Report 5

EE / CprE / SE 491 - sdmay25-06

Iowa Adventure Cyclists Course Creator

Week 5 Report

August 2024 - May 2025

Client & Faculty Advisor: Julie Rursch

Team Members

Kayley Clark - Technical Lead

Tanner Smith - Algorithm Architect

Nayma Garcia - UI/UX lead

Grant Pierce - Client Relation Manager

Nick Thoms - Testing

Eli Newland - Task Manager

Wan Elisa Wan Sarif - Component Design

Past Week Accomplishments

This week the team worked on connecting our backend and frontend, Eli and Nayma took the lead on setting up React native on their devices first, Eli worked on the backend, while Nayma got started on the frontend. In the meantime, Kayley reached out to request access for a SQL server from Iowa State. While that is being processed, she started on a table script to be entered into the SQL server. It was discovered, to increase efficiency in the project, it may be easier to convert the API to being within the server, for faster queries. However, this makes the app static, as if the API is later updated, the server must also be as well.

Additionally, all of the team contributed to the Design Document. From prior work Tanner had put together, we were able to piece a rough draft. While Elisa and Grant worked on formatting the information, and Nick verified all of the information within the document.

We had a productive team meeting to review the design document draft and discuss any necessary revisions. The team agreed on the overall structure and content, but identified a few areas that needed further elaboration. We plan to refine these sections in the coming week to ensure our design document is comprehensive and aligns with our project goals

Timeline

Date	Accomplishments
10/22	Full Stack Login Accomplished
10/29	API Connected to Application
11/5	Document #2 Revisions Complete
11/12	Friend Functionality Demonstration
11/19	Map Functionality Rendering & Downloadable Output
11/26	Test Criterion and Cases at 40% Coverage
12/3	Prototype & Document Completed

Pending Issues

- Spoke with client about obtaining a year long mySQL server from IASTATE so that every member in the team doesn't have to create their own. The client said that it would be possible and that she would get that moving this week.

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Kayley Clark	Worked on setting up the initial code for mySQL server, researched moving the API data into mySQL format for better efficiency on calls	7	17

Tanner Smith	Researched path generating algorithms to better understand how to create routes, as well as graph properties that could be used.	6	16
Nayma Garcia	Started creating prototypes for a log in screen & homepage	6	16
Grant Pierce	Setup React Native, explored the framework, and started building a login screen while experimenting with navigation and layouts	7	18
Nick Thoms	Worked on conceptual design and analysis of system. Coming up with use cases, and domain model.	6	16
Eli Newland	Worked on linking the basic frontend and backend	8	18
Wan Elisa Wan Sarif	Created design documentation, began formatting information for later use. Looked into pathing algorithms.	6	16

Plans for Coming Week

- Update the filesystem layout on Gitlab

- Look into how to use Dikstrajs or A* in path creation

- Build a threat model

- Continue work on Design Document

- Research into pathing algorithms (Dykstra algo.) for route planning

  - How to reduce data into a graph problem