CSC 431 – Spring 2025

MeetSync

Software Requirements Specification (SRS)

Fuseini Salifu	Member
Alden Sahi	Member
Jonathan Bergbaum	Member

Version History

Version	Date	Author(s)	Change Comments
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1. Introduction

1.1 Overview

The Group Scheduler is a scheduling and coordination tool designed to facilitate efficient planning and communication within small groups. Core features include event creation, polling for optimal meeting times, real-time chat, and automated calendar integration. By supporting user profile customization, privacy controls, and external calendar synchronization, the platform ensures a flexible and intuitive user experience. This document describes the system architecture, constraints, use cases, and evolutionary requirements that guide the product's development.

1.2 General Description

The Group Scheduler enables users to coordinate meetings with minimal effort, offering functions such as event scheduling, group chat, availability polling, and personalized notifications. Designed with simplicity and collaboration in mind, it targets University of Miami project teams, clubs, and peer groups. Benefits include time efficiency, improved coordination, and reduced miscommunication among users. The system also includes administrative functionalities such as database management and profile privacy control, ensuring robust support and security for all users.

1.3 Scope of this Document

This document covers all aspects of the Group Scheduler's design, including user interactions such as profile creation, event scheduling, in-app communication, voting, and system-driven notifications. It details the platform's capabilities, constraints, and future expansion plans. The final product will offer a streamlined solution for collaborative scheduling, primarily targeting student project teams and academic groups.

2. System Requirements

2.1 Functional Requirements

Title	Profile Creation
Description	The system shall enable users to create and customize their profiles by entering details such as name, phone number, and email
Priority	3
Precondition(s)	N/a
Basic Flow	the user selects the "Create Profile" option, fills in the required fields, and submits the information, which is then stored securely by the system.
Postconditions(s)	A user profile is created and associated with the user's account.
Use Case Diagram	Fig 1

Title	User Authentication
Description	The system will allow users to securely log in using either their email or username paired with a password. It will check if the pair is correct.
Priority	1
Precondition(s)	The user needs to have an account
Basic Flow	The user navigates to the login page, enters valid credentials, the system verifies the credentials, and then grants access to the user's dashboard.
Postconditions(s)	The user is authenticated and redirected to their personalized home page.
Use Case Diagram	Fig 1

Title	Event Creation
Description	The system will allow users to create and customize events
Priority	1
Precondition(s)	The user needs to have an account
Basic Flow	The user selects "Create Event," inputs event details (time, date, description, recurrence options, attendees),

	and confirms the event, which is then added to the system calendar.
Postconditions(s)	A new event is created and visible in the user's event list and calendar.
Use Case Diagram	Fig 1

Title	Reminder Notifications
Description	The system shall send automated reminder notifications to users based on customizable schedules set prior to an event.
Priority	2
Precondition(s)	An event must be created with configured reminder settings.
Basic Flow	Upon event creation, the user sets a reminder interval, and the system schedules notifications which are dispatched at the designated times.
Postconditions(s)	Users receive timely reminders ensuring they are informed about upcoming events.
Use Case Diagram	Fig 1

Title	Automatic Polling/Voting System
Description	The system will incorporate an automatic polling feature that enables users to vote on preferred meeting times or platforms for an event.
Priority	3
Precondition(s)	An event must be created and participants invited to vote.
Basic Flow	The event creator initiates a poll, invites participants, each user casts a vote for the preferred options, and the system tallies and displays the results.
Postconditions(s)	The optimal time or platform is determined based on the collected votes.
Use Case Diagram	Fig 1

Title	In-App Chat
Description	The system will provide a secure in-app chat feature enabling direct communication between individual users or group members associated with an event.
Priority	4
Precondition(s)	The users must be authenticated and connected to the event or group.

Basic Flow	Users open the chat interface, select a contact or group, send messages, and receive real-time responses via the integrated messaging system.
Postconditions(s)	A conversation thread is maintained within the application, facilitating seamless communication.
Use Case Diagram	Fig 1

Title	Privacy and Security Controls
Description	The system will enforce robust privacy and security measures, allowing users to manage their data visibility and safeguard their identity.
Priority	3
Precondition(s)	User registration and profile creation must be complete.
Basic Flow	Users navigate to the privacy settings, configure preferences for data sharing and security, and the system applies these settings across all functionalities.
Postconditions(s)	User data and identity are protected in accordance with the configured privacy settings.
Use Case Diagram	Fig 1

USE CASE DIAGRAM

2.2 Non-Functional Requirements

Title	Performance
Description	The system shall process user requests and deliver responses within 2 seconds under normal operating conditions.
Priority	0
Applicable FR(s)	All functional requirements

Title	Security
Description	The system shall implement robust security measures—including encryption and secure communication protocols—to protect user data and maintain privacy.
Priority	0
Applicable FR(s)	User Authentication, Profile Creation, Privacy and Security Controls

Title	Usability
Description	The system shall provide an intuitive user interface and clear navigation to ensure a seamless experience for users of all technical skill levels.
Priority	1
Applicable FR(s)	All functional requirements

Title	Scalability
Description	The system shall be designed to efficiently scale and support an increasing number of users without degradation in performance.
Priority	1
Applicable FR(s)	All functional requirements

3. System Constraints

3.1 Tool Constraints

Title	Tools needed
Description	The project will utilize industry-standard development tools—including version control systems(Git), integrated development environments(IDE), and CI/CD pipelines—to ensure efficient collaboration and maintainable code.
Priority	0

3.2 Language Constraints

Title	Languages
Description	The system shall be implemented using languages that offer robust security and scalability, such as JavaScript/React for front-end development and Python for back-end services.
Priority	4

3.3 Platform Constraints

Title	Cross-Platform Compatibility
Description	The application shall support major operating systems, including Windows, macOS, Linux, Android, and iOS, ensuring broad accessibility and a consistent user experience.
Priority	0

3.4 Hardware Constraints

Title	Hardware Constraints
Description	Requires an internet-connected device with minimal hardware specification (4GB RAM, modern web browser.
Priority	1

3.5 Network Constraints

Title	Network constraints
Description	Requires an active internet connection for real-time collaboration
Priority	1

3.6 Deployment Constraints

Title	Deployment constraints
Description	The application will be hosted on cloud infrastructure such AWS or Firebase
Priority	2

3.7 Transition & Support Constraints

Title	Transition and support constraints
Description	Regular updates and bug fixes required, allows user to submit request
Priority	2

3.8 Budget & Schedule Constraints

Title	Budget and schedule constraints
Description	Development timeframe: one semester

Priority	0

3.9 Miscellaneous Constraints

Title	Miscellaneous constraints
Description	Adherence to usability and accessibility standards
Priority	3

4. Requirements Modeling

4.1 Use Case Tables

Title	View Calendar
Description	The system shall allow users to view a calendar displaying scheduled events.
Priority	2
Precondition(s)	User must be logged in and have events scheduled.
Basic Flow	The user selects the 'View Calendar' option, and the system displays a visual calendar with all scheduled events.
Postconditions(s)	User is able to view events in a calendar format.

Title	Notifications
Description	The system shall send users automated reminder notifications based on event settings.
Priority	2
Precondition(s)	User must have upcoming events with reminders configured.
Basic Flow	The system checks for events with pending reminders and dispatches notifications to the user.
Postconditions(s)	User receives reminders as scheduled.

Title	Chat
Description	The system shall enable users to send and receive real-time messages with event participants.
Priority	4
Precondition(s)	Users must be authenticated and part of the same event or group.
Basic Flow	User accesses the chat interface, selects a conversation, types and sends a message, which is then delivered instantly.

Postconditions(s)	Message is sent and added to the conversation thread.

Title	Voting
Description	The system shall allow users to vote on preferred event times or platforms via a poll.
Priority	3
Precondition(s)	An event poll must be initiated.
Basic Flow	User selects a poll, chooses an option, and submits their vote. The system updates the tally.
Postconditions(s)	Vote is recorded and contributes to the final decision.

Title	Create Event
Description	The system shall allow users to create and customize events.
Priority	1
Precondition(s)	User must be authenticated.
Basic Flow	User selects 'Create Event', enters event details (time, date, etc.), and confirms creation.
Postconditions(s)	Event is added to the calendar and associated with the creator.

Title	Edit Event
Description	The system shall allow users to edit details of an existing event.
Priority	3
Precondition(s)	User must be the creator or authorized participant.
Basic Flow	User selects an event, modifies fields, and saves changes.
Postconditions(s)	Updated event details are saved and reflected in the system.

Title	View Event
Description	The system shall allow users to view event details.
Priority	2

Precondition(s)	User must be an invitee or the event creator.
Basic Flow	User selects an event and is shown full event information.
Postconditions(s)	Event information is displayed to the user.

Title	Delete Event
Description	The system shall allow users to delete an event they created.
Priority	3
Precondition(s)	User must be the event creator.
Basic Flow	User selects the event, clicks 'Delete', and confirms the action.
Postconditions(s)	Event is removed from the calendar and notifications are canceled.

Title	View Profile
Description	The system shall allow users to view their profile information.
Priority	2
Precondition(s)	User must be logged in.
Basic Flow	User navigates to 'Profile' and views stored personal data.
Postconditions(s)	Profile information is displayed.

Title	Edit Profile
Description	The system shall allow users to update their profile information.
Priority	2
Precondition(s)	User must be authenticated.
Basic Flow	User accesses the profile section, modifies fields, and submits changes.
Postconditions(s)	Profile is updated and changes are saved.

Title	Delete Profile
Description	The system shall allow users to delete their profile and account.
Priority	3
Precondition(s)	User must be authenticated and confirm deletion.

Basic Flow	User selects 'Delete Profile', confirms intent, and the system removes the account.
Postconditions(s)	User profile and associated data are deleted.

Title	Database Management
Description	The system shall enable admins to manage stored data and system logs.
Priority	1
Precondition(s)	User must have admin access.
Basic Flow	Admin logs in, accesses database tools, and performs management tasks.
Postconditions(s)	Database is maintained and data integrity ensured.

Title	Privacy Profile
Description	The system shall allow admins to configure user privacy settings and permissions.
Priority	2
Precondition(s)	Admin access is required.
Basic Flow	Admin navigates to privacy settings and applies global or user-specific policies.
Postconditions(s)	Updated privacy policies are enforced across the system.

5. Evolutionary Requirements

5.1 Functional

Title	Calendar integration, scheduling recommendations
Description	- The system will integrate external calendar services, such as Google Calendar, Outlook, Apple Calendar, to sync scheduled events. - The system should recommend optimal meeting times based user availability and past scheduling patterns - A dedicated mobile application will be developed for Android and iOS platforms.
Priority	1, 2, 3
Precondition(s)	- User has linked an external calendar - User has a history of scheduled events - Core web functionalities are implemented
Postconditions(s)	- Events scheduled in the app appear in the external calendar and vice versa - The system provides intelligent time slot recommendations - Users can access the scheduler via a mobile device
Use Case Diagram	See on page 7

5.2 Non-Functional

Title	Localization support, advanced analytics and reporting
Description	- The system will support multiple languages for a global user base - Users will have access to insights on scheduling trends and meeting effectiveness
Priority	2, 3
Applicable FR(s)	- Profile management, notifications - Event creation, polling system