AARYAN

(TEAM LEADER)

Branch : CSE
Roll no. : 9501/22

KSITIJ

Branch : CSE
Roll no. : 9517/22

OUR TEAM.

RAHUL

Branch : CSE
Roll no. : 9526/22

Table of
CONTENTS

INTRODUCTION

1.1 Purpose

The purpose of this document is to specify the detailed software requirements for Team Sync, a collaborative project management platform designed for teams. The platform includes features for managing tasks, projects, communication, file sharing, and real-time collaboration through messaging and video conferencing.

1.2 Scope

The platform is a web-based and mobile-compatible project management and collaboration system that enables teams to efficiently manage projects, tasks, and communication. Team Sync allows users to create and assign tasks, track progress, and collaborate through real-time messaging and video conferencing. It also supports document sharing, notifications, and AI-driven insights for improved productivity. The system provides role-based access for admins, project managers, and team members, ensuring secure and organized collaboration.

Additionally, Team Sync integrates automated reminders, performance analytics, and customizable workflows to enhance team efficiency. The platform enables seamless integration with third-party tools, ensuring smooth data exchange and synchronization. It is designed to support remote teams, startups, and enterprises by offering a centralized workspace where members can efficiently manage workloads, monitor deadlines, and communicate effectively. With a user-friendly interface and scalable architecture, Team Sync enhances productivity, fosters teamwork, and streamlines project execution across various domains.

OVERALL DESCRIPTION

2.1 Project Management System

2.1.1 Description

This module allows teams to manage projects efficiently by creating, assigning, and tracking tasks. Users can define project goals, set deadlines, and collaborate with team members in real time. The system provides a centralized workspace where project managers can oversee progress, allocate resources, and ensure timely completion of tasks.

2.1.2 Functional Requirements:

Project Manager Functionality:

- Project managers can create new projects, define objectives, and set deadlines.
- Project managers can assign tasks to team members and track their progress.
- Project managers can set priorities, milestones, and dependencies for better workflow management.
- Project managers can view team performance, generate reports, and adjust project timelines.

Team Member Functionality:

- Team members can view assigned projects and tasks along with deadlines.
- Team members can update task statuses (e.g., pending, in progress, completed).
- Team members can collaborate within the project by sharing updates, comments, and documents.
- Team members can request deadline extensions or task modifications if needed.

2.1.3 User Stories

- Project Manager: As a project manager, I want to create and assign tasks so that my team can work efficiently and meet deadlines.
- Team Member: As a team member, I want to update my task status so that my project manager stays informed about my progress.

2.2 User Profile and Role Management

2.2.1 Description:

This module enables users to create, update, and manage their profiles. It includes role-based access control, ensuring that users have permissions based on their roles (e.g., admin, manager, team member).

2.2.2 Functional Requirements:

User Functionality:
- Users can create and edit their profiles with personal details, skills, and experience.
- Users can set visibility preferences for their profiles.
- Users can change their roles if permitted by the admin.

Admin Functionality:
- Admins can assign roles (e.g., manager, team member) and define permissions.
- Admins can view and update user profiles.
- Admins can disable or remove users if necessary.

2.2.3 User Stories

- User: As a user, I want to update my profile so that my team members can see my latest skills and availability.
- Admin: As an admin, I want to assign roles to users so that they have the correct permissions within the system.

2.3 AI-Driven Search & Analytics

2.3.1 Description:

This module leverages AI to improve search functionality and provide data-driven insights into project performance, team efficiency, and productivity trends.

2.3.2 Functional Requirements:

Search Functionality:
- Users can search for tasks, projects, team members, and documents using AI-based suggestions.
- AI provides auto-suggestions based on frequently accessed projects and tasks.

Analytics & Reports:
- Users can view real-time analytics on task completion rates, project delays, and resource utilization.
- AI-generated insights highlight bottlenecks and suggest improvements.

2.3.3 User Stories:

- User: As a user, I want to search for tasks and documents easily so that I can find information quickly.
- Manager: As a manager, I want AI-driven reports so that I can identify inefficiencies in project workflows.

2.4 Task Assignment and Tracking

2.4.1 Description
- This module allows managers to assign tasks to team members, set deadlines, and track progress in real time.

2.4.2 Functional Requirements
Task Assignment:
- Managers can create new tasks and assign them to team members.
- Managers can set priorities, due dates, and dependencies between tasks.

Task Tracking:
- Users can update the status of assigned tasks (e.g., pending, in progress, completed).
- Managers can monitor progress through a dashboard.

2.4.3 User Stories
- Manager: As a manager, I want to assign tasks to my team so that we can meet project deadlines efficiently.
- Team Member: As a team member, I want to update my task status so that my manager knows my progress.

2.5 Messaging System

2.5.1 Description
This module provides a communication channel within the platform for freelancers and employers to discuss project details, timelines, and deliverables.

2.5.2 Functional Requirements
- In-app messaging system for freelancers and employers to communicate.
- Push notifications and email alerts for new messages.
- Message threads tied to specific projects or contracts.
- File sharing capabilities for documents and project deliverables.
-

2.5.3 User Stories
- Freelancer: As a freelancer, I want to communicate with the employer to clarify project details and ensure alignment.
- Employer: As an employer, I want to discuss project deliverables with the freelancer before approving the final work.

2.6 Notifications & Alerts

2.6.1 Description
This module is responsible for sending notifications to users regarding job applications, project updates, payments, and deadlines.

2.6.2 Functional Requirements
- Real-time notifications for job postings, job applications, project milestones, and payments.
- Email and push notifications for important updates (e.g., project deadlines, escrow releases, etc.).
- Configurable notification settings for users.

2.6.3 User Stories
- Freelancer: As a freelancer, I want to receive notifications about new job postings in my skill area so that I can apply quickly.
- Employer: As an employer, I want to receive updates on my project's progress and freelancer submissions.

DIFFERENTIATORS

1. Intelligent Task Assignment:

- **Solution:**

Utilizes AI-driven algorithms to automatically assign tasks based on team members' skill sets, workload, and past performance.

- **Differentiator:**

Optimizes team efficiency by ensuring tasks are assigned to the most suitable members, reducing manual workload and improving productivity.

2. Integrated Real-Time Collaboration:

- **Solution:**

Provides built-in real-time messaging and video conferencing to enhance communication between team members.

- **Differentiator:**

Eliminates the need for third-party collaboration tools by offering an all-in-one platform for discussions, file sharing, and task updates..

3. Centralized Project Management:

- **Solution:**

Offers a unified dashboard where users can track project progress, deadlines, and assigned tasks in real time.
.

- **Differentiator:**

Streamlines workflow management, ensuring all team members stay aligned with project goals and timelines.

4. AI-Powered Insights & Analytics:

- **Solution:**

Leverages machine learning models to analyze team performance, predict bottlenecks, and suggest improvements.

- **Differentiator:**

Empowers managers with data-driven insights to make informed decisions and optimize project execution.

5. Customizable Role & Access Control:

- **Solution:**

Allows organizations to define role-based permissions, ensuring sensitive data is only accessible to authorized personnel.

- **Differentiator:**

Enhances security and operational control by restricting access based on team hierarchy and project requirements.

6. Seamless Integration with Productivity Tools:

- **Solution:**

Supports integration with third-party tools like Google Drive, Slack, and Trello for better workflow automation.

- **Differentiator:**

Ensures smooth collaboration without disrupting existing work processes, reducing the learning curve for new users..

.

7. Automated Notifications & Task Reminders:

- **Solution:**

Sends real-time alerts and scheduled reminders for upcoming deadlines, meetings, and pending approvals.

- **Differentiator:**

Minimizes delays and enhances accountability by keeping every team member informed about critical updates.

8. Scalable & Cloud-Based Infrastructure:

- **Solution:**

 Built on a microservices architecture to ensure high availability, scalability, and efficient resource management..

- **Differentiator:**

Supports teams of all sizes, from startups to enterprises, without performance bottlenecks or downtime. 🚀

NON-FUNCTIONAL REQUIREMENTS

3.1 Performance Requirements

- The platform should support thousands of simultaneous users for task assignments, project tracking, and real-time collaboration.
- AI-driven recommendations, messaging, video conferencing, and notifications should be processed in real time for seamless user experience.

3.2 Security Requirements

- Encrypted storage of sensitive user data (passwords, payment details).
- Two-factor authentication (2FA) for all users during login.
- Secure Socket Layer (SSL) for all transactions involving financial data.

3.3 Usability Requirements

- The platform should be user-friendly, with an intuitive UI on both web and mobile apps.
- Accessible to users with disabilities, following WCAG 2.0 guidelines.

3.4 Reliability Requirements

- The system should be available 99.9% of the time, ensuring minimal downtime.
- Regular data backups should be implemented to prevent data loss in case of system failure.
- The platform must handle high transaction volumes without losing data or causing delays.

3.5 Scalability Requirements

- The platform should be designed to scale vertically and horizontally to accommodate growing numbers of users and transactions.
- As the user base grows, the platform should maintain optimal performance without significant degradation.

3.6 Maintainability Requirements

- The platform should be modular, allowing easy updates and the integration of new features.
- Codebase should follow clean coding practices and industry standards to ensure ease of maintenance.
- Comprehensive documentation should be provided for developers, including APIs, module details, and system architecture.

3.7 Supportability Requirements

- .The platform should include a customer support system with options for users to submit tickets, request help, and access FAQs or guides.
- Logs should be maintained for system performance and errors, allowing quick diagnosis and resolution of issues.

SYSTEM ARCHITECTURE

5.1 High-Level Architecture

The Team Sync platform follows a microservices architecture to ensure scalability, modularity, and efficient system management. The key components of the architecture include:

Frontend Layer:

- Web and mobile interfaces developed using React.js for an intuitive and seamless user experience.
- Ensures a responsive and interactive UI for managing tasks, teams, and projects efficiently.

Backend Layer:

- Backend services built using Node.js to handle business logic, API endpoints, and database interactions.
- Implements RESTful APIs for communication between frontend, backend, and external services.

Database Layer:

- A MongoDB database to store users, tasks, projects, messages, notifications, and team collaboration data.
- Optimized for high availability and scalability, ensuring smooth data management.

Task Management & Collaboration Layer:

- Centralized task assignment and tracking system for seamless project coordination.
- Role-based access control to define permissions for team members.

.

5.2 Deployment Diagram

The system will be deployed on a cloud platform like AWS or Google Cloud, leveraging services such as:

- Load Balancers: To manage traffic distribution and ensure optimal server performance.
- Autoscaling: To handle increased user traffic without compromising performance.

CDN (Content Delivery Network): For fast content delivery across geographic locations.

SYSTEM MAINTENANCE

.

8.1 Maintenance Procedures

- Regular Updates:
The system will undergo regular software updates to incorporate new features, improve security, and fix bugs. These updates will be scheduled during off-peak hours.
- Error Handling and Reporting:
All errors encountered by users or administrators will be logged, and administrators will receive real-time notifications in case of system failure.
- Support and Troubleshooting:
 A dedicated support team will be available to handle issues related to system performance, user queries, and payment-related problems.

CONCLUSION OF SRS

(SOFTWARE REQUIREMENT SPECIFICATION)

Our Team Sync project is more than just a collaboration tool—it is a game-changer in how teams coordinate, communicate, and execute projects efficiently. By integrating AI-driven task management, seamless messaging, real-time notifications, and a user-friendly interface, we are streamlining teamwork and ensuring productivity at every level.

With a robust and scalable technology stack, our platform empowers teams to work smarter, track progress effortlessly, and stay aligned with their goals. Whether it's assigning tasks, sharing documents, or conducting virtual meetings, Team Sync brings everything into one unified workspace.

This project is not just about building a tool; it's about redefining teamwork in a digital-first world. We are committed to driving innovation, enhancing collaboration, and delivering a solution that meets the evolving needs of modern teams. With your support, we can bring Team Sync to life and revolutionize the way teams work together—today and in the future. 🚀