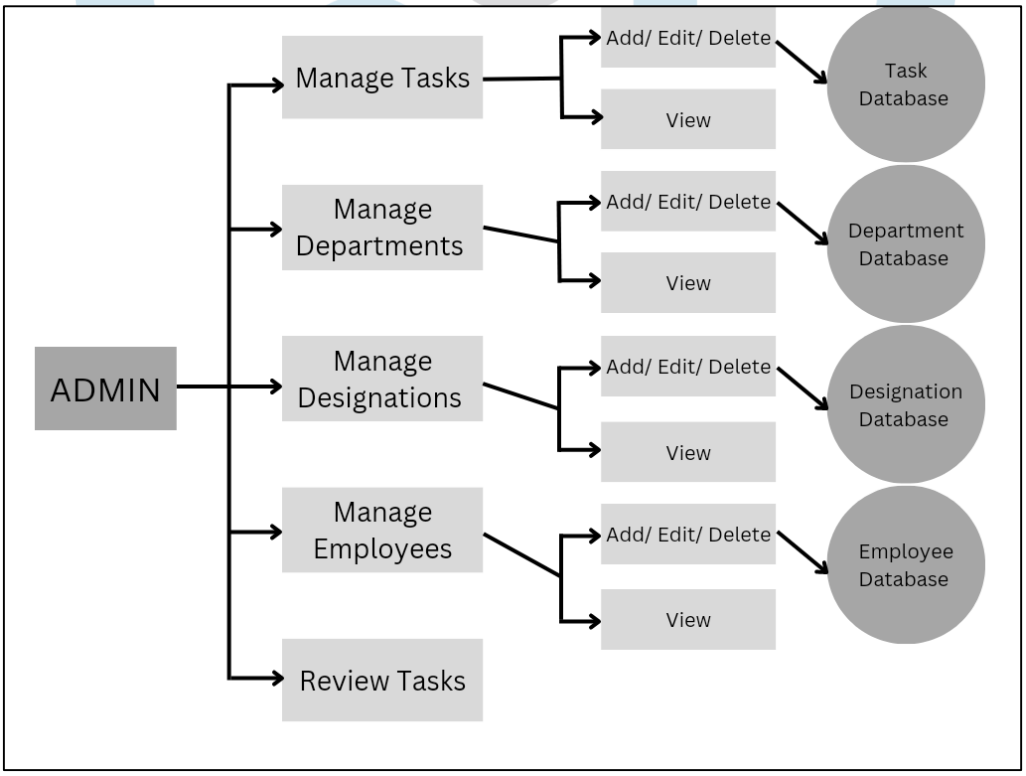

Fig 4.2.1.2 Admin DFD

4.2.2. Tables

4.2.2.1 Employee Table

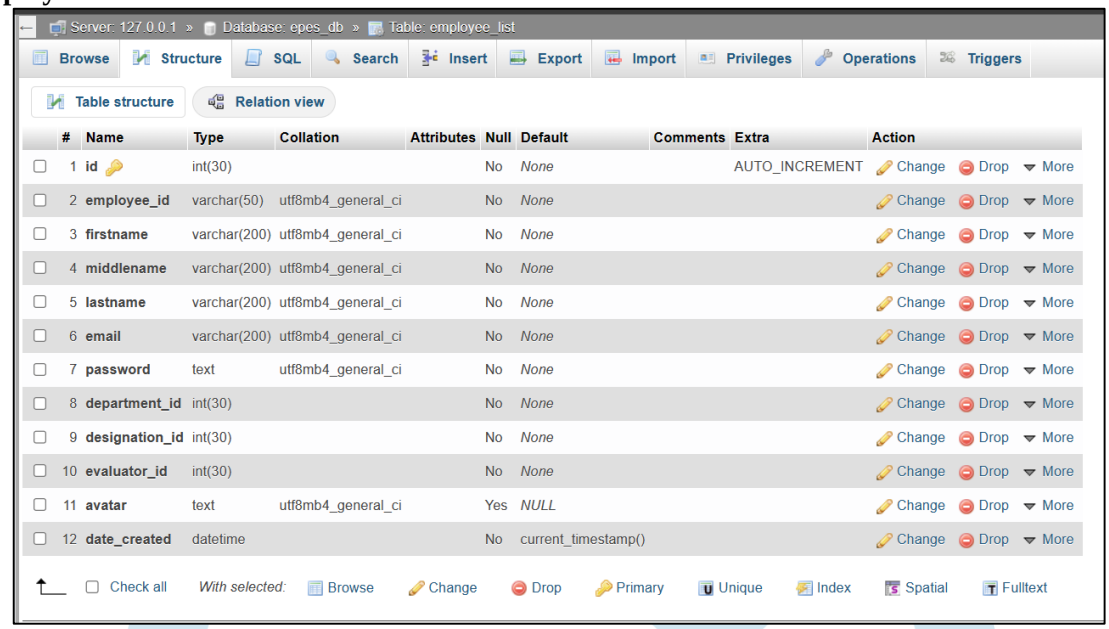

Fig. 4.2.2.1 Employee Table

4.2.2.2 Department Table

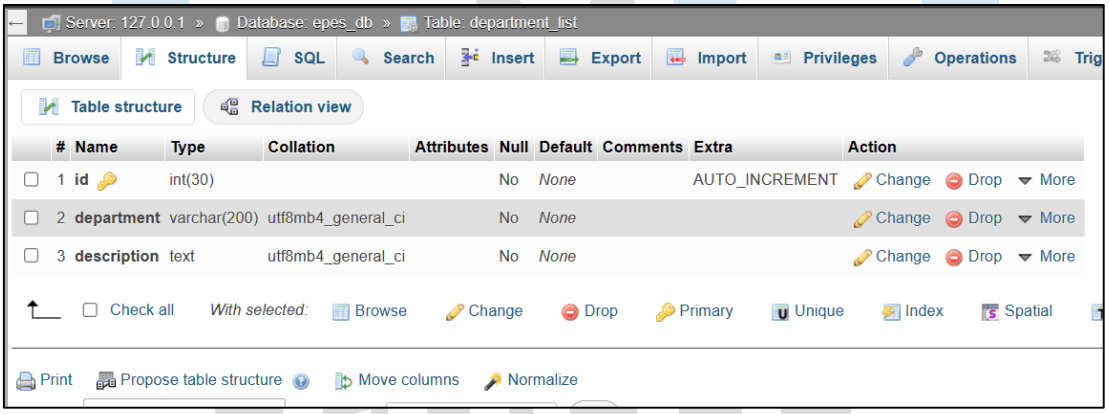

Fig. 4.2.2.2 Department Table

4.2.2.3 Designation Table

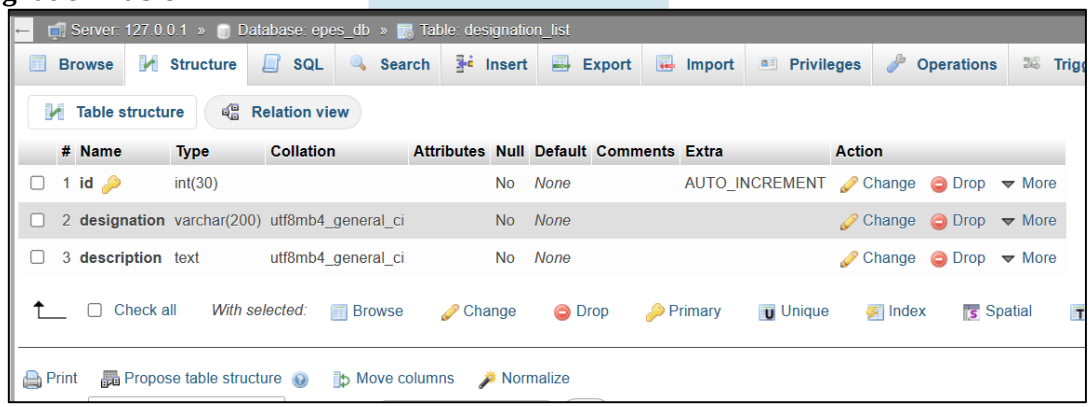

Fig. 4.2.2.3 Designation Table

4.2.2.4 Users Table

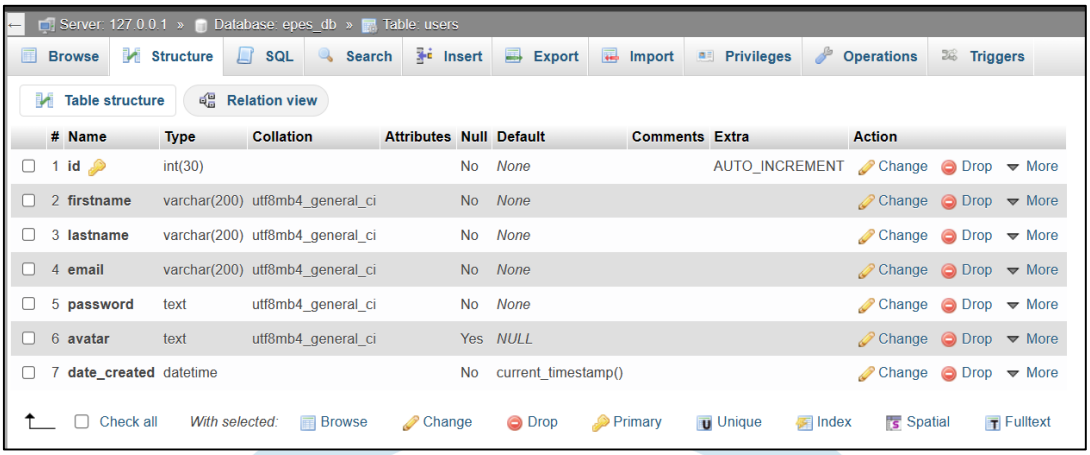

Fig. 4.2.2.4 Users Table

4.2.2.5 Task List Table

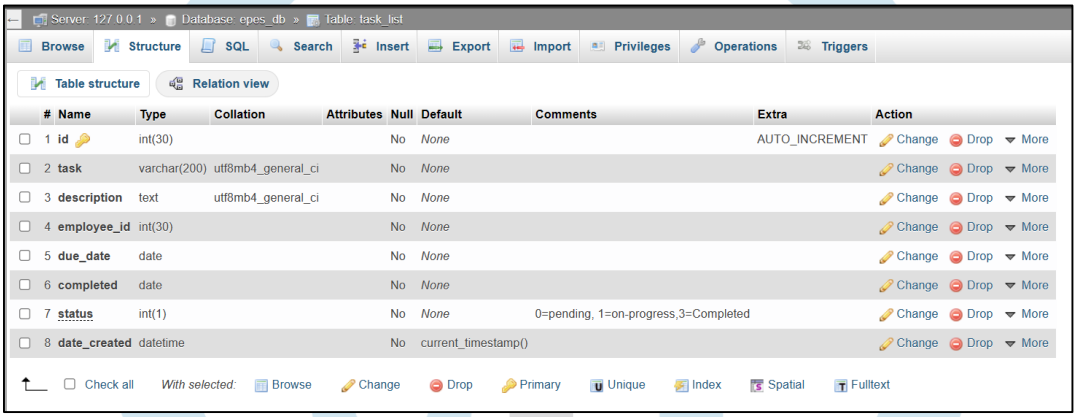

Fig. 4.2.2.5 Task List Table

4.2.2.6 Task Progress Table

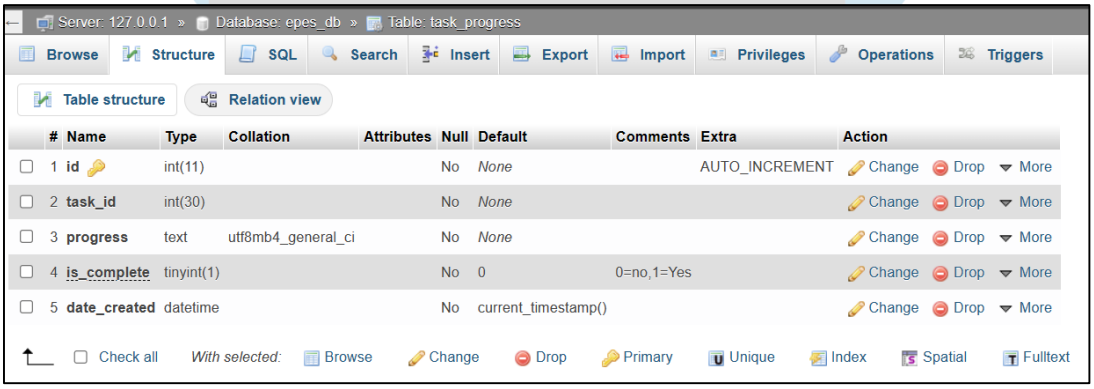

Fig. 4.2.2.6 Task Progress Table

5. IMPLEMENTATION

5.1. Implementation Platform/ Environment

5.1.1 Frontend and Backend

These include the materials and tools required for developing the front end and back end of the website.

- HTML/ HTML5
- CSS/ CSS3

- BOOTSTRAP
- PHP
- MYSQL

5.1.1.1 HTML/ HTML5

A common markup language for constructing web pages and other content that can be seen in a web browser is called HTML (Hyper Text Markup Language). Content that can be shown on a web page, including text, photos, videos, links, and other media elements, has a structure thanks to HTML.

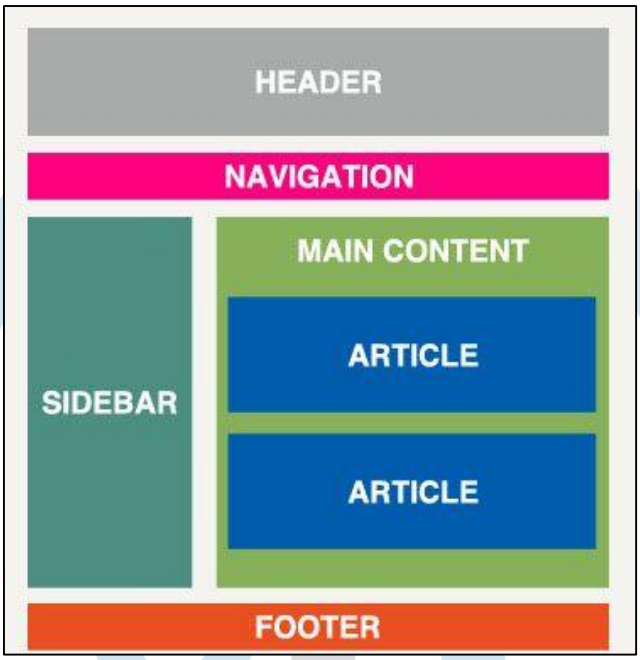

Fig. 5.1.1.1 Structure of HTML/ HTML5

The most recent version of HTML, HTML5, is an advancement over earlier HTML versions. When it was released in 2014, it had new features like support for multimedia elements (like audio and video), new form input types (like email, date, and range), and enhancements to accessibility and mobile device compatibility. Semantic elements (like <header>, <footer>, <nav>, <article>, and <section>) were also included.

Enhanced scripting and user interaction are also made possible by HTML5, thanks to technologies like the Canvas API and the Web Storage API, which enable client-side data storage without requiring server interaction and dynamic visual rendering, respectively.

5.1.1.2 CSS/ CSS3

A style sheet language called CSS (Cascading Style Sheets) is used to specify how an HTML or XML document is presented. By separating a document's display from its information, CSS makes it simpler to update and maintain a website's style.

The most recent version of CSS, known as CSS3, was made available in 2011. It has new layout options like flexible box layout and grid layout, as well as additional features like support for animations, gradients, shadows, and rounded corners.

Better support for media queries, which let a document's styling change according to the device or screen size it is being viewed on, is another feature of CSS3. This facilitates the process of developing responsive websites, which can adjust to the various screen sizes and devices, including computers, tablets, and smartphones.

5.1.1.3 BOOTSTRAP 5

Twitter created the free and open-source Bootstrap front-end framework. This is an assortment of HTML, CSS, and JavaScript elements that are useful for creating websites and web apps that prioritize mobile devices.

With Bootstrap, you can simply change a wide range of pre-designed UI elements and components, like forms, buttons, navigation menus, modals, and carousels, to meet the specific demands of your project. In addition, it has a grid system that facilitates the creation of adaptable and responsive layouts for various screen sizes and devices.

The most recent iteration of Bootstrap, version 5, was made available in May 2021. A new reset CSS file, a more straightforward and modularized codebase, enhanced accessibility, and enhanced support for modifying and expanding the framework are just a few of the enhancements and new features it offers.

5.1.1.4 PHP

A well-liked server-side programming language for building dynamic websites and web apps is PHP. Following its initial release in 1995, it has grown to rank among the most popular web programming languages.

PHP is a web server and operating system-compatible language that is available as open-source software. It is simple to use and has a sizable developer community that actively participates in its upkeep and growth.

When PHP code is run on the server side, it may create dynamic HTML content, communicate with databases, and carry out several server-side operations like file handling, networking, and encryption.

PHP is frequently used to build full-stack web applications in conjunction with HTML, CSS, and JavaScript. PHP is also used in the development of well-known content management systems like WordPress, Drupal, and Joomla. While the syntax of PHP is comparable to that of other programming languages like C and Java, it also has some special features and capabilities of its own, like the ability to handle form data and support for cookies and server-side sessions. Since its first release, PHP has undergone multiple updates; the most recent is PHP 8.1.

5.1.1.5 MYSQL

SQL (Structured Query Language) is a data management and manipulation language used by MySQL, an open-source relational database management system (RDBMS). Since its initial release in 1995, it has grown to rank among the most used relational database systems worldwide.

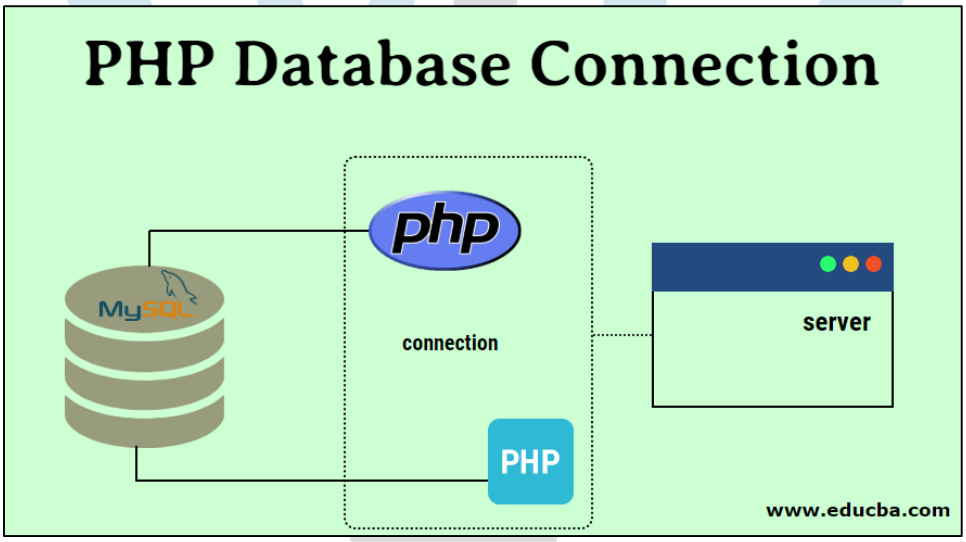

Fig. 5.1.1.5 Connection of PhP with Database

MySQL is used for managing and storing data for a variety of applications, ranging from big enterprise-level systems to little web-based apps. A variety of storage engines, offering varying degrees of performance, scalability, and dependability, are supported.

Numerous tools, such as web-based interfaces, graphical user interfaces, and command-line interfaces, are available for managing and accessing MySQL. It is simple to integrate with many application kinds because it is compatible with a broad variety of programming languages.

The scalability and dependability of MySQL are two of its main advantages. It can easily be scaled up or down to match an application's needs, and it can manage massive volumes of data. Additionally, it provides high availability capabilities like replication, which enables fault tolerance and redundancy by distributing data among several servers.

5.1.1 VS CODE

Microsoft created the well-known open-source code editor known as Visual Studio Code (VS Code). Developers use it extensively to write and edit code in a variety of computer languages, including Python, Ruby, and JavaScript. The ability to be customized is one of VS Code's primary benefits. It has many pre-installed themes and settings that are easily adjustable to meet the requirements of a certain project or development environment. It also boasts a sizable and vibrant developer community, which has produced numerous extensions and plugins that enhance the editor's capabilities.

VS Code is compatible with Linux, macOS, and Windows and is a multi-platform program. It is a well-liked option for developers who require a potent code editor that uses fewer system resources because it is also quick and lightweight.

5.1.2 XAMPP

The MySQL/MariaDB database, PHP scripting language, Perl programming language, and Apache HTTP server are all part of the free and open-source XAMPP web server solution stack. The acronym for the name XAMPP stands for Apache, MySQL, PHP, Perl, and X (cross-platform).

Web developers use XAMPP to develop and test web apps locally before putting them on production servers. It offers a ready-to-use platform with all the required web development components that is simple to set up.

It is common practice to develop and test dynamic web applications and content management systems like WordPress, Drupal, and Joomla using XAMPP, which is available for Windows, macOS, and Linux. It also comes with programs like phpMyAdmin, which lets users use a web interface to administer MySQL and MariaDB databases.

Although XAMPP is mostly used for testing purposes and local development, it is not advised to use it as a production server because of security and performance issues.

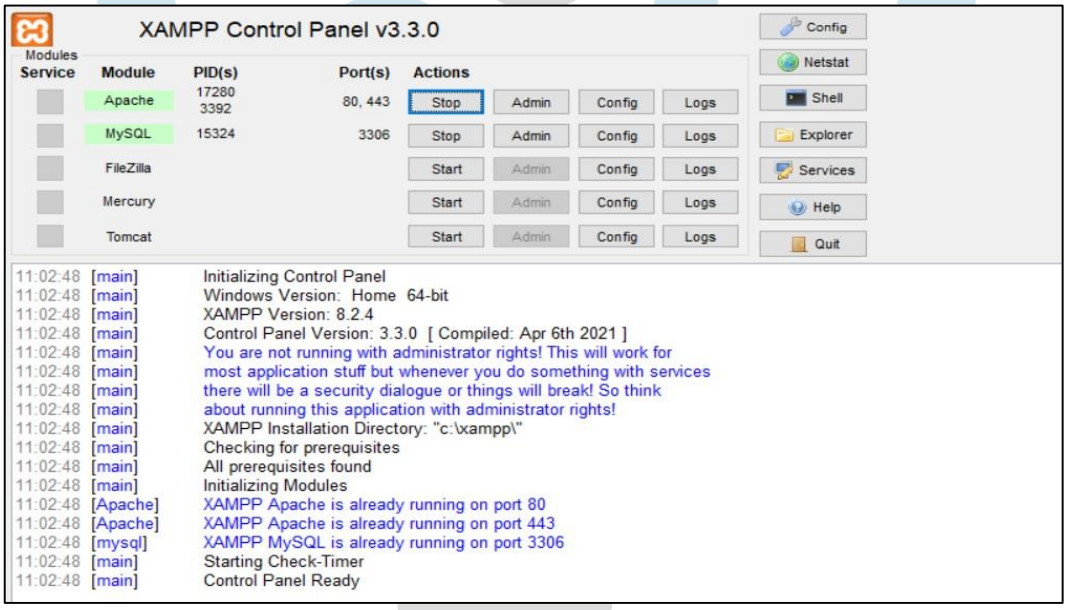

Fig. 5.1.3 XAMPP Home Page

5.2. Screenshots (Task Based)

5.2.1 Login Page

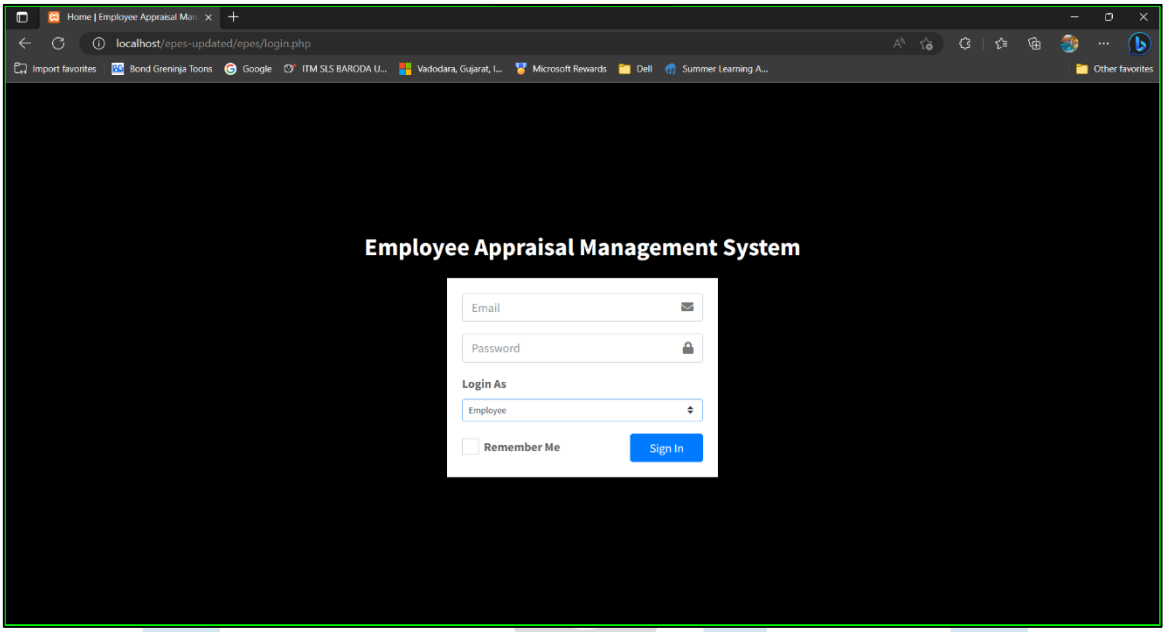

Fig 5.2.1 Login Page

5.2.2 Employee Dashboard

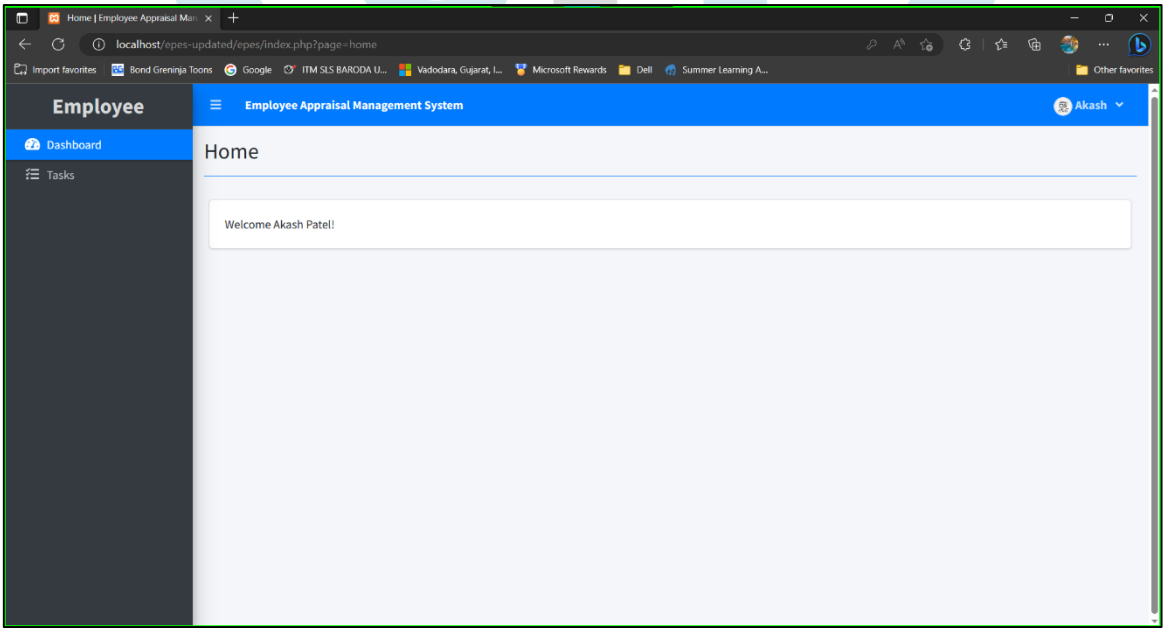

Fig 5.2.2 Employee Dashboard

5.2.3 Employee Task

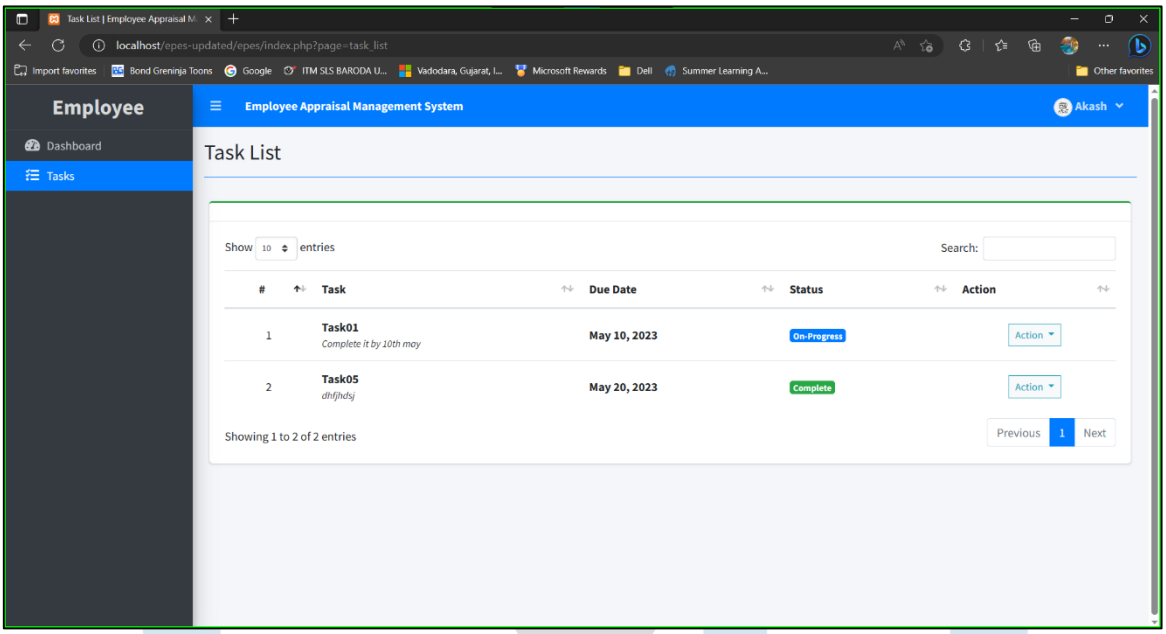

Fig 5.2.3 Employee Task

5.2.4 Employee View Task

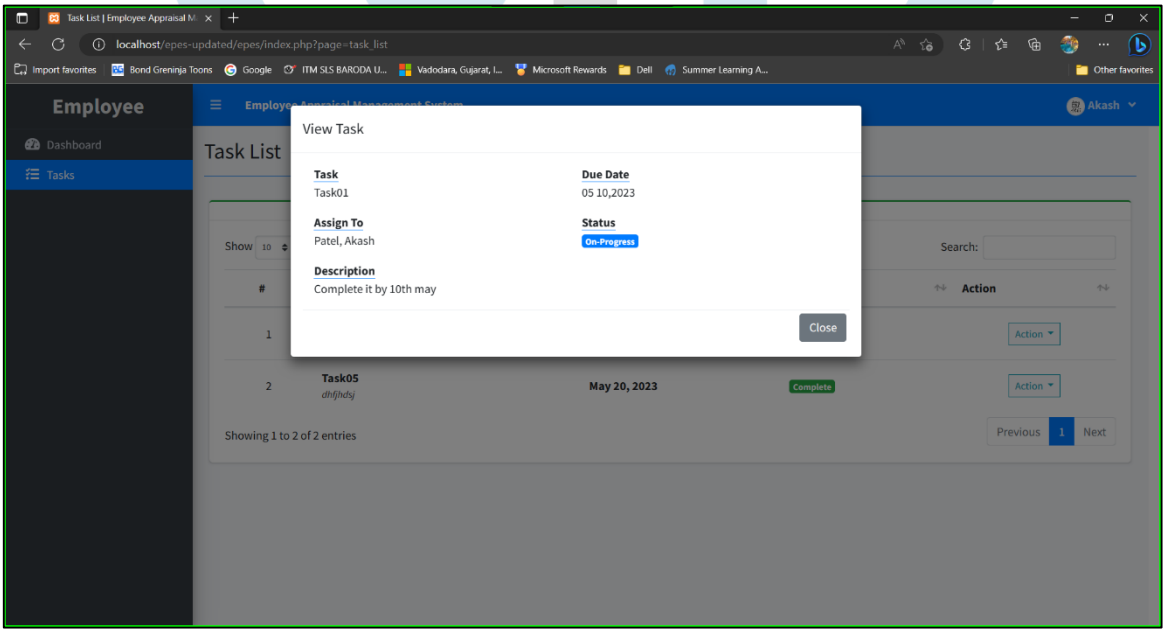

Fig 5.2.4 Employee view task

5.2.5 Employee Add Progress

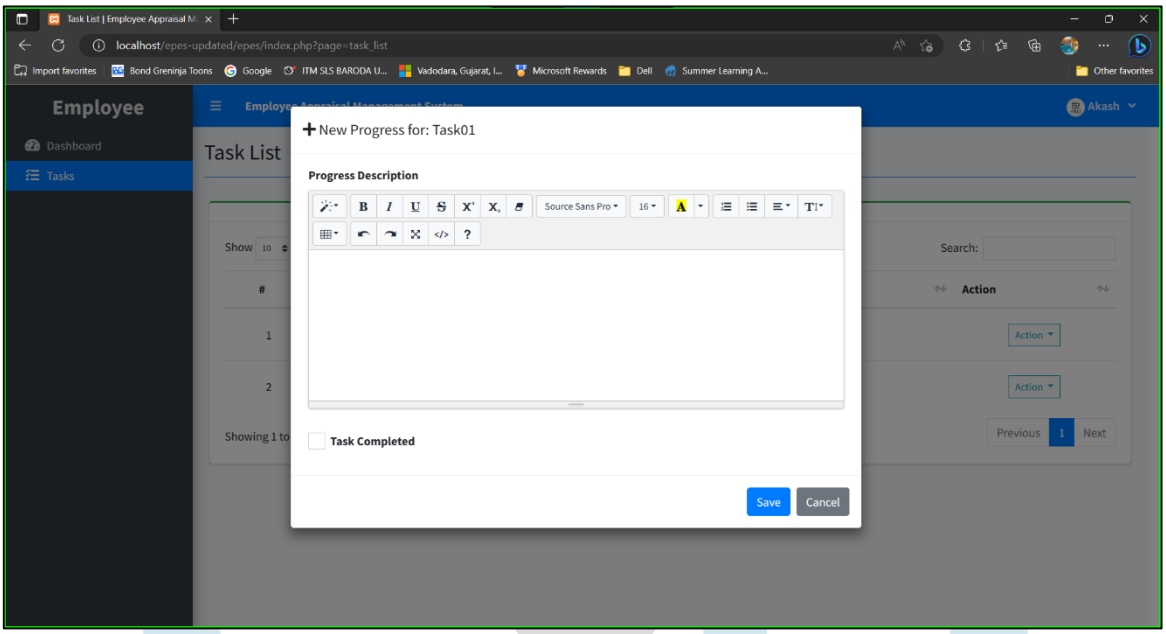

Fig 5.2.5 Employee add progress

5.2.6 Employee View Progress

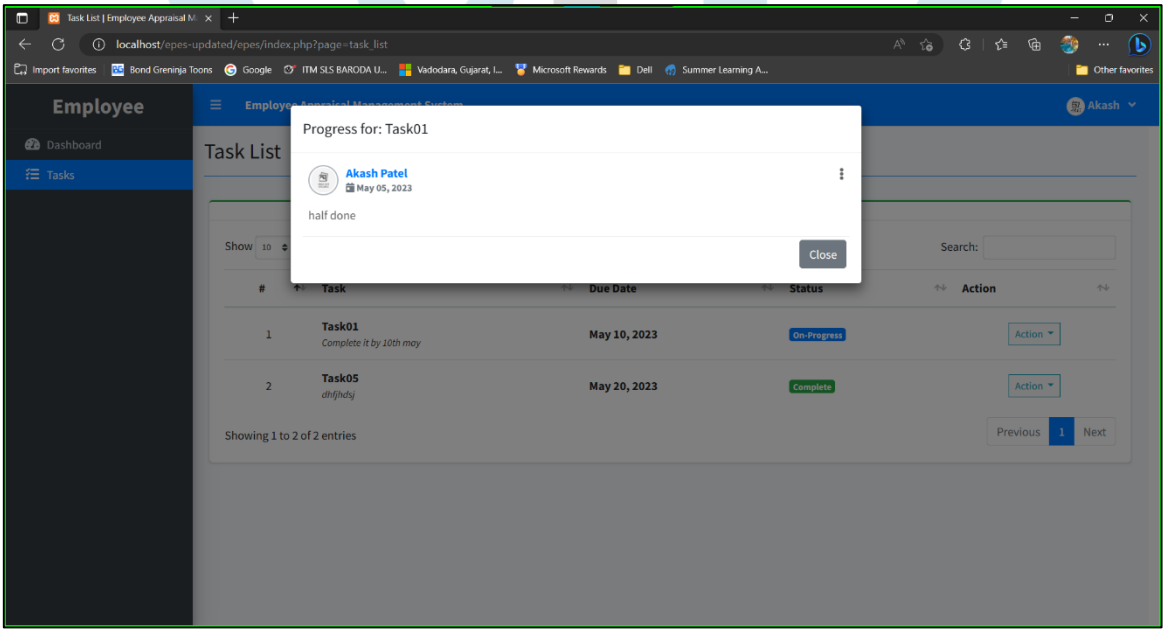

Fig 5.2.6 Employee view progress

5.2.7 Admin Dashboard

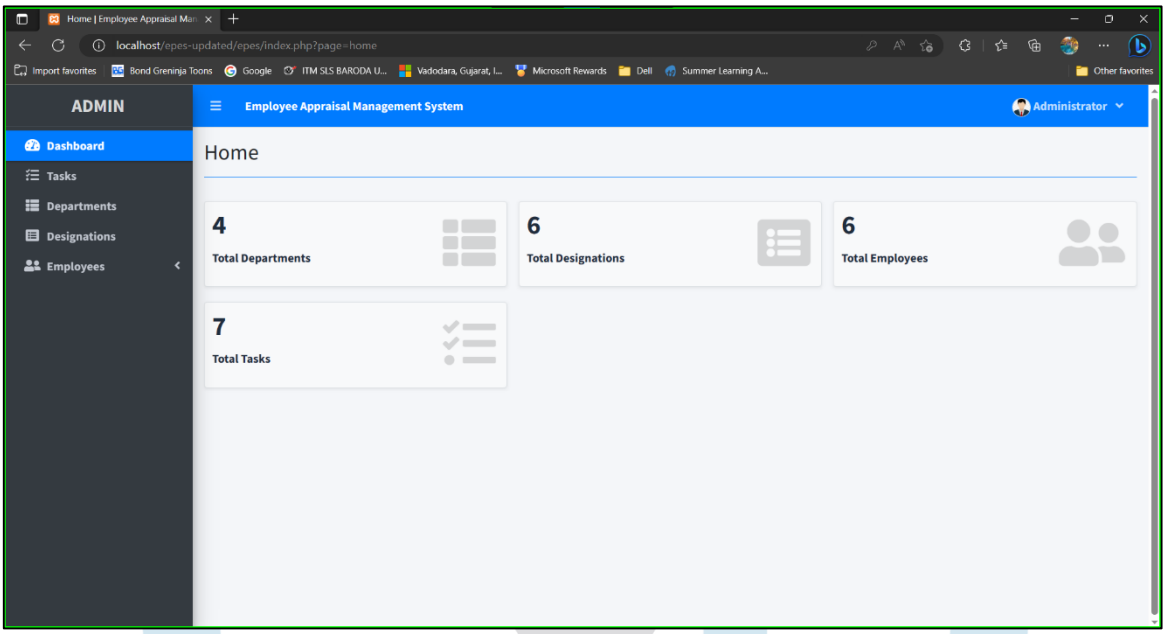

Fig 5.2.7 Admin Dashboard

5.2.8 Task List

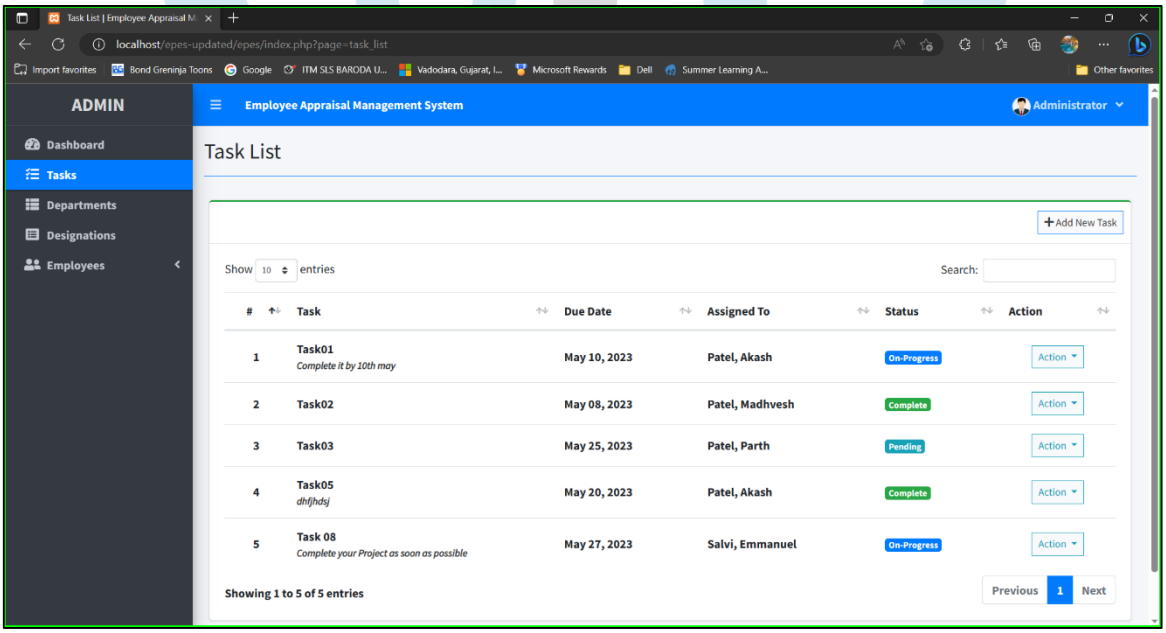

Fig 5.2.8 Task List

5.2.9 Add New Task

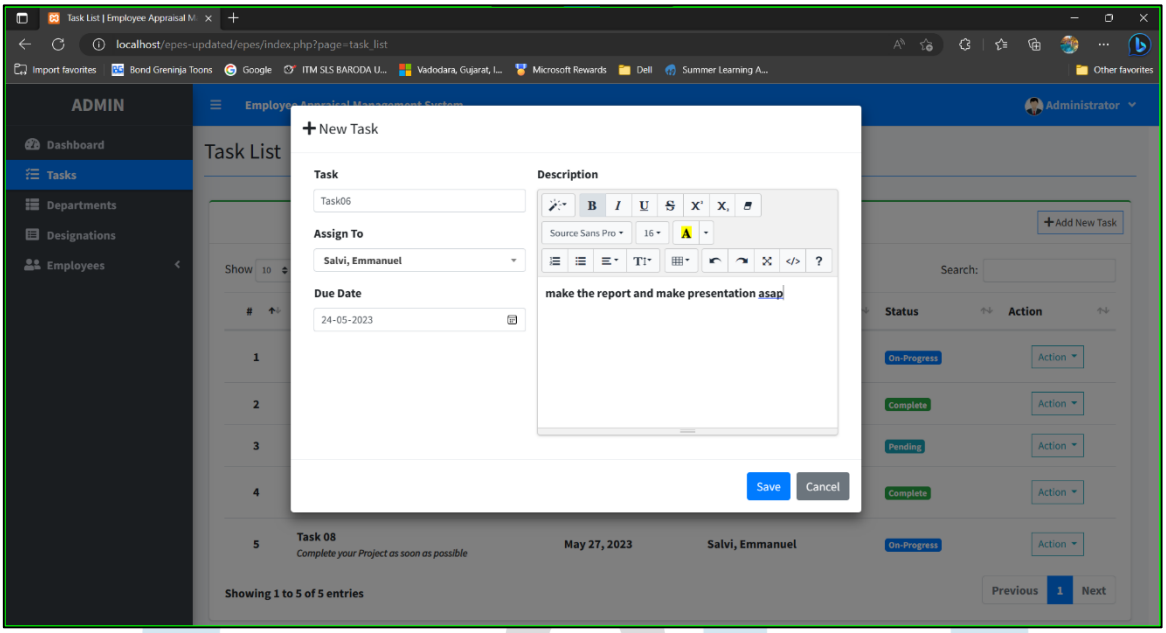

Fig 5.2.9 Add new task

5.2.10 View Task

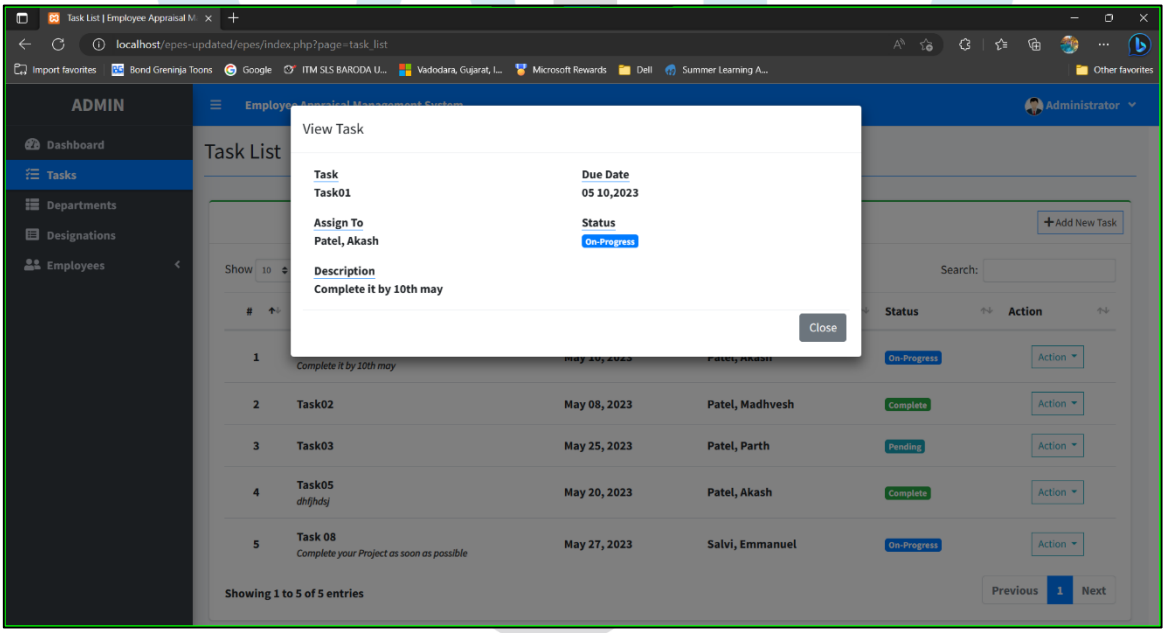

Fig 5.2.10 View task

5.2.11 Department List

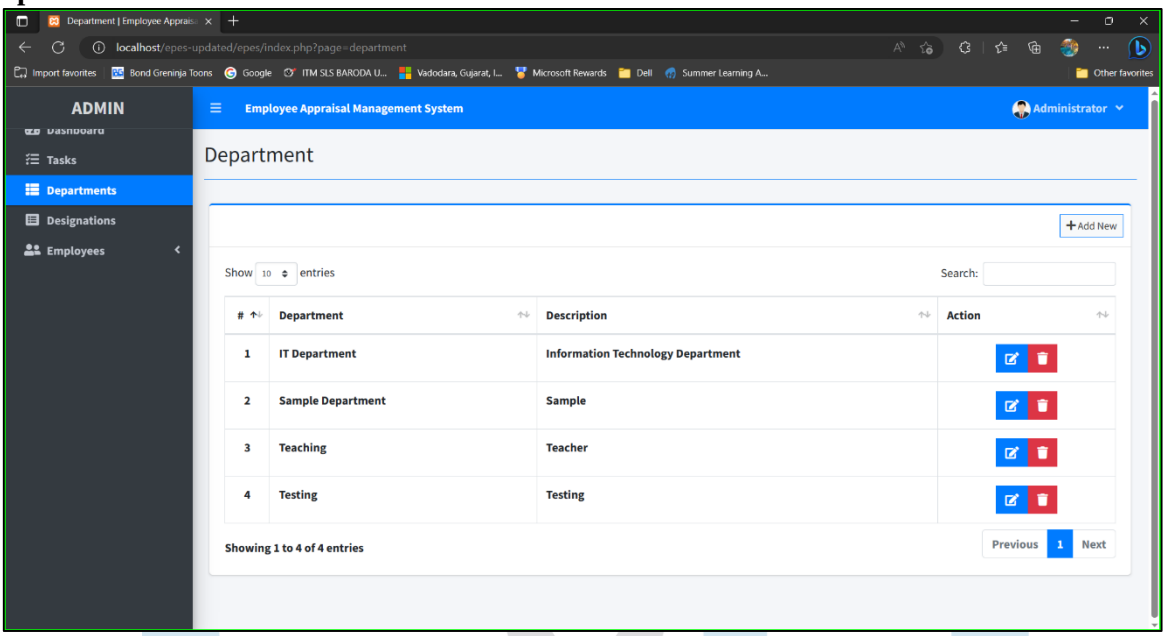

Fig 5.2.11 Department List

5.2.12 Designation List

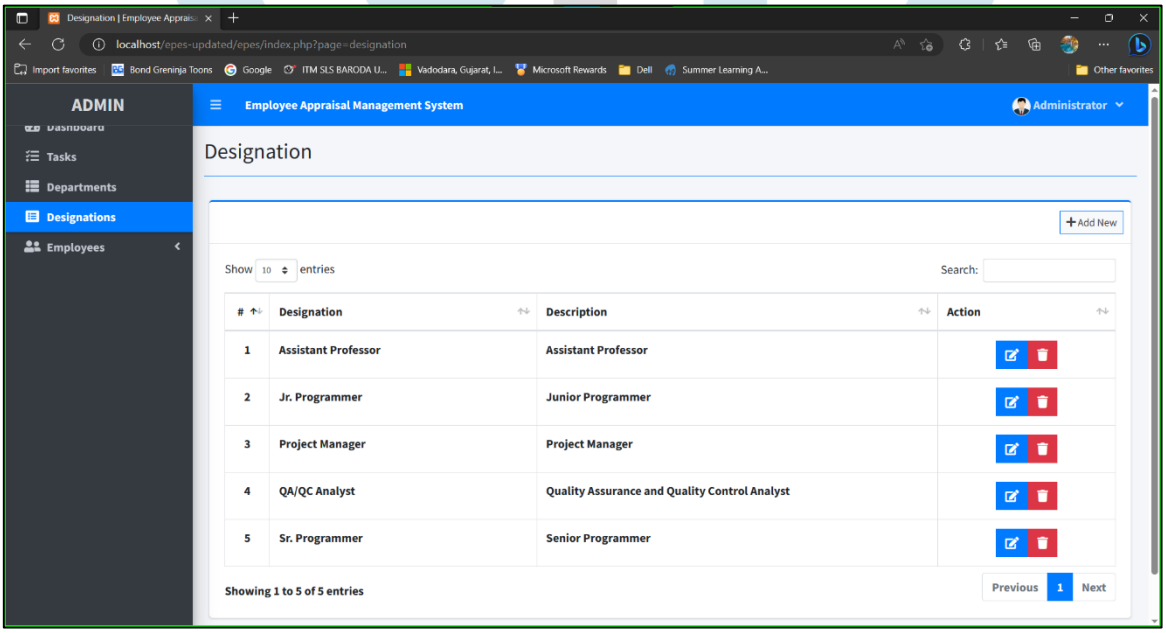

Fig 5.2.12 Designation List

5.2.13 Employee's List

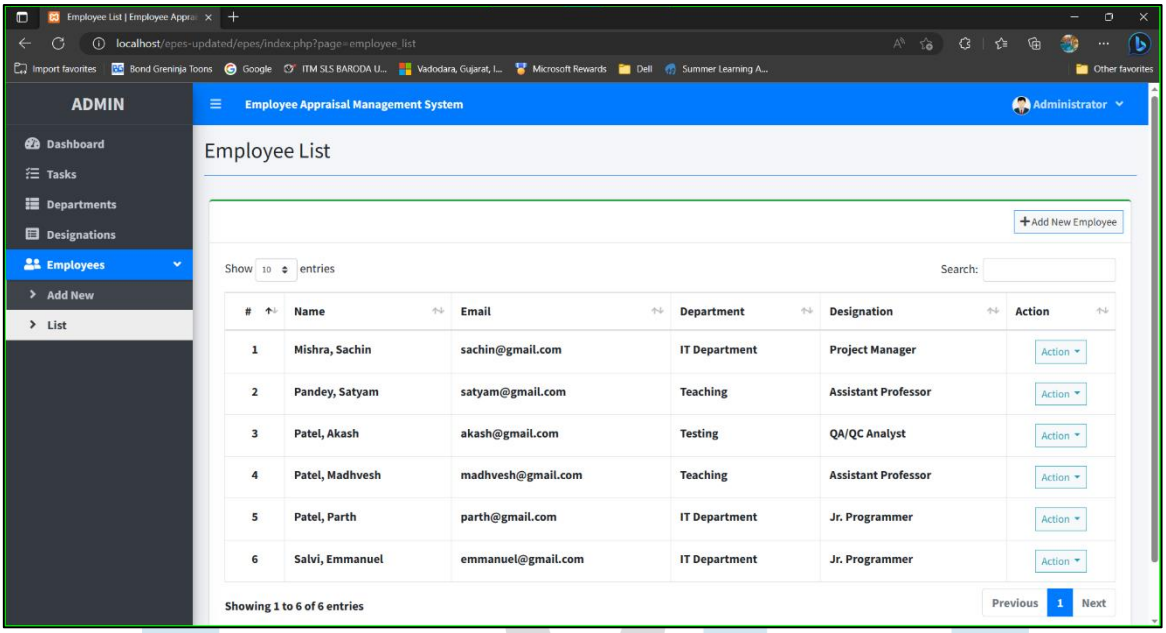

Fig 5.2.13 Employees list

5.2.14 Add New Employee

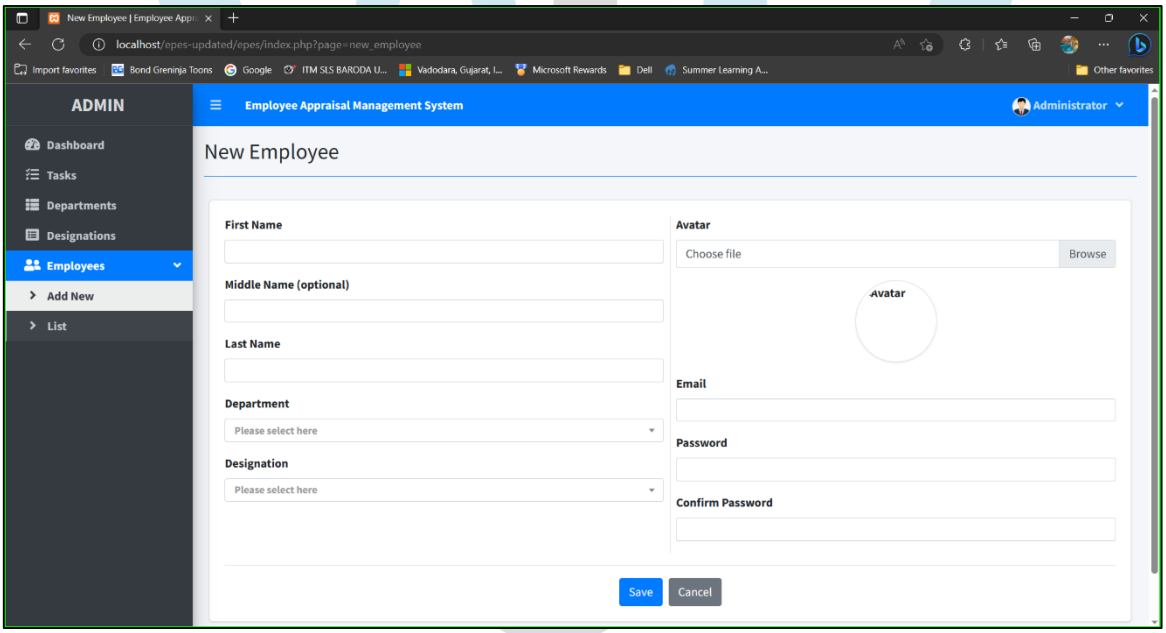

Fig 5.2.14 Add new employee

6. TESTING

6.1 Unit Testing

Unit testing concentrates on having the modules find the faults on their own. This makes it possible for the tester to find coding flaws. It involves taking a module, running it independently of the rest of the software product using pre-made test cases, and comparing the outcome that is returned with the module's specifications and design. Finding and fixing as many software bugs as possible is one of the goals of testing. There are several arguments in favor of unit testing, including:

- The module is small enough that we can try testing it in a way that is clearly exhaustive
- The size of the single module is modest enough that we can detect an error pretty simply.
- Confusing connections between several mistakes in wildly disparate program components are removed.

An issue arises when a module is tested separately. How can we operate a module in the absence of anything calling it, calling it in turn, and maybe even producing intermediate values that are obtained during execution? One method is to create a suitable driver function to call it, add output statements to it, and create simple stubs for it to call. Modules that are inferior to the module that needs to be tested are replaced by stubs. A stub or dummy subprogram prints entry verification, returns, and utilizes the interface of the subordinate module. It may also perform limited data modification.

6.2 Integration Testing

This is an organized method for building the program's framework and simultaneously identifying interface-related mistakes. The goal is to take a unit-tested module and use design to construct a program structure that has been identified. Determining whether or not the interfaces between modules are correct is the primary goal of integration testing. The interface is one particular goal of integration testing: determining whether parameters are identical in terms of type, allowable ranges, meaning, and utilization on both sides. Three types of integration testing exist:

- Top Down Approach: This type of integration adds modules one at a time, working its way down the invocation hierarchy until the complete tree level is formed.
- Bottom-Up Approach: The Bottom-Up approach operates similarly from the bottom up.
- Sandwich Strategy: A sandwich strategy concurrently operates from top to bottom.

6.3 Test Cases

- Is the system correctly linked? - Does it send users to the intended page?
- Information transmitted: It is important to verify that a page passing a parameter to another page receives the right data, regardless of what the preceding page passed.
- Correct output is required: Generally, tests are run with known outcomes. All system functionalities should be thoroughly examined to determine whether they produce the desired results. The system is functioning properly if the output of the system matches that outcome.

6.3.1 Login for User

Serial No.	Description	Expected Result	Actual Result	Result
01	This page contains 2 Fields (login id and Password), 1 list (employee or admin) and a login button to submit the information. User is entering correct information.	User dashboard page should open after successful login.	Respective user Dashboard page is opening after Successful login by user.	Passed
02	If either login id or password is filled incorrect	An error message should be displayed	When wrong information is entered by user then an error message is displayed.	Passed

Table 6.3.1 Login for user

6.3.2 Add New Employee Page

Serial No.	Description	Expected Result	Actual Result	Result

01	Add New Employee page consist of detail information about employee and a submit button to submit the information. Here the admin is entering correct information.	After submitting information, data saved successfully message should be displayed and employee's list page should be displayed.	After submitting information, data saved successfully message is displayed and employee's list page is also displayed.	Passed
02	If the information entered by user is left somewhere blank.	Message should be displayed asking the user to fill the information.	Message is occurred if the information is left blank.	Passed

Table 6.3.2 Add New Employee Page

7. CONCLUSION

To conclude the description about the project: The expanded functionality of today's software requires an appropriate approach towards software development. This software is developed using HTML, CSS, Bootstrap, PHP and MySQL. Through our project, we have developed an Employee Appraisal Management System (EAMS) that is user-friendly and customizable. Our system provides a centralized platform for managers to assign tasks and track progress. Talking about the project, the administrator has all the record of employees, departments, designations and tasks and he can manage as well. Administrator can assign new tasks to employees and view their progress. The employee can browse tasks assigned him/ her by the administration, and add his/ her progress.

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