Open Ended Lab Report

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Title: Employee Task Manager

Introduction:

The **Employee Task Manager** is a web-based application built using **PHP** and **MySQL** that allows users to manage and organize their daily tasks efficiently. Designed primarily for employee task tracking, this system enables registered users to **create, view, update, and delete tasks**, offering a streamlined and intuitive interface for task management.

The platform includes essential features like **user registration and login**, a personalized dashboard to view individual tasks, and functionality to assign **priority levels and due dates**. Users can also track the status of each task and maintain productivity with clear, organized information.

This project serves as a practical implementation of a CRUD (Create, Read, Update, Delete) application, ideal for beginners learning **web development**, or as a lightweight internal tool for small teams.

Motivation:

- **To provide a simple and user-friendly task management solution** for employees and individuals to stay organized.
- **To help users manage tasks effectively** by allowing them to add, view, update, delete, and prioritize tasks with due dates.
- **To understand and implement CRUD operations** and database connectivity using MySQL. **To implement user authentication** and session management for secure access to personalized dashboards.

Objectives:

- **Develop a secure login and registration system** to allow only authorized users to access their task dashboard.
- **Enable users to create, view, update, and delete tasks** through a simple and intuitive interface
- **Allow task scheduling with due dates** to help users manage time effectively.
- Provide options to assign priorities and statuses to tasks.
- **Integrate a MySQL database** to store user and task information persistently and efficiently.

Background Theory:

The Task Manager project is based on the fundamental principles of web development and database systems. It combines both client-side and server-side technologies to create a complete, dynamic application that helps users manage their daily tasks effectively. This system is developed using HTML, CSS, PHP, JavaScript, and MySQL.

PHP, a server-side scripting language, plays a key role in handling business logic, processing form data, managing sessions, and communicating with the database. On the client side, HTML is used to build the structure of the web pages, while CSS is responsible for styling and making the user interface visually appealing. JavaScript enhances the user experience by adding interactivity, such as toggling password visibility and confirming task deletion.

MySQL is used as the backend database management system. It stores all data related to users and their tasks in structured tables. The concept of CRUD operations—Create, Read, Update, and Delete—is central to the project, allowing users to manage their tasks seamlessly. The application also incorporates basic session management and authentication to ensure that only registered users can access their personal task dashboard.

By integrating these technologies and concepts, the project offers a practical implementation of how modern web applications function, demonstrating both the theoretical understanding and real-world application of web-based task management systems.

ER Diagram:

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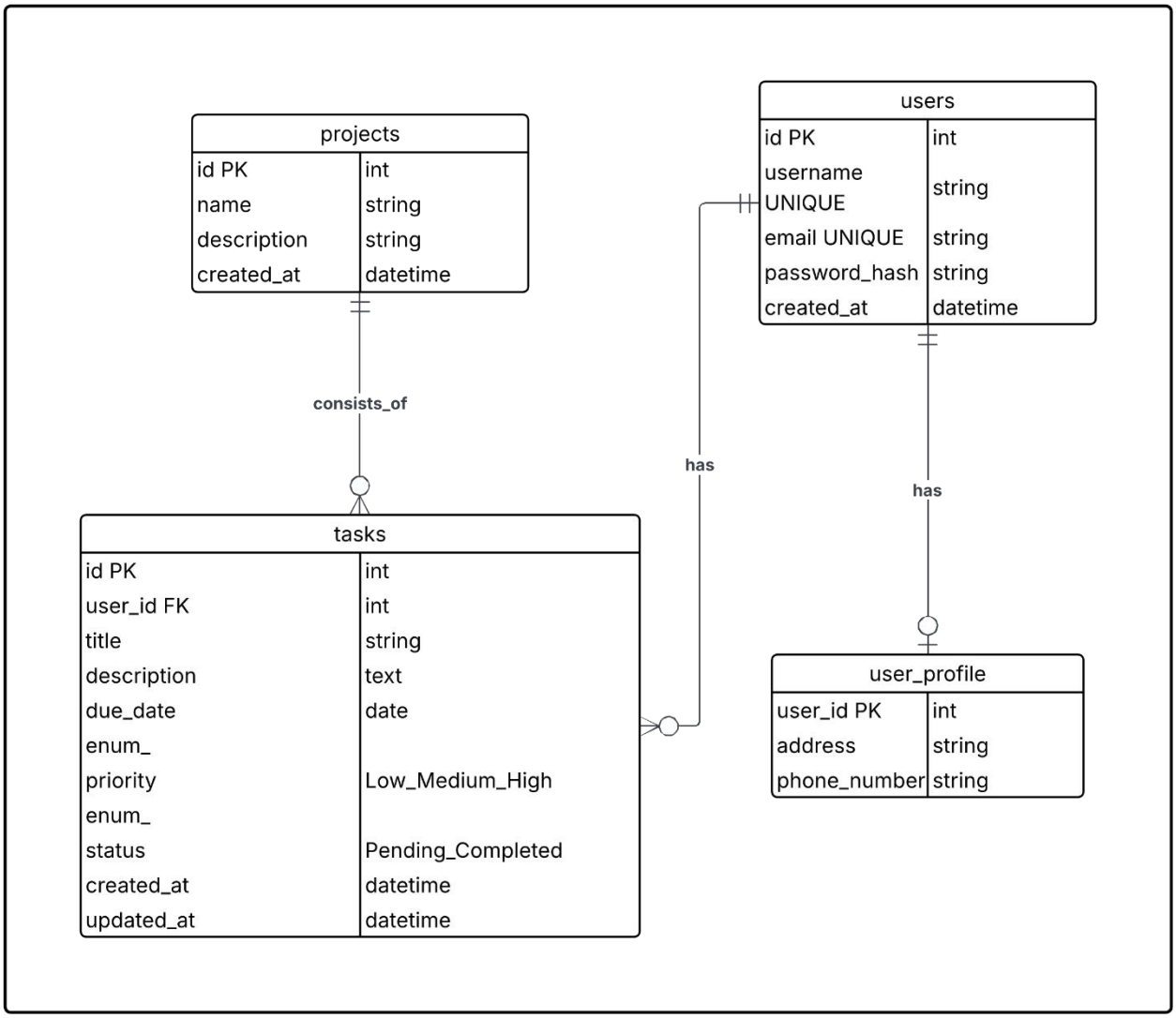
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description string
created_at datetime
users
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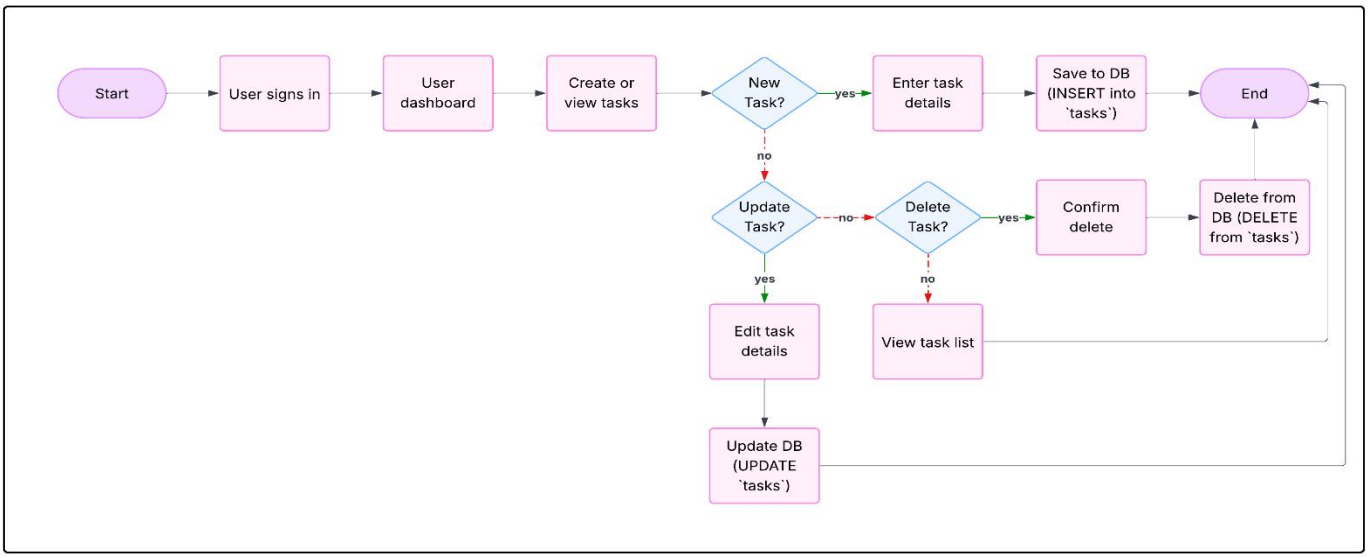
email UNIQUE string
password_hash string
created_at datetime
consists_of
has
has
tasks
id PK int
user_id FK int
title string
description text
due_date date
enum_
priority Low_Medium_High
enum_
status Pending_Completed
created_at datetime
updated_at datetime
user_profile
user_id PK int
address string
phone_number string

Flowchart:



Modern Tools:

- **PHP**
- **MySQL**
- **HTML**
- **CSS**
- **XAMPP**
- **VS Code**

Methodology:

1. Requirement Analysis

In this phase, the scope and features of the system were defined. The goal was to create a web-based task management tool where users can register, log in, and manage tasks with attributes such as title, description, due date, priority, and status. The need for user authentication, task tracking, and CRUD operations was identified.

2. Database Design

The system uses two core tables:

- **users**
  - **id (Primary Key)**
  - **username**
  - **email**
  - **password_hash**
- **tasks**
  - **id (Primary Key)**
  - **user_id (Foreign Key referencing users.id)**
  - **title**
  - **description**
  - **due_date**
  - **priority (Low, Medium, High)**
  - **status (Pending, Completed)**
  - **created_at**

The relationship is one-to-many: one user can have many tasks.

3. System Architecture

The project follows a Client-Server architecture:

- **Client Side (Front-End):**Built with HTML, CSS, and JavaScript. It handles user input, displays task data, and interacts with the backend via form submissions.
- **Server Side (Back-End):** Developed using PHP. It processes user requests, manages sessions, handles CRUD operations, and communicates with the database.
- **Database:**MySQL is used to store persistent data including users and their tasks.

4. User Authentication Logic

- Registration is handled by register.php using password_hash() for secure storage.
- Login is handled by login.php using password_verify().
- Sessions are used to track logged-in users securely.
- Unauthorized access to dashboard.php and task-related pages is prevented by session checks.

5. Task Management Features (CRUD)

Create:

add_task.php accepts task details and inserts a new record into the database.

Read:

dashboard.php retrieves all tasks for the logged-in user and displays them in a table.

Update:

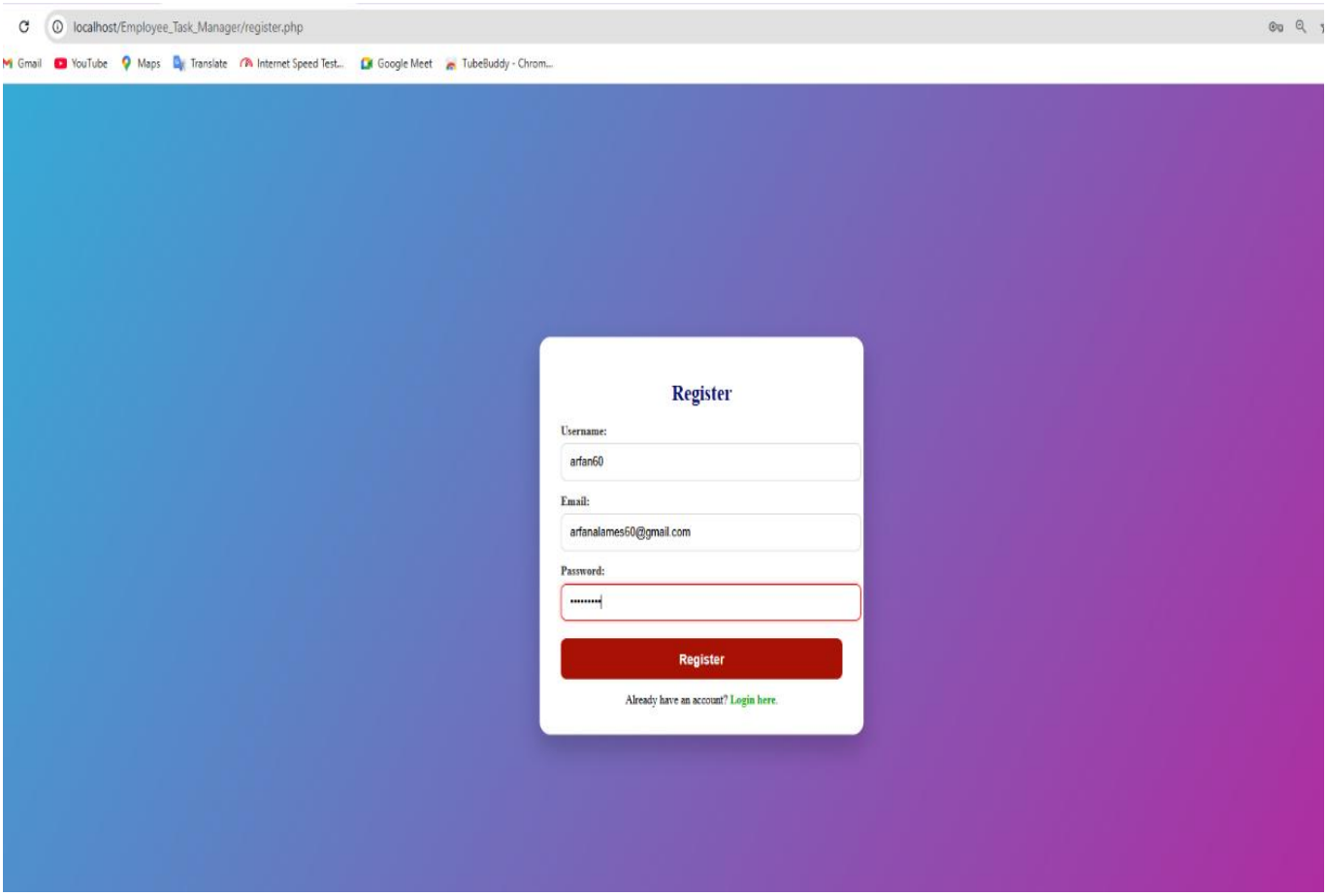
update_task.php allows users to modify task title and description.

Delete:

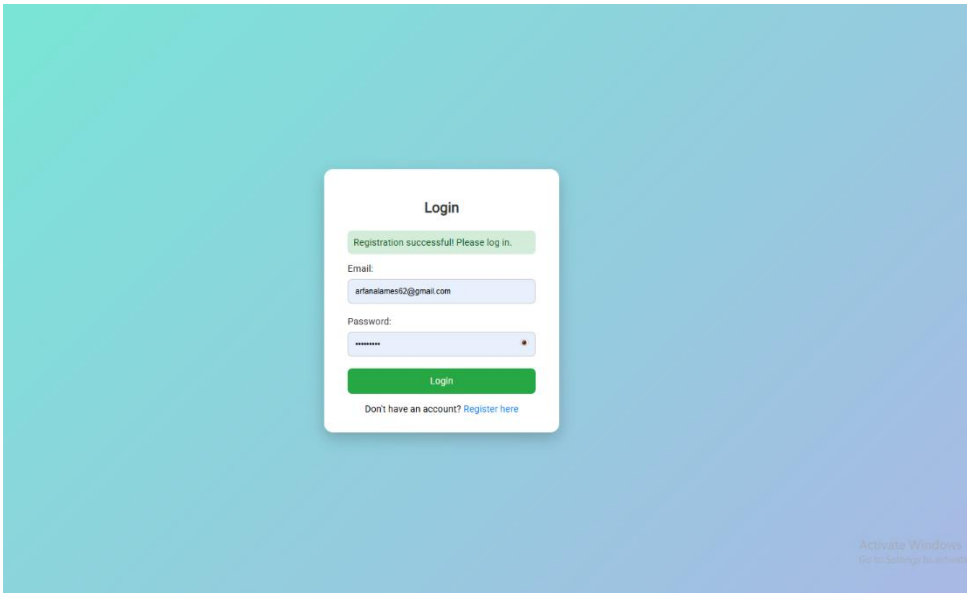
delete_task.php handles task deletion with confirmation.

Final Product:

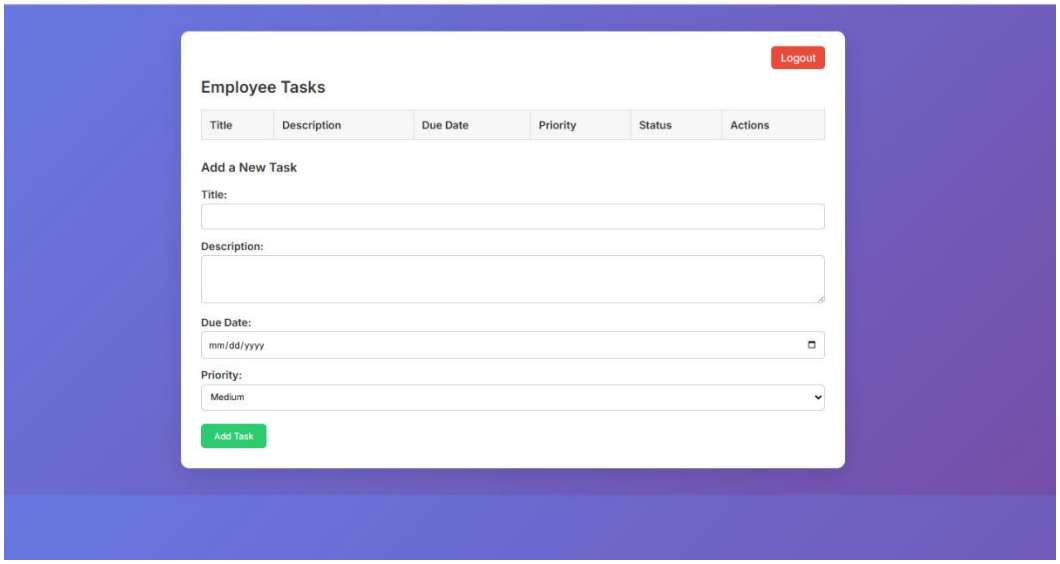
1. Registration Page:



2. Login Page:

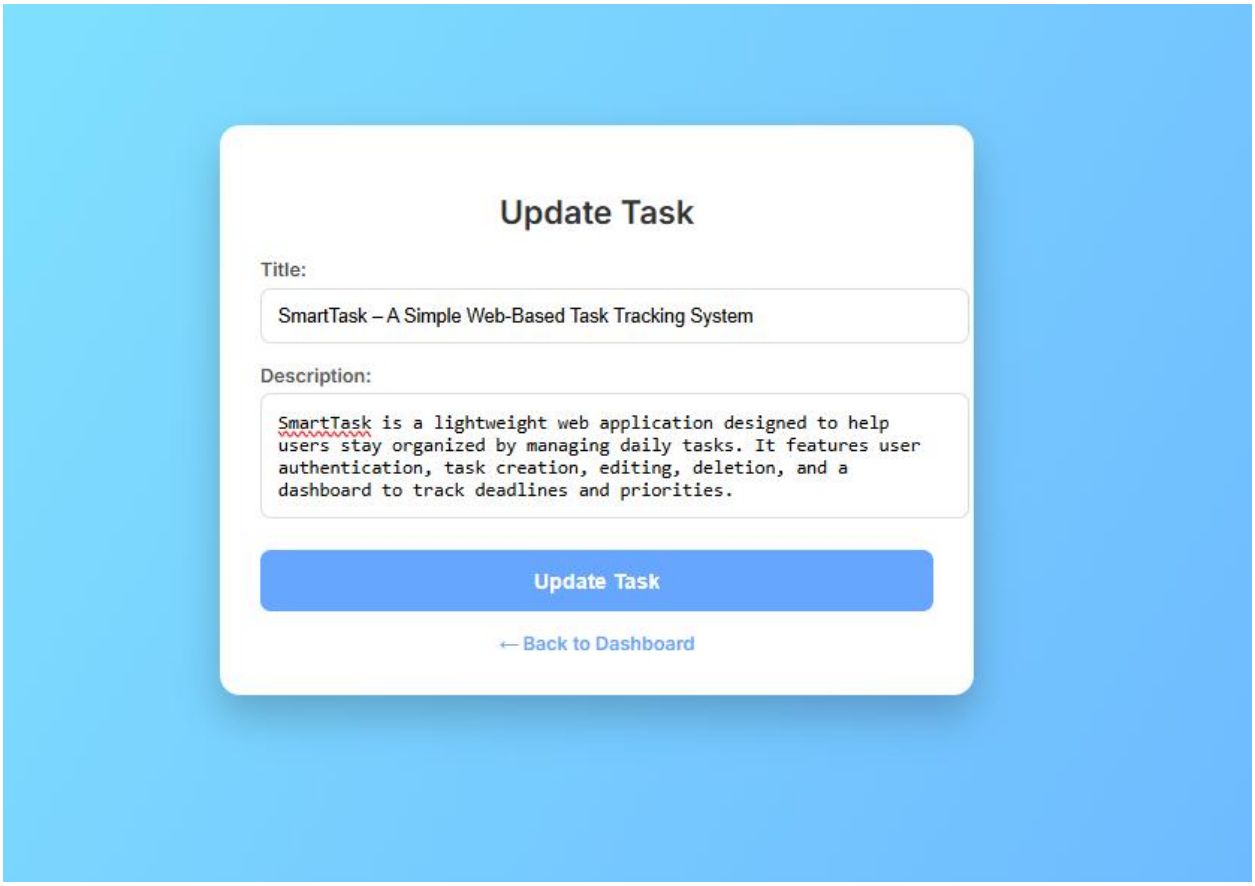


3. User Dashboard:



4. Add Task Form:

5. Update Task Page:

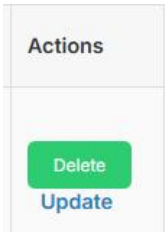


6. Tracking Task :

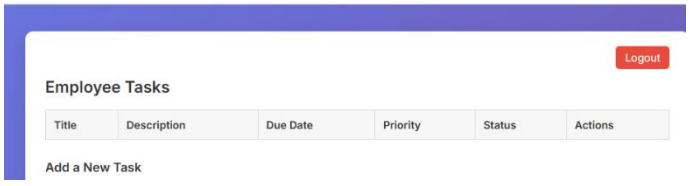
Employee Tasks

Title	Description	Due Date	Priority	Status	Actions
SmartTask – A Simple Web-Based Task Tracking System	SmartTask is a lightweight web application designed to help users stay organized by managing daily tasks. It features user authentication, task creation, editing, deletion, and a dashboard to track deadlines and priorities.	2025-04-09	High	Pending	Delete Update

7. Delete Task Confirmation:



8. Logout :



9. PHP Admin Tasks:

	id	user_id	title	description	due_date	priority	status	created_at	updated_at
Edit Copy Delete	6	2	wf	asdf	2025-04-14	Medium	Pending	2025-04-09 01:24:40	2025-04-09 01:24:40
Edit Copy Delete	7	4	SmartTask – A Simple Web-Based Task Tracking Syste...	SmartTask is a lightweight web application designe...	2025-04-09	High	Completed	2025-04-09 03:05:08	2025-04-09 03:05:08

10.PHP Admin User:

Extra options

	id	username	email	password_hash	created_at
Edit Copy Delete	1	arfan	arfanalames63@gmail.com	$2y$10$i9oV/jSFzLK9prnWF.D1QeSjX.15dtR.xVGAP8HawPu...	2025-04-06 21:36:41
Edit Copy Delete	2	arfan62	arfanalames62@gmail.com	$2y$10$erucY4DLdZaTozhJAeQHqeozWYtke7/w6cRA6NLOYb9...	2025-04-07 20:56:15
Edit Copy Delete	3	arfan59	arfan59@gmail.com	$2y$10$DeMfwURrLHEWR7Bz29WW9.p4laCPXg4.9ForonsO4p1...	2025-04-07 21:04:42
Edit Copy Delete	4	arfan60	arfanalames60@gmail.com	$2y$10$TljANgDOz0u2QeInQBPgwezua5DmY7dyfzBgy0A5U/k...	2025-04-09 02:58:43

Conclusion:

The **Employee Task Manager** project successfully demonstrates the design and development of a simple, secure, and user-friendly task tracking system using modern web technologies. It enables users to efficiently manage their daily tasks through features such as user authentication, task creation, updating, deletion, and real-time task tracking with priority and due dates.

The system showcases key web development concepts including CRUD operations, database connectivity, session management, and responsive UI design. Through this project, practical experience was gained in full-stack development using PHP and MySQL, as well as in front-end styling with HTML, CSS, and JavaScript.

Overall, the project meets its objectives by providing a functional and scalable solution for personal or team-based task organization. It also lays the groundwork for future enhancements such as task notifications, file attachments, and multi-user collaboration