Report 4

EE / CprE / SE 491 - sdmay25-06

Iowa Adventure Cyclists Course Creator

Week 4 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

We met with our advisor to discuss our current progress. She provided insights on hardware considerations and highlighted crucial design components. A key realization was that our cyclist-centered application should cater to busy users. This means creating routes should involve few steps, allowing quick exports to satisfy users.

The team brainstormed content for our design document. We've developed an excellent vision board depicting various user types, exploring what they feel,

think, hear, say, and do. This exercise helped us identify user personas and determine our project requirements.

Eli and Nayma created a demo application using React Native, chosen for its compatibility with both iOS and Android platforms. After launching the app, they developed a Node.js backend and a MySQL server. We need to document the MySQL server setup for each team member or decide on creating a shared server. One suggestion is to use a Raspberry Pi for this purpose.

Kayley worked to adjust the timeline, and a rough draft is as follows. The team is going to begin work for accomplishments early on and have something presentable for the accomplishment by the Friday before the deadline date. This way the accomplishment may be reviewed, and bugs may be fixed accordingly. This upcoming week, we have a design document that should have a rough draft by next Thursday. However, we hope to accomplish this rough draft by Tuesday next week.

Tanner and Wan Elisa worked to gather the requirements we had already come up with and formed them into a rough draft document that will later help us when we see the rubric for the assignment. Additionally, Wan Elisa worked to start gathering the images and creating visuals with pipelines / workflow on how we expect the system to run data and download the data for Garmin use.

With the application running, Grant and Nick began work on the login functionality, with Grant focusing primarily on the security and hashing functionality of passwords and user data. Nick focused primarily on testing functionality, whether physical user testing, edge cases, or security testing.

Timeline

Date	Accomplishments
10/15	Design Requirements Document Demo 1 & Lightning Talk
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

- Android application has yet to be tested, working on obtaining an android device to use for testing purposes.

- Asking to see if we can get a year long server from IASTATE so that every member in the team doesn't have to create a mySQL server on their personal device. Spoke with client about obtaining this.

Individual Contributions

Team Member	Contribution	Weekly Hours	Total Hours
Kayley Clark	Nailed down timeline, selected appropriate components to start working towards	6	10
Tanner Smith	Worked on creating user stories and requirements gathering for design document	6	10
Nayma Garcia	Worked on setting up the backend with the database for the application using Node.JS and mySQL	6	10
Grant Pierce	Started login screen functionality and started working on security	6	11
Nick Thoms	Worked with Grant to determine cases needed for testing security of login after deployment. Looked into system use cases for domain design.	6	10
Eli Newland	Got demo application working on iOS phone, set up React Native project for frontend use.	6	10
Wan Elisa Wan Sarif	Gathering images and created drawings to correlate with design	6	10

	components for the front end, to be used in the design requirements document		

Plans for Coming Week

- Start work on design requirements document

- Begin the login screen functionality

- Each member should have a demo application working on iOS or Android device