

SAHARA

A COURSE PROJECT MANAGEMENT PORTAL

Team: Ravi & Friends

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GITHUB LINK

<https://github.com/EnivNaqSevraqf/sahara>

This is the Github link to our project's codebase and documentation.

NEED FOR SOFTWARE

- The website centralizes all CS253 course materials, announcements, and interactive tools in one easy-to-navigate platform, enhancing communication, resource management, and student engagement.
- Enables real-time updates and feedback, making course management more efficient and responsive.
- Sahara is particularly more helpful in **project/team-centered** courses such as CS253, owing to the many team-related features available.



POTENTIAL USERS

- **Students:** Access course content, submit assignments, and participate in discussions.
- **Instructors:** Distribute materials, post updates, and manage course communications.
- **TAs:** Grade assignments, provide feedback and assistance to students and professors with the conduct of the course.

MAJOR REQUIREMENTS

FUNCTIONAL FEATURES

- **Content Management:**
 - Enable easy uploading and organization of course materials (assignments, announcements).
- **Communication & Real-Time Updates:**
 - Provide integrated discussion forums, messaging systems, and dynamic notifications to keep users informed of course events and deadlines.
- **Assignment Processing:**
 - Allow streamlined assignment submission, grading, and feedback within the platform.

SECURITY AND USER EXPERIENCE

- **User Roles & Authentication:**
 - Support multiple roles (students, instructors and TAs) with secure login and role-based access control.
- **Security & Privacy:**
 - Implement robust encryption and secure protocols to protect all user data.
- **Responsive Design:**
 - Ensure a clean, intuitive interface that works seamlessly across desktops, tablets, and mobile devices.

DEMONSTRATION

PLANS TO IMPROVE

- Enable professors to manually edit and manage team compositions.
- **AI-Assisted Grading**
 - Integrate AI-powered tools to streamline the grading of assignments and other gradable tasks.
- **Beta Testing Functionalities**
 - Facilitate the pairing of teams for beta testing activities.
 - Develop forms to help communicate and manage beta testing pairs.

- **Enhanced Forum Functionality**

- Message Tagging: Allow users to tag messages for easier identification and categorization.
- Anonymous Texting: Provide an option for users to post messages anonymously within forums.
- Text Censoring: Implement features to censor inappropriate content in forum messages.

- **Quiz Functionality**

- Enable instructors to create quizzes with predefined questions and expected answers.
- Allow students to take quizzes within specified deadlines, with automated response validation and scoring.

- **Activity Notifications and Deadline Reminders**
 - Automate notifications and emails for key activities, including:
 - Creation of gradable tasks.
 - Assignment grading.
 - Announcements.
 - TA assignments.
 - Beta team pairings.
 - Deadline reminders.
 - Continually address bug fixes and software improvements through rigorous testing.

LESSONS LEARNT

- **Debugging: A Never-Ending Party:**
 - We quickly realized bugs are like those uninvited guests who just won't leave—they pop up when you least expect them and make themselves at home. Turns out, "it works on my machine" is really just code for "enjoy the debugging party!"
- **The (Love-Hate) Art of Feedback:**
 - We soon discovered that even the tiniest typo can set off a chain reaction of "Why didn't you do it this way?" comments. Moral: embrace constructive criticism and stock up on coffee before deadlines.
- **Teamwork: The Ultimate Debugging Buddy:**
 - Coordinating across countless lines of code taught us that clear communication can save an avalanche of headaches. Nothing bonds a team like the shared experience of collectively blaming (and then fixing) the quirks of our own code.



THANK YOU

