EMPLOYEE MANAGEMENT SYSTEM

PROJECT REPORT

Submitted by

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Of
Bachelor of Technology

Under the guidance of

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
RAJIV GANDHI UNIVERSITY OF KNOWLEDGE TECHNOLOGIES
BASAR, NIRMAL (DIST.),
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Project Report submitted to
Rajiv Gandhi University of Knowledge Technologies, Basar
for the partial fulfillment of the requirements for
the award of the degree of

Bachelor of Technology in
Computer Science & Engineering
by

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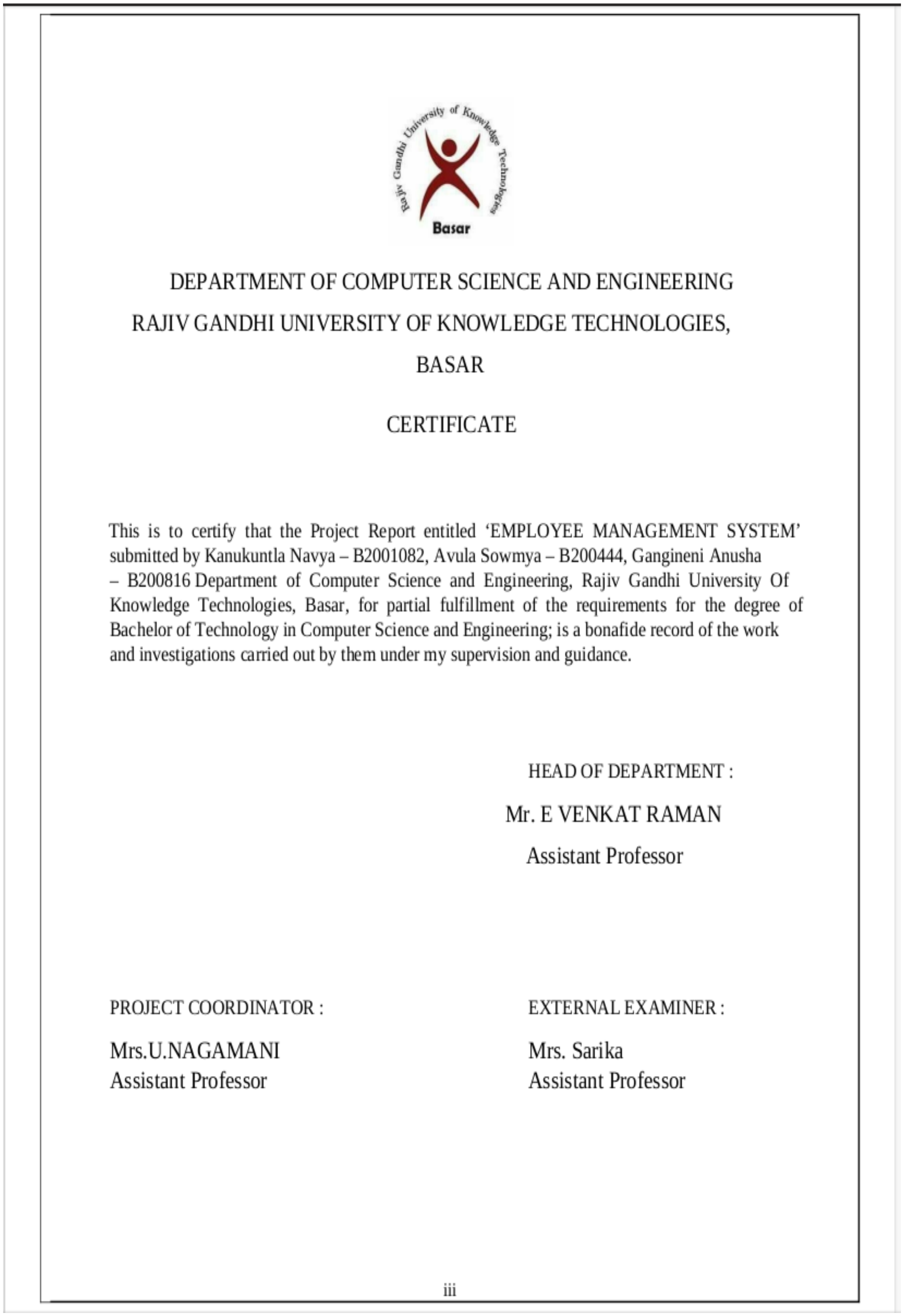
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
RAJIV GANDHI UNIVERSITY OF KNOWLEDGE TECHNOLOGIES,
BASAR
JUNE 2024



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RAJIV GANDHI UNIVERSITY OF KNOWLEDGE TECHNOLOGIES,
BASAR

CERTIFICATE

This is to certify that the Project Report entitled 'EMPLOYEE MANAGEMENT SYSTEM' submitted by Kanukuntla Navya – B2001082, Avula Sowmya – B200444, Gangineni Anusha – B200816 Department of Computer Science and Engineering, Rajiv Gandhi University Of Knowledge Technologies, Basar, for partial fulfillment of the requirements for the degree of Bachelor of Technology in Computer Science and Engineering; is a bonafide record of the work and investigations carried out by them under my supervision and guidance.

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EXTERNAL EXAMINER :
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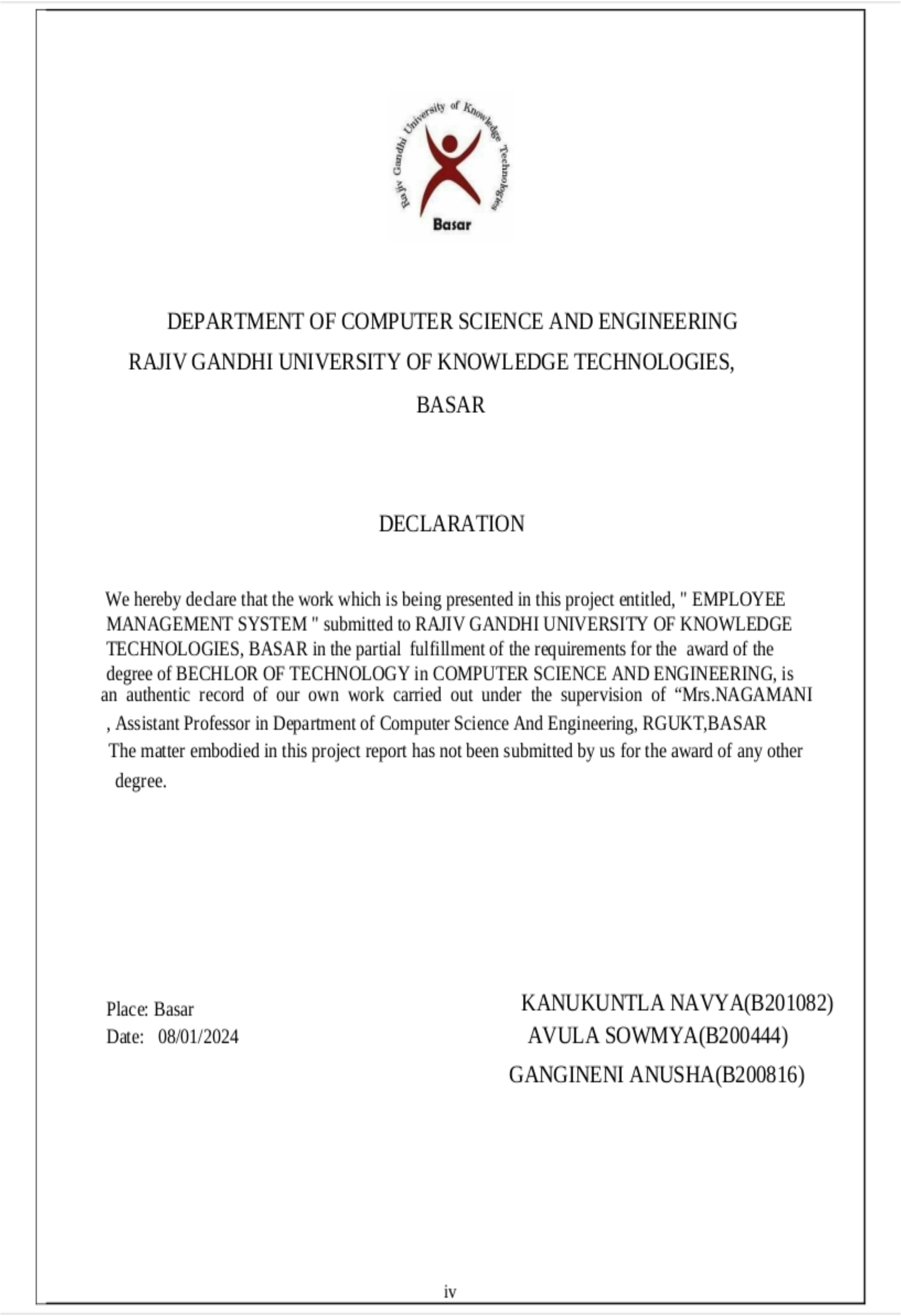

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
RAJIV GANDHI UNIVERSITY OF KNOWLEDGE TECHNOLOGIES,
BASAR

DECLARATION

We hereby declare that the work which is being presented in this project entitled, " EMPLOYEE MANAGEMENT SYSTEM " submitted to RAJIV GANDHI UNIVERSITY OF KNOWLEDGE TECHNOLOGIES, BASAR in the partial fulfillment of the requirements for the award of the degree of BECHLOR OF TECHNOLOGY in COMPUTER SCIENCE AND ENGINEERING, is an authentic record of our own work carried out under the supervision of “Mrs.NAGAMANI , Assistant Professor in Department of Computer Science And Engineering, RGUKT,BASAR The matter embodied in this project report has not been submitted by us for the award of any other degree.

Place: Basar
Date: 08/01/2024

KANUKUNTLA NAVYA(B201082)
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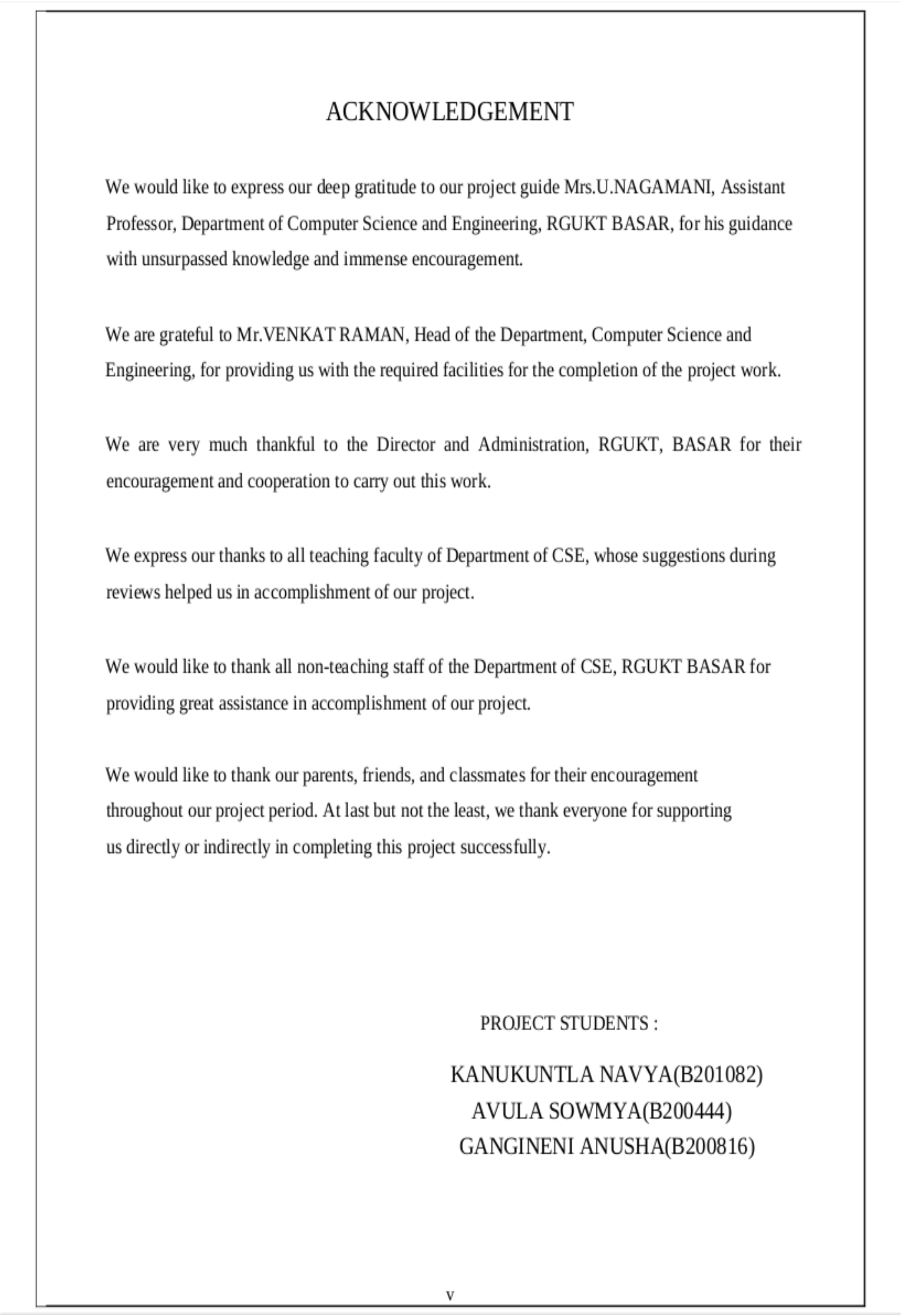

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PROJECT STUDENTS :

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Abstract

The Employee Management System (EMS) is a comprehensive solution designed to automate and streamline employee-related processes within an organization. This system provides a centralized platform for managing employee records, tracking attendance, processing payroll, evaluating performance, and facilitating communication between employees and management. By replacing manual processes with an automated system, EMS reduces administrative burdens, minimizes errors, and ensures the accuracy and accessibility of employee data.

With features like real-time data analytics and detailed reporting, the system aids in better decision-making and enhances compliance with labor laws and organizational policies. Designed with scalability and user-friendliness in mind, EMS can adapt to the evolving needs of growing organizations. The system not only improves operational efficiency but also contributes to better employee satisfaction and productivity, supporting the organization's overall objectives.

Contents

Chapter 1

Introduction

1.1 Introduction

The Employee Management System (EMS) is an essential tool designed to efficiently handle various aspects of employee management in an organization. As the workforce grows and organizational structures become more complex, traditional manual methods of managing employee data and processes often lead to inefficiencies, errors, and compliance risks. EMS addresses these challenges by offering a centralized, automated platform that simplifies and optimizes employee-related tasks

1.1.1 Project Objective

The objective of the Employee Management System project is to develop a robust and user-friendly platform that automates and streamlines various employee-related processes within an organization.

This system is designed to enhance operational efficiency by reducing manual administrative tasks and minimizing errors, ensuring accurate storage and quick retrieval of employee information through a centralized database.

Additionally, it aims to facilitate seamless communication between employees and management while providing actionable insights through analytics and reporting to support informed decision-making.

By standardizing processes, the system ensures compliance with labor laws and organizational policies and is built to be scalable, accommodating the organization's growth. Ultimately, this project seeks to improve resource management, employee satisfaction, and organizational productivity.

1.1.2 Background

The background process of an Employee Management System (EMS) developed using PHP involves several key activities that operate behind the scenes to ensure the system functions efficiently and reliably. These processes are implemented to manage tasks such as data storage, user authentication, role-based access control, and real-time operations. Below is an overview of the core background processes:

1.2 Problem Statement

Managing employees in an organization using traditional methods often leads to inefficiencies, errors, and lack of transparency. Manual processes for tasks such as maintaining employee records, tracking attendance, processing payroll, and evaluating performance are time-consuming, prone to human error, and difficult to scale as the organization grows. Additionally, decentralized and inconsistent record-keeping can result in data inaccuracies, miscommunication, and non-compliance with labor laws and organizational policies.

1.3 Aims and Objectives

The primary aim of the Employee Management System project is to develop a comprehensive and user-friendly platform that automates and streamlines employee-related processes, enhancing operational efficiency and improving overall organizational productivity. The system seeks to provide a centralized solution for managing employee records, tracking attendance, processing payroll, evaluating performance, and facilitating communication between employees and management.

1.4 Scope of the Project

Task Assignment and Management

- Allow managers to create, assign, and delegate tasks to employees.
- Enable employees to view, update, and track the status of their assigned tasks.

Task Tracking and Monitoring

- Provide real-time tracking of task progress for both managers and employees.
- Include status indicators such as:
  - Pending
  - In Progress
  - Completed
- Provide deadlines for tasks to ensure timely completion.

Employee Management

- Maintain a centralized database of employee details, including:
  - Roles
  - Contact information
- Ensure role-based access control, with managers and administrators having additional privileges to perform specific tasks.

Notifications and Alerts

- Send automated notifications to employees for:
  - Task assignments
  - Task updates
  - Approaching deadlines
- Alert managers about overdue or critical tasks that require immediate attention.

1.5 Reporting and Analytics

- Generate detailed reports on:
    - Task completion rates
    - Employee performance
    - Overall project progress
- Provide insights that support data-driven decision-making for the management team.

Chapter 2

Model Implementation and Analysis

2.1 Introduction

Briefly introduce the topics discussed in this chapter.

2.1.1 System Design and Architecture

The Employee Task Management System follows a client-server architecture with a clear separation of the frontend, backend, and database components. The frontend, developed with HTML, CSS, and JavaScript, provides an intuitive user interface for managers and employees to manage tasks, view progress, and generate reports. The backend, powered by PHP, handles the business logic, including task assignments, employee management, notifications, and role-based access control. The database, typically MySQL or PostgreSQL, stores all task-related data, employee records, and notifications. Real-time updates, secure authentication, and automated notifications ensure a seamless user experience. The system is designed to be scalable, flexible, and secure, allowing for efficient task tracking, data management, and reporting across the organization.

2.2 Implementation Tools and Environment

The development of the Employee Task Management System (ETMS) requires the use of various tools, technologies, and development environments to create a robust, scalable, and efficient system. Below is a breakdown of the primary tools and environments used for implementing the system.

1. Programming Language

PHP: PHP is used as the server-side scripting language for the backend. It is widely used for web development and can easily integrate with databases like MySQL and PostgreSQL. PHP is a suitable choice for handling business logic, user authentication, task management, and reporting.

2. Web Server

Apache HTTP Server: Apache is commonly used as the web server for PHP applications. It is reliable, supports various configurations, and is easy to integrate with PHP through `mod_php`.

Nginx (Optional): Nginx can also be used for serving static content and reverse proxying to PHP-FPM (FastCGI Process Manager) if performance optimization is required.

3. Database Management System

MySQL: MySQL is a relational database management system (RDBMS) used to store all the data, such as employee information, task details, and task assignments. It is easy to integrate with PHP using MySQLi or PDO (PHP Data Objects).

PostgreSQL (Optional): As an alternative to MySQL, PostgreSQL can also be used. It offers advanced features like better handling of complex queries, concurrency, and large datasets.

4. Frontend Development Tools

HTML5: HTML is used to structure the web pages, including forms, buttons, and tables for displaying tasks and employee information.

CSS3: CSS is used to style the pages, ensuring a responsive and aesthetically pleasing design.

JavaScript: JavaScript is used to add interactivity, such as dynamic task filtering, live updates, and form validation.

Frontend Frameworks (Optional): If needed, modern frontend frameworks like React or Vue.js can be integrated for building more interactive and dynamic user interfaces.

2.2.1 Integration and Testing

Integration and testing are essential phases of the development process to ensure the system works as expected when all individual components are combined. For the Employee Task Management System (ETMS), this phase focuses on validating the functionality of integrated modules, ensuring data consistency, system stability, and that user interactions meet the specified requirements. Below is a breakdown of integration and testing strategies for the system:

2.3 USER LOGIN

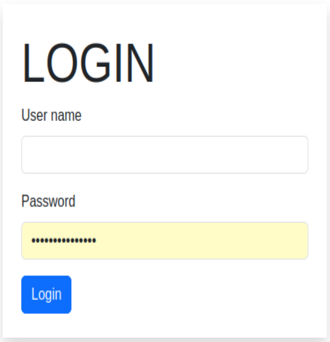
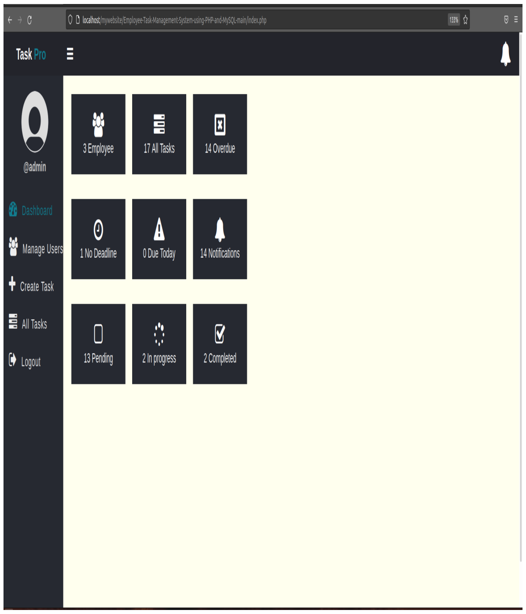
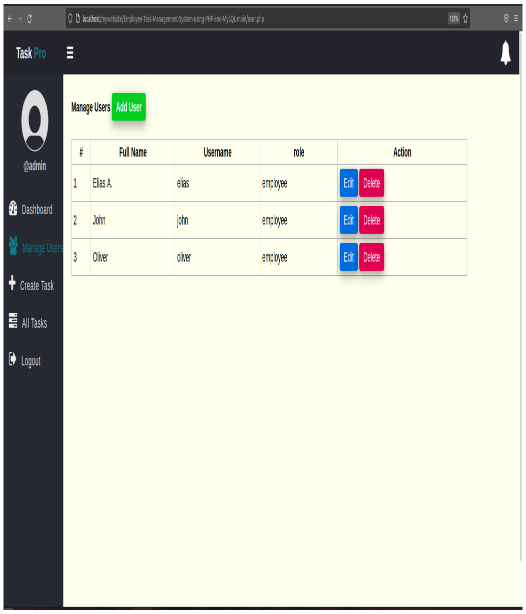


Figure 2.1: USER LOGIN

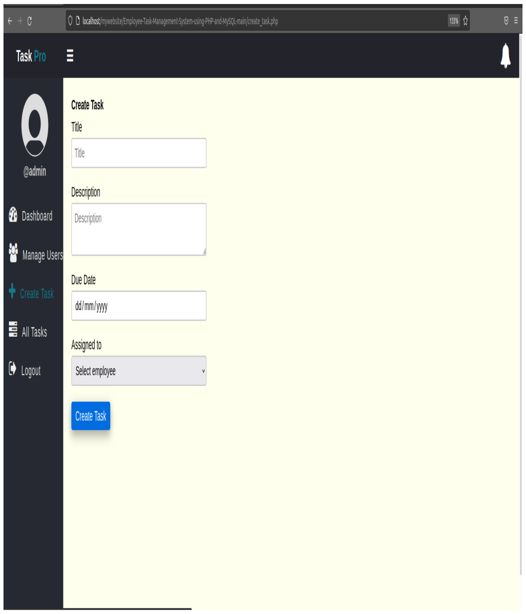


(a) DASHBOARD


localhost/mywebsite/Employee-Task-Management-System-using-PHP-and-MySQL-main/user.php
133%
Task Pro
@admin
Dashboard
Manage Users
Create Task
All Tasks
Logout
Manage Users
Add User

#	Full Name	Username	role	Action
1	Elias A.	elias	employee	Edit Delete
2	John	john	employee	Edit Delete
3	Oliver	oliver	employee	Edit Delete

(b) MANAGE USERS



localhost/mywebsite/Employee-Task-Management-System-using-PHP-and-MySQL-main/create_task.php
133%
Task Pro
@admin
Dashboard
Manage Users
Create Task
All Tasks
Logout

Create Task

Title

Title

Description

Description

Due Date

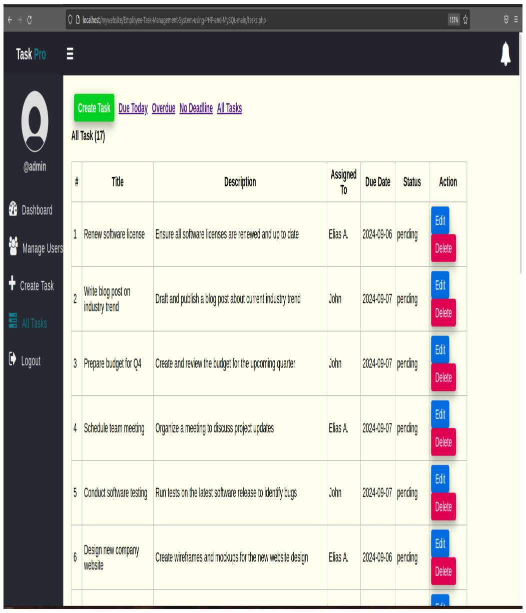
dd/mm/yyyy

Assigned to

Select employee

Create Task

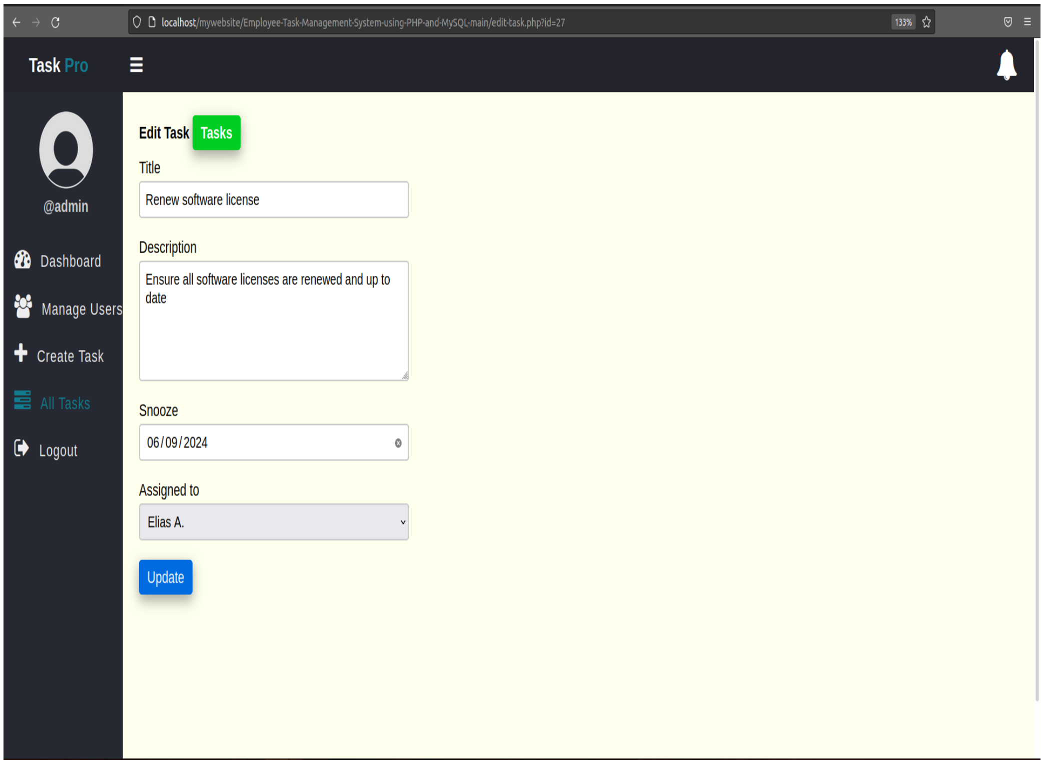
(a) CREATE TASK



All Task (17)

#	Title	Description	Assigned To	Due Date	Status	Action
1	Renew software license	Ensure all software licenses are renewed and up to date	Elias A.	2024-09-06	pending	Edit Delete
2	Write blog post on industry trend	Draft and publish a blog post about current industry trend	John	2024-09-07	pending	Edit Delete
3	Prepare budget for Q4	Create and review the budget for the upcoming quarter	John	2024-09-07	pending	Edit Delete
4	Schedule team meeting	Organize a meeting to discuss project updates	Elias A.	2024-09-07	pending	Edit Delete
5	Conduct software testing	Run tests on the latest software release to identify bugs	John	2024-09-07	pending	Edit Delete
6	Design new company website	Create wireframes and mockups for the new website design	Elias A.	2024-09-06	pending	Edit Delete

(b) ALL TASKS



localhost/mywebsite/Employee-Task-Management-System-using-PHP-and-MySQL-main/edit-task.php?id=27
133%
Task Pro
@admin
Dashboard
Manage Users
Create Task
All Tasks
Logout
Tasks
Update

Edit Task

Title

Renew software license

Description

Ensure all software licenses are renewed and up to date

Snooze

06/09/2024

Assigned to

Elias A.

Figure 2.4: EDIT TASKS

Chapter 3

Code Implementation

3.1 Code Implementation

Step 1: Set up Project Structure Before diving into the code, organize your project structure. Here's an example:

```
Employee-Management-System/

 app/
   Model/
      User.php

   inc/
      header.php
      nav.php

   css/
      style.css

   DB_connection.php
   add-user.php
   edit-user.php
   delete-user.php
   manage-users.php
   login.php
```

3.2 Database Setup

To store employee records, a MySQL database needs to be created. Below is the SQL query to create a simple table for employees:

```
CREATE DATABASE employee_management;
USE employee_management;

CREATE TABLE employees (
id INT AUTO_INCREMENT PRIMARY KEY,
full_name VARCHAR(100),
username VARCHAR(50),
role VARCHAR(20),
age INT,
salary DECIMAL(10,2),
dob DATE,
date_of_joining DATE
);
```

3.3 Create Database Connection(DBconnection.php)

This file will handle the connection between PHP and the MySQL database. The connection will be reused across your project.

```
<?php
// DB_connection.php
$servername = "localhost";
$username = "root";
$password = "";
$dbname = "employee_management";

// Create connection
$conn = new mysqli($servername, $username, $password, $dbname);

// Check connection
if ($conn->connect_error) {
die("Connection failed: " . $conn->connect_error);
}
?>
```

3.4 Create User Model (User.php)

This file contains the business logic to interact with the database, such as fetching, adding, editing, and deleting users.

```
<?php
// app/Model/User.php

function get_all_users($conn) {
$query = "SELECT * FROM employees";
$result = $conn->query($query);
if ($result->num_rows > 0) {
return $result->fetch_all(MYSQLI_ASSOC);
} else {
return [];
}
}

function add_user($conn, $full_name, $username, $role, $age, $salary, $dob, $date_
$query = "INSERT INTO employees (full_name, username, role, age, salary, dob, date
VALUES ('$full_name', '$username', '$role', $age, $salary, '$dob', '$date_of_joini
return $conn->query($query);
}

function edit_user($conn, $id, $full_name, $username, $role, $age, $salary, $dob,
$query = "UPDATE employees SET full_name='$full_name', username='$username', role=
salary=$salary, dob='$dob', date_of_joining='$date_of_joining' WHERE id=$id";
return $conn->query($query);
}

function delete_user($conn, $id) {
$query = "DELETE FROM employees WHERE id=$id";
return $conn->query($query);
}
?>
```

3.5 Admin Authentication (login.php)

This is a simple login page where an admin can log in. It checks the username and password, and sets up a session for the admin.

```
<?php
session_start();
// Assume we have a hardcoded admin username and password
$admin_username = "admin";
$admin_password = "admin123";

if ($_SERVER['REQUEST_METHOD'] === 'POST') {
if ($_POST['username'] === $admin_username && $_POST['password'] === $admin_passwo
$_SESSION['role'] = 'admin';
$_SESSION['id'] = 1; // Admin ID
header('Location: manage-users.php');
exit();
} else {
$error = "Invalid credentials!";
}
}
?>
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<title>Login</title>
</head>
<body>
<form method="POST">
<input type="text" name="username" placeholder="Username" required>
<input type="password" name="password" placeholder="Password" required>
<button type="submit">Login</button>
</form>
<?php if (isset($error)) { echo "<p>$error</p>"; } ?>
</body>
</html>
```

Chapter 4

Conclusion

4.1 Conclusion

The Employee Management System (EMS) is an essential tool for organizations to efficiently manage and organize employee information. This system allows administrators to perform essential tasks such as adding, viewing, editing, and deleting employee records. By implementing this project in PHP and MySQL, gain hands-on experience in various aspects of web development, including database management, session handling, and user interface design

4.2 References

- https://www.php.net/PHP Documentation: https://www.php.net/
- https://dev.mysql.com/doc/MySQL Documentation: https://dev.mysql.com/doc/
- https://www.w3schools.com/W3Schools for HTML/CSS/JS tutorials: https://www.w3schools.com/