Software Requirement Specification for TAC Portal

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Problem Statement	BASIC TASK OPERATION-TASK CREATION AND APPROVAL BETWEEN ASSIGNER AND ASSIGNEE

INTRODUCTION:

1.TECHNICAL COMPONENTS:

COMPONENTS	TECH STACK
BACKEND	NODE.JS AND EXPRESS.JS
FRONTEND	ANGULAR
DATABASE	MONGODB

1.1.Purpose:

This document outlines the requirements for a Task Portal designed to streamline task management and eliminate scheduling conflicts. The system will facilitate task creation, assignment, approval, and tracking, while providing essential features for effective collaboration and oversight.

1.2. Scope of Project

The Task Portal will focus on centralizing task management, preventing overlapping task assignments, and enhancing team productivity. Key functionalities include task creation, assignment, approval, progress tracking, and communication tools. The system will incorporate features such as due dates, detailed task descriptions, and appointment scheduling to optimize workflow and ensure timely completion of tasks.

2. SYSTEM OVERVIEW

2.1. Users

- Assigners:
  Responsible for task creation, assignment, approval, and monitoring task progress.
- Assignees:
  Receive and complete assigned tasks, provide status updates, and request appointments.

2.2. Features:

- Task Management:
  Create, assign, and manage tasks with clear descriptions, due dates, and priority levels.
- Scheduling:
  Prevent task overlaps by implementing a scheduling system that considers assignee availability.
- Approval Workflow:
  Establish a structured approval process for tasks to ensure accountability.
- Progress Tracking:
  Monitor task progress, set milestones, and generate reports on task completion.
- Communication:
  Facilitate team collaboration through integrated messaging and discussion forums.
- Notifications:
  Provide timely alerts for task assignments, approvals, deadlines, and updates.
- Analytics:
  Generate reports on task performance, team productivity, and workload distribution.

3. FUNCTIONAL REQUIREMENTS:

- **3.1 Task Management**
    - Task creation
    - Task assignment
    - Task modification
    - Task deletion
    - Task search and filtering
    - Task prioritization
    - Task dependencies

- **3.2 Scheduling**
    - Task scheduling
    - Resource allocation
    - Overlap prevention
    - Scheduling conflicts resolution

- **3.3 Approval Workflow**
    - Task submission for approval
    - Approval/rejection process
    - Approval history
    - Notifications for approvals/rejections

- **3.4 Progress Tracking**
    - Task status updates
    - Progress reporting
    - Milestone tracking
    - Time tracking

- **3.5 Communication**
    - Messaging system
    - Discussion forums
    - File sharing
    - Notifications

- **3.6 Analytics**
    - Performance metrics
    - Productivity reports
    - Workload analysis
    - User activity tracking

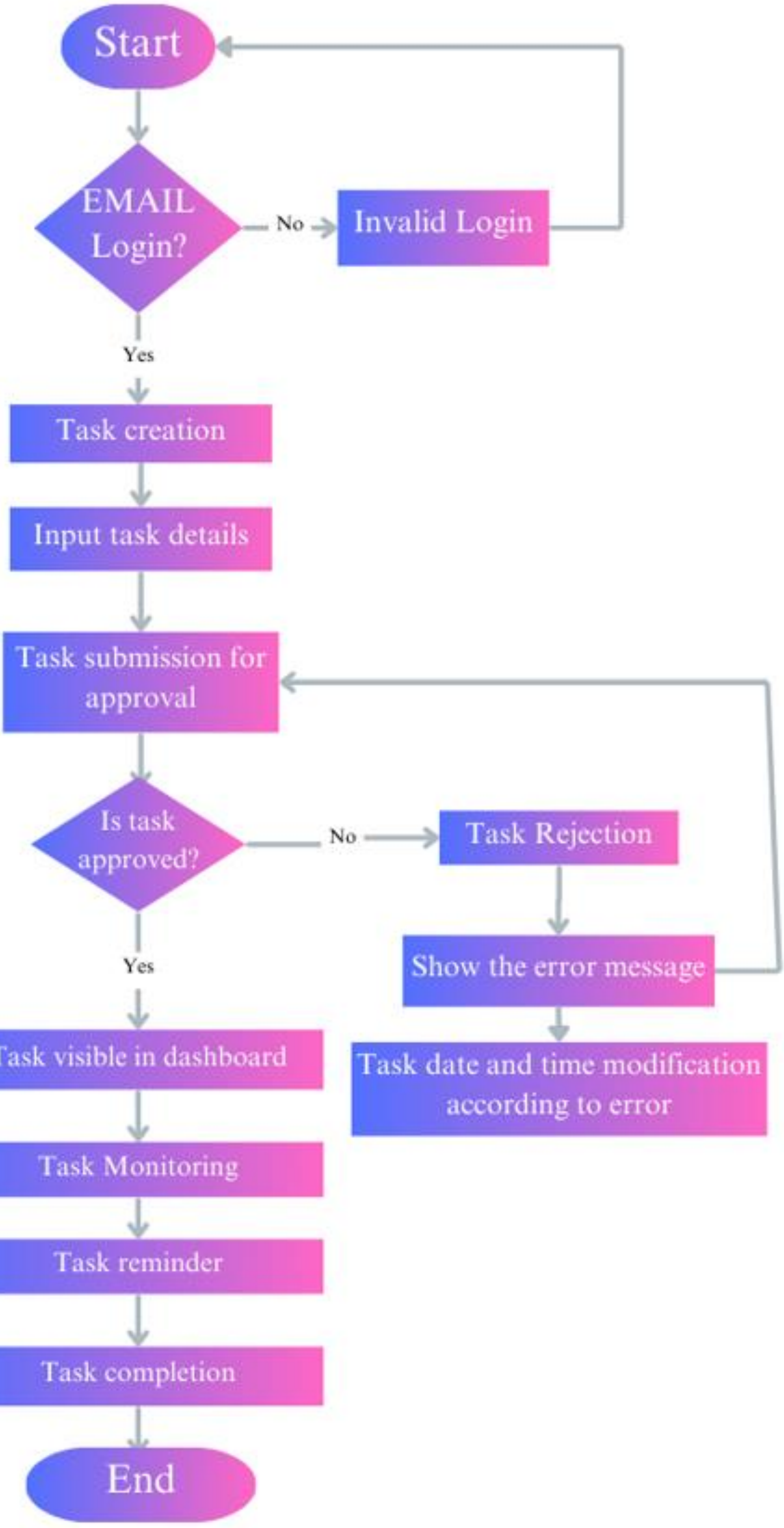
4.NON-FUNCTIONAL REQUIREMENTS:

- **4.1 Performance:**
  Ensure rapid system response times and efficient handling of concurrent users.
- **4.2 Security:**
  Protect user data and system integrity through robust authentication and authorization mechanisms.
- **4.3 Usability:**
  Design an intuitive and user-friendly interface for seamless interaction.
- **4.4 Reliability:**
  Maintain high system availability and implement data backup strategies.
- **4.5 Scalability:**
  Accommodate increasing user numbers and data volume while preserving performance.

FLOWCHART STEPS:

1. Start
2. User initiates task creation
3. Input task details (title, description, due date, priority, etc.)
4. Validate input data
    - Yes: Proceed to next step
    - No: Display error message, go back to input task details
5. Assign task to assignee(s)
6. Save task to database
7. Generate notifications
8. End.

5.FLOWCHART:


Start
EMAIL Login?
No
Invalid Login
Yes
Task creation
Input task details
Task submission for approval
Is task approved?
No
Task Rejection
Show the error message
Task date and time modification according to error
Yes
Task visible in dashboard
Task Monitoring
Task reminder
Task completion
End

CONCLUSION:

The Task Portal effectively addresses the challenge of overlapping task schedules. By incorporating task creation, assignment, scheduling, approval, and tracking functionalities, it optimizes workflow and enhances team productivity. The system's focus on preventing conflicts and providing essential tools making it as a valuable asset for efficient task management.