



User Needs and Requirements

Computer Science 309 Dashboard

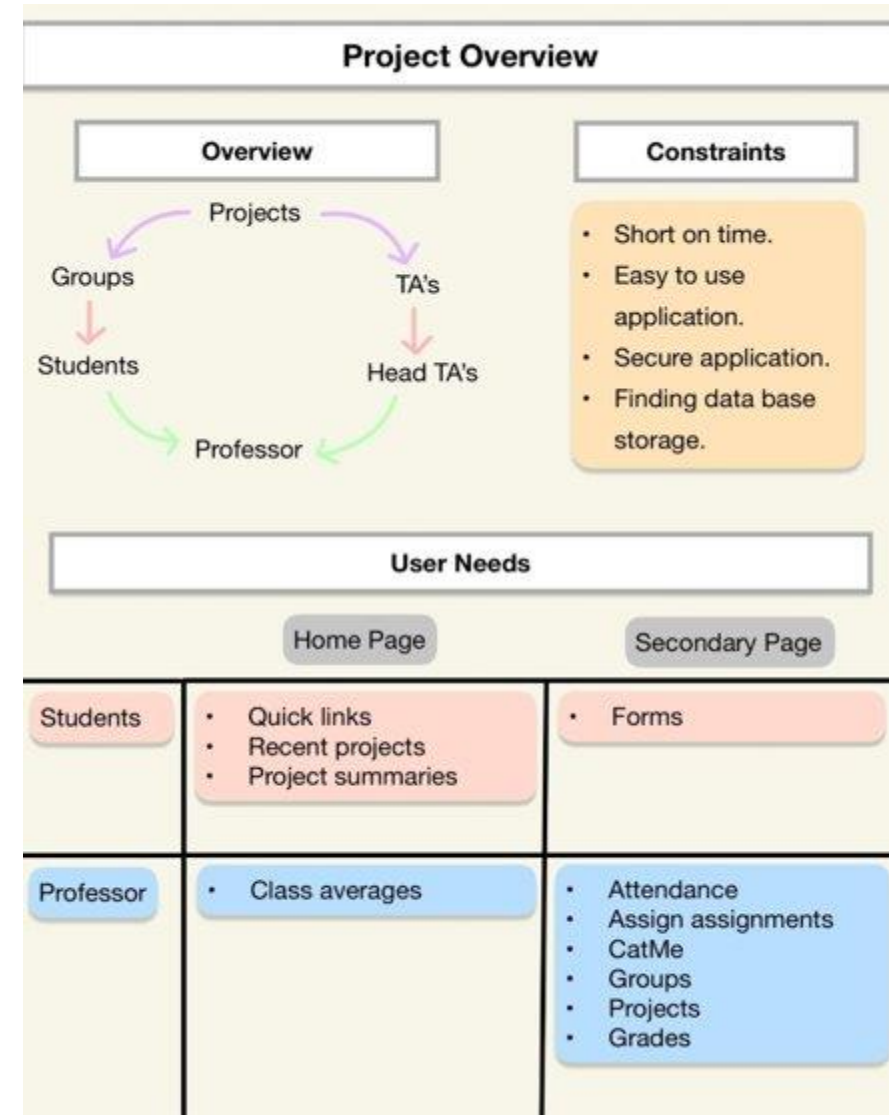
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Project Overview

Project Overview

- Project: Computer Science 309 Dashboard
- Advisor: Dr. Simanta Mitra
- Client: Dr. Simanta Mitra
- Goal: Create a platform that gathers, analyzes, and portrays data from numerous applications used in the course including, Canvas, CATme, Gitlab, etc.
- Special Features: Once the application is in motion, we will add attendance, ABET, and other features!





Problem Statement

Project Statement

- Official Project Abstract:
 - The ComS 309 Dashboard will be an App and website that students, TAs, and professors can utilize to access resources, see team metrics, and look at the time until their next demo.
 - TAs will also be able to manage teams more efficiently and will be notified about problematic students.
 - It will integrate elements from Github, CATME, and Canvas to present all information in one place.
 - Two teams have attempted this project in the past; our team will analyze their codes to develop a working application.
 - TypeScript, Node.js, and React Expo will be used to design the application, along with an AWS RDS-supported database for storage. Once developed, the system will be deployed on AWS.



Users and Needs

Users and Needs

Users		Needs	
Professors		<ul style="list-style-type: none">• Students enrolled (names, pictures, etc.)• Attendance tracking• Problematic students• Grades• Performance data• Ease in combination of data from multiple platforms	
Teaching Assistants		<ul style="list-style-type: none">• Students in groups (names, pictures, etc.)• Problematic students• Grades• Reviews and reflections	
Students		<ul style="list-style-type: none">• Group information (projects, teammates, etc.)• Assignments• Grades• Reviews and reflections	
Others		<ul style="list-style-type: none">• Performance data	



Requirements

Requirements

Topic	Requirements
Dashboard	<ul style="list-style-type: none">• Accessible to professors, students, TAs, and head TAs with role-specific views.• Responsive design for both desktop and mobile use.
Data Management	<ul style="list-style-type: none">• Efficient storage and retrieval of course data, including assignments, grades, and feedback.
User Interface	<ul style="list-style-type: none">• Intuitive and user-friendly interface for all user roles.• Consistent design across web and mobile platforms.
Mobile App	<ul style="list-style-type: none">• Companion app for professors with basic functionality like attendance and scanning in documents.



Engineering Standards

Engineering Standards

Standard	Explanation
IEEE 830-1998: Recommended Practice for Software Requirements Specifications	This standard provides guidelines for creating software requirements specifications, which would be useful in documenting the project's requirements.
IEEE 1012-2016: Standard for System, Software, and Hardware Verification and Validation	This standard would be applicable for ensuring the quality and reliability of the dashboard system.



Conclusions

- Users include Professors, Teaching Assistants, and students.
- All information will be available in one location.
 - Students will be able to access all assignment information in one platform for review after submission.
 - Students will have easier access to class and project resources.
 - Professors and TA's will be able to track students that are problematic in submitting assignments or attending class.
- Professor will be able to analyze class data in coordination with ABET requirements.
 - Other professors could potentially use this part of the program for their course.
- Stronger organization of course materials for storage.
- Engineering standards IEEE 830-1988 & 101-2016 are applicable.