

Student Study Scheduling Portal

Introduction:

In today's digital academic environment, students increasingly collaborate remotely and need efficient ways to coordinate study sessions. Traditional methods, like messaging or manual polls, are time-consuming and often lead to scheduling conflicts. The Student Study Scheduling Portal aims to automate and simplify the process of forming study groups and scheduling meetings, making academic collaboration seamless, fast, and effective for all users.

Project Scope:

This project focuses on communication and scheduling activities for study groups in educational institutions. The main users are students who want to find study partners, join or create groups, and coordinate meeting times. Group coordinators manage group sessions, and academic instructors can view collaboration patterns. The system will not handle actual study content delivery or in-depth analytics, but will provide an effective, user-friendly platform for managing group schedules and notifications.

Overview of the System:

User Roles

1. Anonymous User: Can view public study groups and search for groups by subject or availability, but must register to join or create groups.
2. Registered Student: Can create a profile with their subjects of interest and available times, join existing study groups, or request to form new ones. Receives personalized notifications and can update their availability.
3. Study Group Coordinator: Can create and manage study groups, schedule group meetings, and view the availability of group members to find optimal meeting times. Can send invites and notifications to group members.
4. Academic Instructor: Can view group formation and student participation but does not manage sessions directly.

Key Features:

- Interactive Availability Grid: Visual weekly schedule grid (rows = members, columns = time slots); members click to indicate when they're free, with color-coded overlap highlights.
- Smart Group Matching: Students can search groups by subject, meeting time, and compatibility; the system recommends best-matching groups.

- Automated Common Slot Finder: “Find Common Slots” button instantly highlights group time blocks when all (or most) members are available.
- Conflict-Free Scheduling: Detects and warns about double-booked members; suggests alternative slots.
- “Force Schedule” Option: Allows coordinators to schedule urgent meetings even if not everyone is available, with clear alerts to affected members.
- Role-Based Access Control: Menu options and screens adapt to user roles, ensuring security and clarity.
- Secure Login & Registration: Password-protected accounts with basic validation and session management.
- File-Based Persistence: Saves user profiles, group data, and schedules across sessions (no complex database setup required).

Future Implementation/ Advanced Features:

- AI-powered matching and recommendations
- Mobile app versions
- Real Time Chat or Messaging
- Calendar sync with Google/Outlook/simple
- File sharing and resource uploads

Use Cases:

1. User Registration: Students and coordinators register, set their profile and availability.
2. Group Search & Join: Students search for groups and request to join.
3. Group Creation & Management: Coordinators create groups, schedule sessions, and manage membership.
4. Scheduling & Notifications: Members set availability, coordinators schedule meetings, system notifies users of new sessions or changes.
5. Conflict Detection: The system warns of overlapping sessions and suggests alternatives.

