

# Conductor App

UC San Diego

## Team 3: <div>ine coders

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## Statement of Purpose

Constructing a course management tool for teaching staff and students within the domain of software engineering to help students structure their team progress and help staff stay in the loop of the team's progress.

Problem our tool is trying to solve

The idea of the Conductor tool is to provide utilities and insights that allow a large scale software engineering class to run more smoothly and to give more time to teaching staff and students to focus on the more interesting parts of Software Engineering.

The tool should automate time consuming tasks as well as provide a structure to capture observations clearly for fair student and group evaluation.

# User Studies

We interviewed real users to understand their role, problem, and tool needs for the Conductor App, and will continue to get feedback!

## Teaching Staff

### Professor

**Role:** Run a ~200 student SE course with lecture, discussion, lab, project & chooses pragmatic tech stacks and workflows that mirror real-world practice (GitHub, Classroom, Canvas, Gradescope).

**Problem:** Cannot easily see process compliance and team health across many teams and disparate tools & students sometimes misallocate focus (e.g., prioritizing project over exams) without timely feedback signals.

**Tool Needs:** A process-health dashboard that correlates plans, issues, PRs, commits, and reviews into multi-component metrics. Also, team health cards that surface end-loading, single-contributor risk, reviewer networks, and pair-programming evidence.

### TA

**Role:** Coordinates grading and rubric consistency across labs, milestones, and projects.

**Problem:** Gathering consistent evidence for process grading is slow, manual, and error-prone.

**Tool Needs:** One-click evidence bundles and rubric checklists auto-filled from GitHub signals and exportable to Canvas/Gradescope.

### Tutor

**Role:** Help run labs, answer student questions, and relay any problems back to the other staff.

**Problem:** Coordinating student questions for labs/assignments and FAQ can be overwhelming.

**Tool Needs:** Queue system for answering student questions along with a FAQ tool that students need to read before entering the queue. Easy way to relay observations/problems to staff.

## Students

### Students

**Role:** Regular student managing lectures, reflections, and project tasks across Canvas, Slack, and Gradescope.

**Problem:** Tasks and deadlines scattered across platforms; often forgets due dates; feels unorganized.

**Tool Needs:** Centralized dashboard showing all assignments, meetings, and deadlines with calendar and notifications.

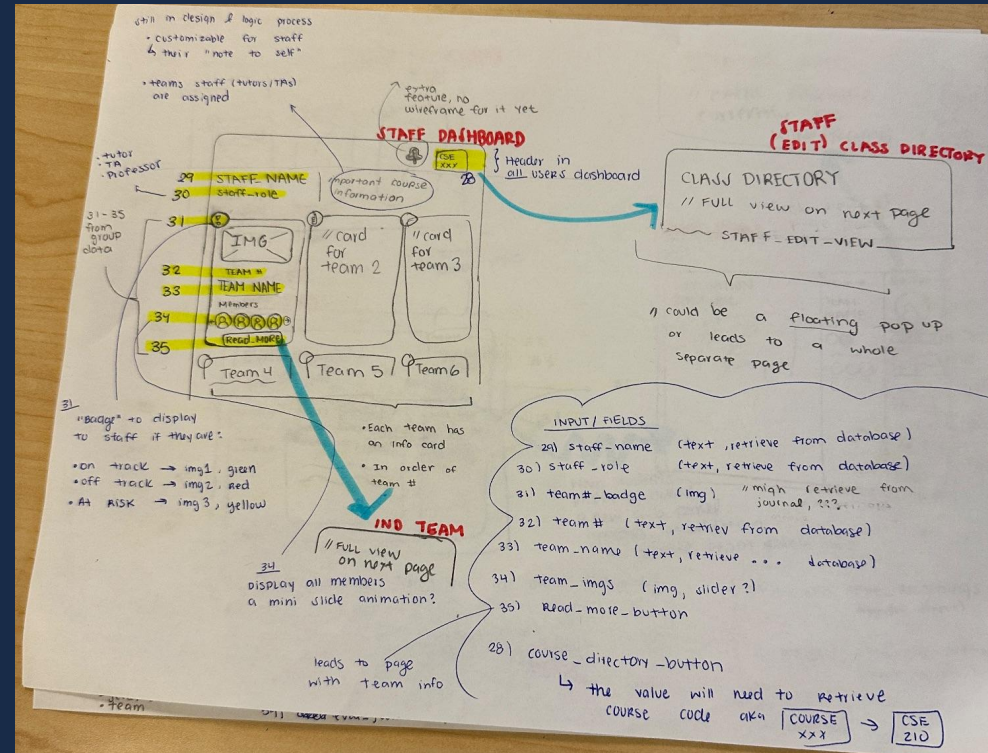
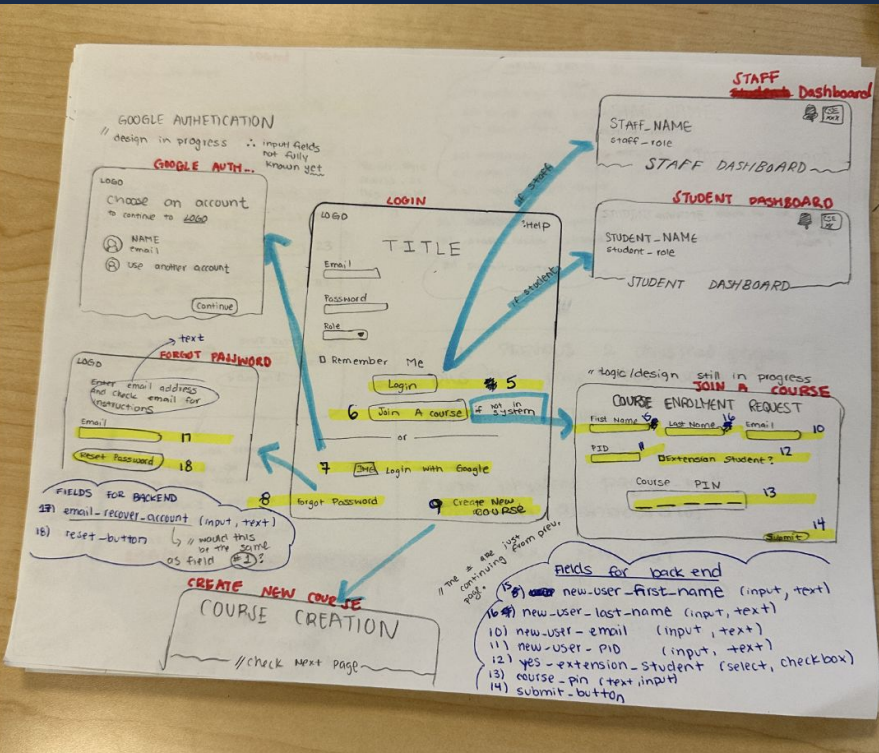
### Team Lead

**Role:** Coordinates a 6-8 person project team; facilitates meetings, assigns tasks, and ensures submissions.

**Problem:** Difficult to align schedules, track individual contributions, and manage communication across tools.

**Tool Needs:** Meeting scheduler, team activity tracker, and automated participation summaries for fair evaluation.

# Wireframes



# Login & Dashboard Demo

**Welcome to Conductor**

First Name

Last Name

Email


Password

Role

☐ Remember me


[LOGIN](#)

or

 Continue with Google


[Forgot password?](#) [Create an account](#)

# Task Tracker Demo

**Conductor App**

## Student Dashboard


Team Lead view · CSE 210



### Class Directory

View and manage all staff and student class information.


Open



### Task Tracker

Monitor assigned tasks, due dates, and progress updates.


View Tasks



### Meeting Notes

Create, organize, or review your meeting notes and class discussions.


Open Notes



### Weekly Evaluation

Review performance summaries and submit weekly feedback reports.

View Evaluation



### Evaluation Journal

Review performance metrics and grading insights for your classes.

View Journal

# Team Structure Overview

Our team is large (13 people) → needed structure.

We divided by **user role** because each role has different:

- UI screens
- Features
- Data access / management
- Interactions with other users

## The 4 Role-Based Sections:

1. **Professor**
2. **TA**
3. **Team Leader**
4. **Student**

This was to ensure parallel work, clarity, and minimal repetition.

For TLDR/ quick info we are using the wiki. As recommended by Prof in OH!

### Section 1: Prof

Front End: Yueqi Wu, Peter

Back End: Sriraksha

Integrated Back & Front End: Abhishek

Data Manager: Abhishek

| ■ Team Card in Staff Dashboard (field number 31-35 in current wirefram)

| | Peter

| | Tongfei,

| | 📁 Class Directory [ EDIT ACCESS] (36- 48) (#39 is an future feature)

| | Yueqi, Audria

| | Raksha

| | ✅ 📄 Evaluation Journal [EDIT]

| | Andrew

| | Abhishek

# Sprint 1 Retrospective

## What went well:

- Conducted user studies
- Developed the wireframes and how they will integrate together with Back End
- Finished login screen, dashboard, team tracker initial Front End design
- Feedback loop: async updates in Slack, bi-weekly check-ins meetings (More as required), Immediate feedback from TAs during OH

## What we should improve:

- Originally organized by Frontend & Backend, but had some disagreements and realized we need more collaboration and communication on both to integrate the changes together and be aware of the other group's progress
- Thus organized by section role: Professor, TA, Team Leader, Student, with someone on Front End, Back End, Integration, and Data Manager for each section

## Goals for next sprint:

- Need to continue practicing GitHub practices, including Issues, PRs, Projects, and will integrate CI/CD Pipeline
- To improve workflow, we should centralize our resources (meeting notes, wireframes, and design details) into a single source of truth (e.g., GitHub Wiki) so everyone can easily access the latest version.