

# CS 407 Fall 2024 | Project Charter

## Course Clash

### Team Members

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### Problem Statement

Studying for classes is an ongoing effort that takes place over the entire duration of a course. Unfortunately, conventional study games are geared more toward having a single, long study session right before a test or quiz, while other games require synchronous real-time play between students who may be operating on different schedules. We want to create a study platform that utilizes correspondence-type games (similar in style to Trivia Crack) that can be used for small bursts of studying each and every day using material specific to the course (like Quizlet). Our platform will be used for frequent, yet short, study sessions between students on different schedules while keeping students engaged and interested through the competitive nature of a game.

### Project Objectives

- Develop a web-based application platform on which students can study materials created by course professors through fun, interactive but asynchronous games.
- Allow professors to upload course-specific materials for students to study, and allow students to create their own study materials
- Allow students to play head-to-head games against each other on a correspondence basis, supporting several games at once per user, and keeping a class leaderboard for competitive effect
- Design a database that allows for users to come back and continue on with their games and studying where they left off
- Allow students to be members of several different courses, and keep separate games for each course.
- Create a notification system that students may opt-in to receive notifications when it is their turn to play in the turn-based game
- Deploy the web-app platform through a public cloud provider (AWS, GCP, etc)

### Stakeholders

- Users

- Students - students can use this app with the courses they are in to study with each other throughout the semester. They can create topics based on what they are learning to casually study them throughout the semester.
- Professors - professors can create games for their course as a tool for students to learn/retain knowledge outside of class. Professors for courses with many terms to memorize may find this especially useful
- Project owners - Thomas Carsello, Jason Bodzy, Zach Heskett, Sooha Park, Celia Ferrer, Sergio Alvarez
- Software Developers - Same as project owners

## Deliverables

- a) Deliverables:
  - i) Client side web application that will allow users to create games and allow users to play those games with other players. This should be usable on a PC or a phone
  - ii) Server/API that speaks with the database and matches users together
  - iii) Database that stores questions, game-states, and user information
- b) Platforms/Frameworks:
  - i) The client side web application will be made in React.JS
  - ii) The backed application will be using Express.JS
  - iii) The database will use PostgreSQL. The database may potentially be hosted through AWS RDS
  - iv) AWS may be employed to deploy the project, potentially using CloudFront CDN, SES for email notification service, ECS for container deployment, S3 for object-store of images/video uploads, and other potential services

## CS 307 Projects

- Jason Bodzy
  - Find Your Home: <https://github.com/JackKrueckeberg/CS307TeamCodeBase>
  - Find your home is a preference-based city searching application. Users can enter their preferences for a city, like median income, region, climate, and crime rate. From there, the app would show a list of suggested cities. Within each city, Find Your Home also showed a live news feed, top attractions, food, and open house and apartment listings within it. Find your home also allows users to compare cities and view graphs of numerics like population, crime rate, and average income.
- Sooha Park
  - ClapBack: <https://github.com/spark005/ClapBack>
  - Keeping up with friends after high school/college is hard. No longer is interaction forced amongst peers through group projects and seating arrangements, which in turn makes building and maintaining friendships significantly more difficult. ClapBack remedies this issue by providing the user a messaging system that randomly generates an individual every day to chat with, providing no other

alternative but making it fun through given prompts and incentives. There are many messaging apps on the market, but none purposely manages the user's contact with their added friends and encourages keeping contact with past relationships.

- Thomas Carsello
  - ManageHelp: <https://github.com/tcarsello/cs307-group24>
  - ManageHelp is a web-application catered towards the needs of small businesses that schedule shifts for hourly workers. The platform allows managers and employees to coordinate work schedules, announcements, shift swaps between employees, and other functions. This project was meant to replace the word-of-mouth method that is often used by small businesses to communicate shift schedules which is often disorganized and has many points of failure. ManageHelp allows for employees and managers to have a single location on which the shift schedules for the business are posted, and actions to request time off, or change the schedule in any way can be easily processed.
- Zachary Heskett
  - Synquencer: <https://github.com/aemcd/synquencer> (<https://synquencer.azurewebsites.net>)
  - Synquencer is a web based music synquencer designed to allow users to collaborate on music in real time. Users can create a musical sequence with different instruments, notes, time signatures, BPMs, and more and collaborate on those songs in real time with someone they know. By sharing the link of the sequence that you are working on, another user can edit the sequence with you, and you can see those changes immediately reflected in the application. It also has features such as the ability to output your sequence as a MIDI file and being able to play your sequence on the website alone, or in tandem with everyone else collaborating with you.
- Sergio Alvarez
  - EasyDraft: <https://github.com/brennanafrank/EasyDraft>
  - EasyDraft is a template processor to make it easier to send documents in bulk when sending to the same people. Users can create their own templates by using keywords that will be replaced using EasyDraft. Law firms and medical organizations might need to send the same document to multiple people, only changing a few words. EasyDraft helps streamline the process by making it easier and faster to fill out these documents.