TASK CREATION AND APPROVAL BETWEEN ASSIGNER AND ASSIGNEE

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PROJECT ID	5
PROBLEM STATEMENT	TASK PORTAL

1.Introduction

1.1 System Overview

This project aims to develop a web-based portal specifically designed to manage tasks and projects within a college environment. It caters to students, faculty, and potentially administrators, providing a centralized platform for collaboration, organization, and communication.

1.2 System Features:

- **User Management:**
  - Different user roles (Students, Faculty, Admin) with specific permissions.
  - Secure login and account management.
- **Project Creation and Management:**
  - Ability to create new projects with descriptions, deadlines, and milestones.
  - Assigning tasks to specific users or teams within a project.

    - Uploading relevant documents and resources for project reference.
- **Task Management:**
    - Detailed task breakdown with due dates, priorities, and dependencies.
    - Progress tracking and completion marking for individual tasks.
    - File attachments and comments for task-specific communication.
- **Communication Tools:**
    - Built-in messaging system for project discussions and updates.
    - Real-time notification system for task updates and deadlines.
    - Optional forum or chat functionality for broader project discussions.
- **Calendar Integration:**
    - Ability to view project deadlines and milestones on a calendar.
    - Option to sync with personal calendars for better time management.
- **Reporting and Analytics:**
    - Generate reports on project progress, task completion rates, and individual contributions (optional, depending on user roles).

1.3 College Requirements Integration:

- **Course Management System Integration:**
    - Allow linking projects to specific courses for better organization.
    - Instructors can assign course-related projects within the portal.
- **Gradebook Integration:**
    - Enable instructors to track project completion and potentially associate grades with them (requires secure integration with existing college grading systems).
- **Resource Integration:**
    - Integrate with college library databases or other relevant resources for easier access within projects.

PYTHON STACK

Front End	● Html ● CSS ● Javascript
Back end	● Python ● Django(Python web)
Database	● postgreSQL ● MySQL
API	● Open API ● SOAP APIs ● RESTFUL API

2.System Architecture

The project task portal can be designed using a three-tier architecture for better organization, security, and scalability. Here's a breakdown of the tiers:

2.1 Presentation Layer

- This layer consists of the user interface (UI) that users interact with.
- It can be a web application accessible through a web browser on any device.
- The UI will display project information, tasks, communication tools, and functionalities based on user roles.
- Technologies like HTML, CSS, Javascript frameworks (React, Angular) can be used for building the UI.

2.2 Business Logic Layer

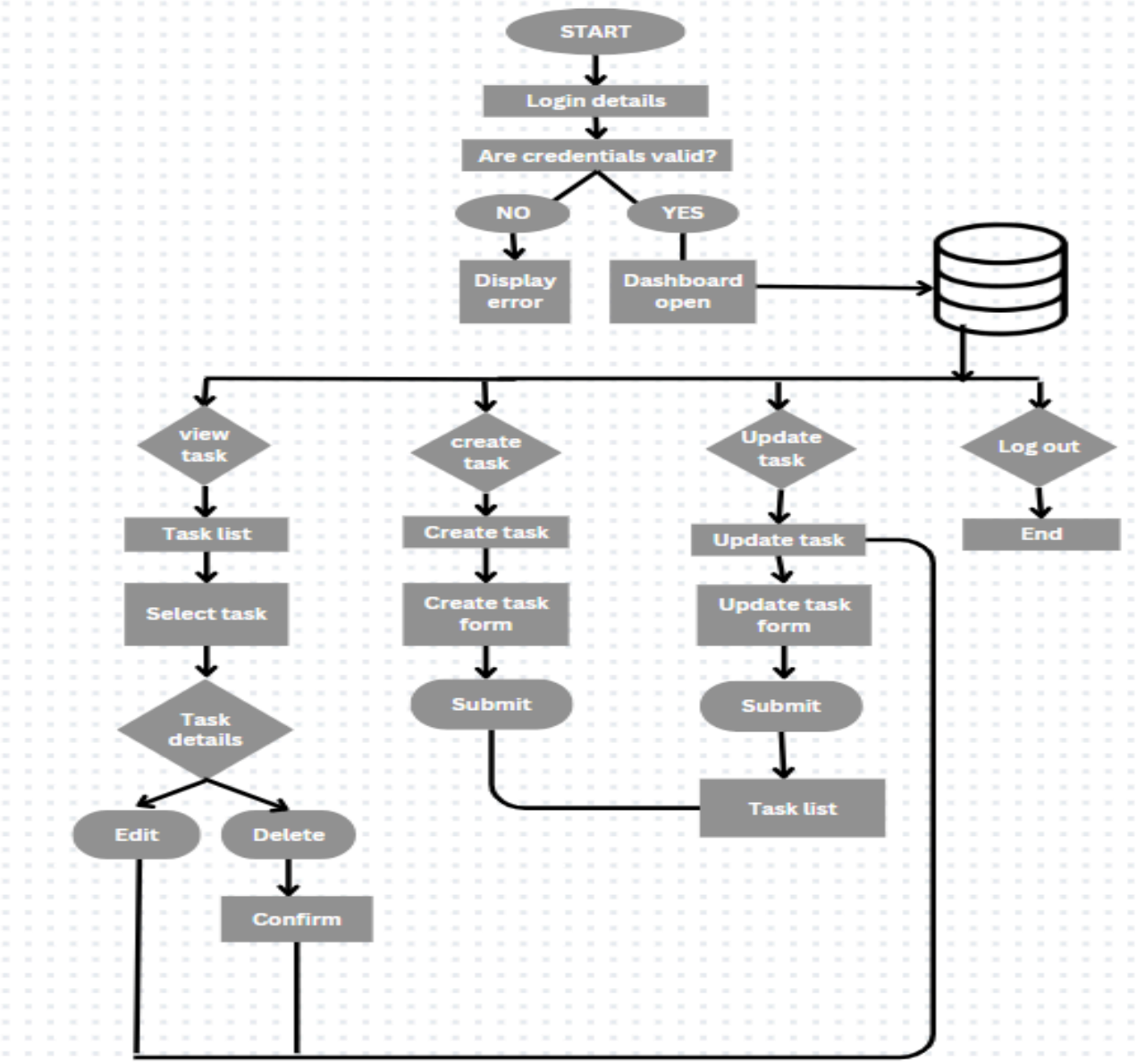
- This layer handles the core functionalities of the application.
- It receives user requests from the UI, processes them according to business logic, and interacts with the data layer.
- This layer might include functionalities like:
    - User authentication and authorization
    - Project and task management logic
    - Communication tools implementation (messaging, notifications)
    - Integration with external systems (optional, e.g., course management system)
- Programming languages like Python, Java, or C# can be used for this layer.

2.3 Data Layer

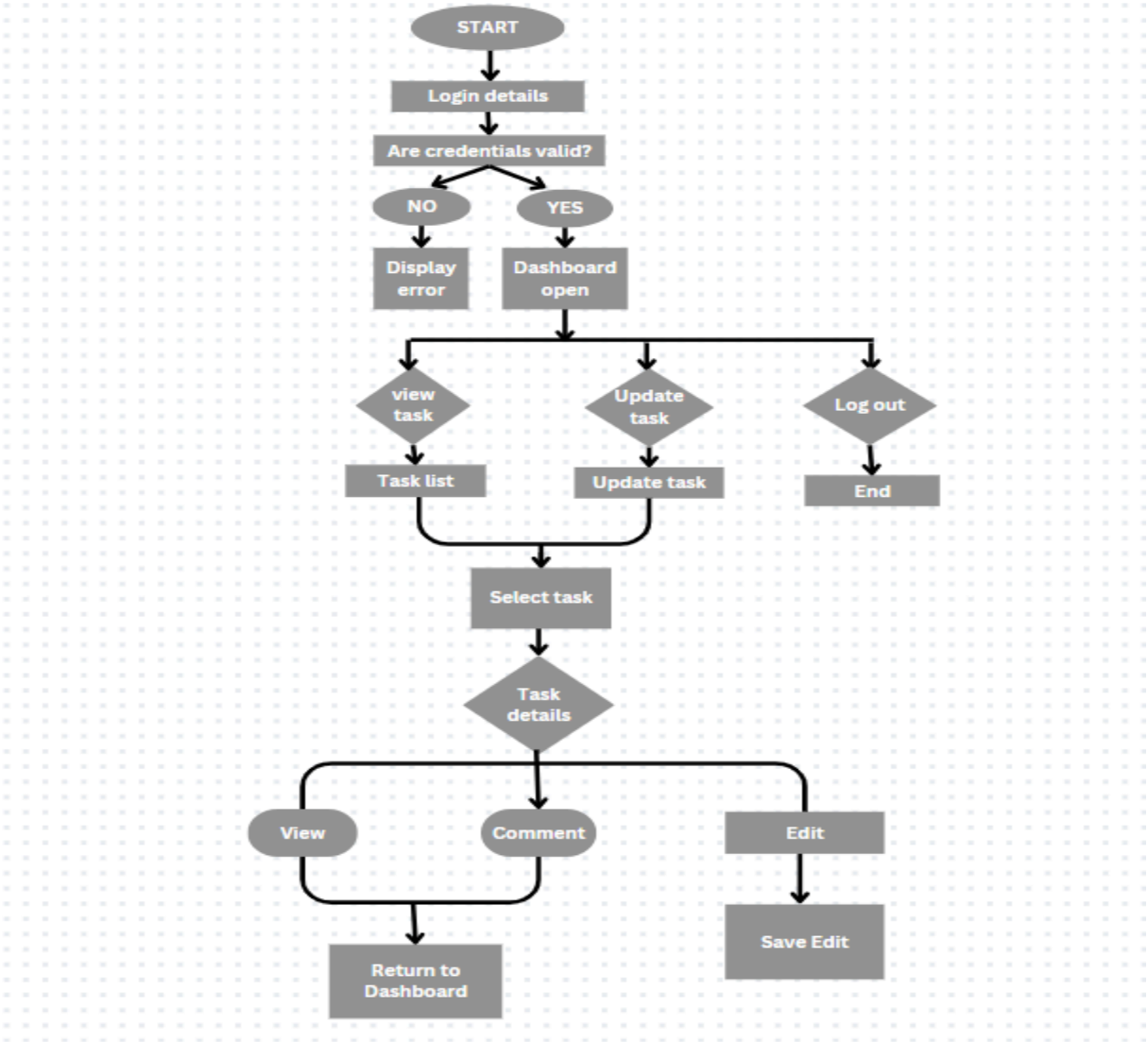
- This layer stores all the application data, including user information, project details, tasks, files, and communication logs.
- A relational database management system (RDBMS) like MySQL, PostgreSQL, or Microsoft SQL Server can be used to store structured data.
- NoSQL databases can be considered for unstructured data like file uploads.
- This layer ensures data security and provides an interface for the business logic layer to access and manipulate data.

3.FLOW CHART

3.1 ASSIGNER:



3.2 ASSIGNEE:


START
Login details
Are credentials valid?
NO
YES
Display error
Dashboard open
view task
Update task
Log out
Task list
Update task
End
Select task
Task details
View
Comment
Edit
Save Edit
Return to Dashboard

4. FEATURES

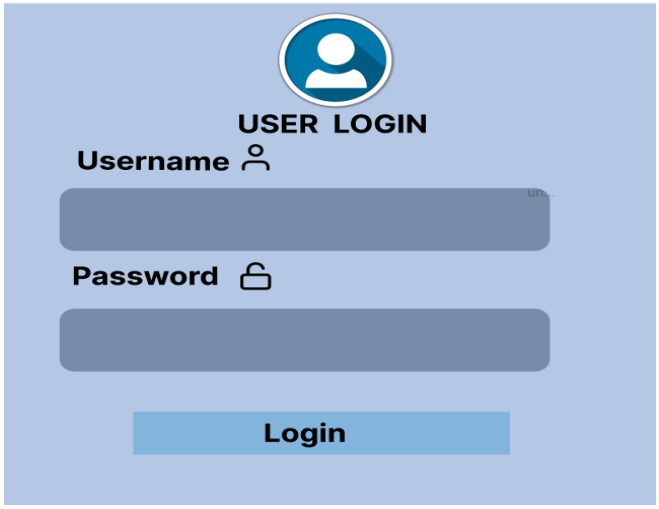
4.1 Advanced Task Management:

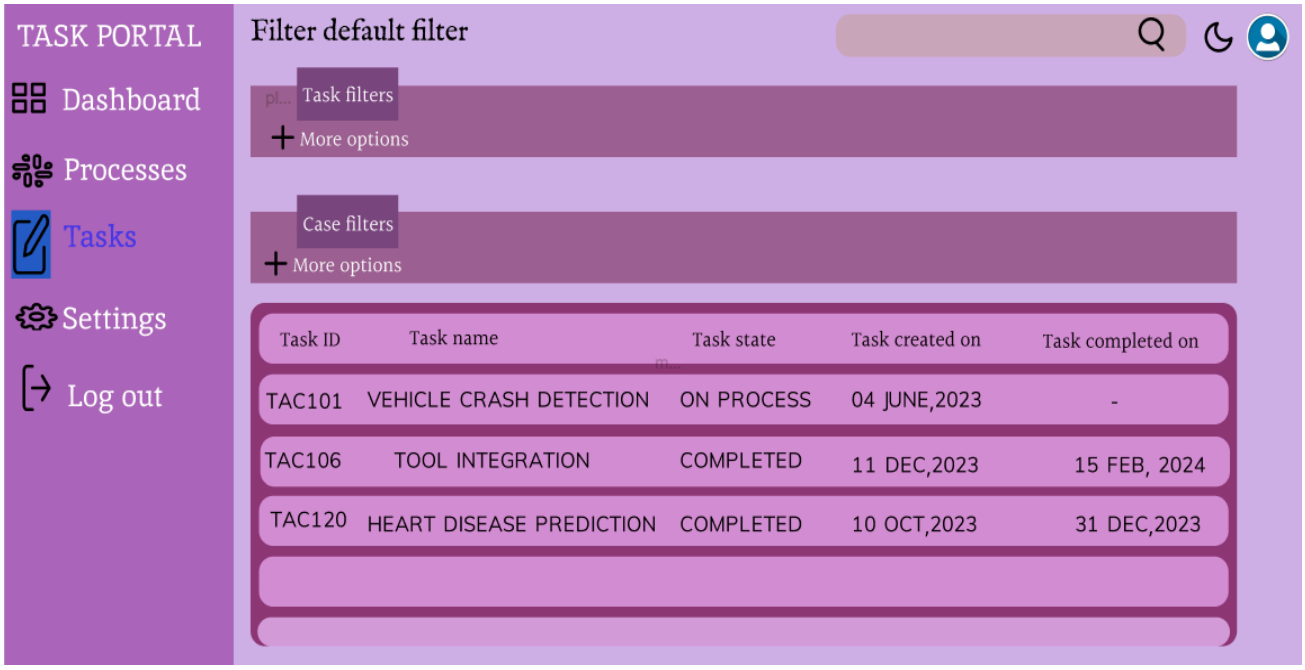
- **Smart Dependencies:** Not just defining task dependencies, but having the system automatically adjust schedules or notify relevant users when upstream tasks are delayed.
- **Contextual Task Views:** Displaying tasks based on relevant context (e.g., project, client, team) with the ability to zoom in and out for a holistic view.
- **Mind Mapping Integration:** Integrating mind mapping tools to visually brainstorm and organize tasks, potentially feeding directly into actionable items within the task portal.

Focus on User Experience (UX):

- **Adaptive Interfaces:** Interfaces that adapt to user behavior and preferences, surfacing relevant features and information based on individual usage patterns.
- **Focus Modes:** Features that help users minimize distractions and focus on completing tasks, possibly integrating with time management techniques like the Pomodoro Technique.
- **Advanced Analytics and Insights:** Personal dashboards providing users with insights into their own productivity habits and task completion rates, enabling self-improvement.
- **Gamification with Customization:** Allowing users to personalize gamification elements, like choosing preferred reward systems (points, badges, leaderboards) for increased motivation.

SAMPLE UI


USER LOGIN
Username
Password
Login


TASK PORTAL
Dashboard
Processes
Tasks
Settings
Log out
Filter default filter
Task filters
More options
Case filters
More options
Task ID
Task name
Task state
Task created on
Task completed on
TAC101
VEHICLE CRASH DETECTION
ON PROCESS
04 JUNE,2023
-
TAC106
TOOL INTEGRATION
COMPLETED
11 DEC,2023
15 FEB, 2024
TAC120
HEART DISEASE PREDICTION
COMPLETED
10 OCT,2023
31 DEC,2023