Conductor App Pitch

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.

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.

Problem our tool is trying to solve

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

User Study

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.

Login Page

LOGO   ?Help

WELCOME TO xxx

Email
[   ]

Password
[   ]

[Login] [Forgot Password] [Join a Course] [Create New Course]

Enter your official email address and follow the instructions emailed to you

Email
[   ]

[Reset Password]

Staff User Flow

Clicking the course logo leads all staff and student to General info directory. The **red** dashes are only visible to staff.

CLASS DIRECTORY

Course Information

Title

Quarter/Semester

Instructor Information

Name

Email

TA Information

TA 1

Name

Email

(+) Add new TA

Tutors

Add new Tutor

Save Directory

NAME
staff_role

Important Info

CSE 110

Team 1   Team 2   Team 3

Team 4   Team 5   Team 6

EVALUATION JOURNAL

Having information about the students right next to the journal will help user recall which team member is in which team and etc.
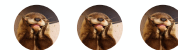
Team 3

Team leads

Name

Members

Links: github.com

Team Availabilities

1 p.m. – 3 p.m.

Name

Directory information about student

NAME
student_role

Team #
TA assigned

CSE 110

Links: github, <customized by user>, …

//TEAM TASK TRACKER
your task: bolded

Pinned links customizable by team

MEETING NOTES

WORK JOURNAL

WEEKLY EVALUATION

"you are _____"

OPTIONS:
> 'on track' : HAPPY PARTY FACE
> 'making progress': HAPPY WORKING OUT FACE
>'Off track': SHY SAD FACE'

Team member or team Lead

preview of most recent notes

Work Journal

ⓘ Helpful Resources

Date: _____

Entry Type: ○ Guided Form
○ Blank

Text Input Area
Thoughts/Reflections

Save   Cancel

Weekly Evaluation

Direct Quotes & Feedback from Team

Text area for collecting feedback, praise, suggestions

Progress Tracker

INDEP/LEAD   TECH   TEAMWORK SCORE

Save Weekly Report

Based on Professor Coblenz 210 Evaluation Rubric

Your Team

General Team Information

Evaluation Journal ⓘ

Name

…

click on the student, a side panel appear to allow team lead to make evaluation

score Independant Leadership

score Tech

score Teamwork

Red section only accessible to Team lead, as for the "General Information that is accessible to both team lead and all students in that team.

Risks and Rabbit Holes

Technical Risks	Non-Technical	Rabbit Hole
• Architecture and System design risk: Our group initial ideas interactive 3D gamified frontend or complex software application might lead high latency or scalability issue where the infrastructure mat not handle incremental load • Versioning conflict: incompatible library or services version to changes in third-party tools • Security and Compliance Risk: Since this application is critical of distributed system across each specific role, data or working	• Communication and Collaboration: create an active work culture and distributed equals workforce for each domain or tasks • Documentation & Knowledge Sharing Risk: The team must maintain clear documentation and shared understanding of all system components to avoid disruptions if a key contributor becomes unavailable.	• Over-optimizing or over-engineering tooling • Chasing for perfect architecture • Refactoring everything instead of providing iterative implementation methods • Rubric Algorithm Question: The update frequency of sensitive score might be low. In this case, what is the best way to show the team's chemistry? Base purely on last assessment or show a general trend from beginning to end.

Approaches:

- Double diamond design thinking process
- Parallel Prototyping
- Mini teams for features for Incremental work
- For Draft of our work please check out this link:

https://www.canva.com/design/DAG3YQ3AwqI/ML8pTJ8UIZKESK
WdDWDG7w/edit?utm_content=DAG3YQ3AwqI&utm_campaign=d
esignshare&utm_medium=link2&utm_source=sharebutton