INDY 1: FITNESS APP

CS 4850 Section 02

Spring Semester 2024

01/25/2024

Luke Zeches

Adam Borowski

Michael Bolnik

Project Team

Roles	Name	Major Responsibilities	Cell Phone/Email
Project Owner	Luke Zeches	Oversee development, program major components	404-940-6041 lzeches@students.kennesaw.edu
Team Leader	Luke Zeches		
Team Members	Michael Bolnik	Program major components	470-429-4444 mbolnik@students.kennesaw.edu
	Adam Borowski	Provide documentation and project design outlines	470-234-4908 Aborows1@students.kennesaw.edu
Advisor/Instructor	Sharon Perry	Facilitate project progress, advise on project planning and management	770-329-3895

Project Name

INDY 1: Fitness App

Enhanced Overview

With our project, we plan to make a fitness app that makes exercising fun and engaging. Many people do not get as much exercise as they should, due to time constraints or lack of motivation. We hope to solve this latter issue with our app. While users are on the app, it will use a GPS system to track their location. With this information, our app will count the distance traveled and save it into a database. To gamify this system, there will be multiple destinations that one can virtually travel to. For example, if a user wished to simulate a trip across the United States, our app would track the distance traveled and show how far along they were. It would also give milestones, such as reaching the Grand Canyon. While on a trip, the app will show your current location on the path using Google Street View. Every user will also be able to see their total distance traveled and the number of destinations reached. For security reasons, every user will have to create an account with a username and password and must login when opening the app. Our app will be built using React Native for iOS and Android development. It will start with a simple UI and a few separate locations to visit but can be updated over time to add more destinations to track.

Deliverables

Current list of anticipated deliverables plus overall scope of our timeline:

Requirements

- Team/Project Selection document (Individual Assignment)
- Project Plan (Group Assignment)
- Requirements and Design Document (Group Assignment)
- Review Requirements with Professor Perry
- Get Sign Off on Requirements

Project Design

- Define Tech Required
- Create Project Systems Diagram
- Design Interface
- Design Database
- Design Functional Step Tracking System
- Design Notifications System
- Develop Working Prototype
    - Login screen
    - Track user’s movement and plot it to the current trip
    - User can see current trip and progress
- Test Prototype

Development

- Website (Group Assignment)
- Review Protype Design
- Rework Requirements
- Design Enhancements to Systems
- Document Updated Design
- Develop Final Product
    - Login screen
    - Allow user to create a new trip if one isn't started
    - Track user's movement and plot it to the current trip
    - User can see current trip and progress
    - User can select the current trip to look around using Google Street View
    - User can view profile information, including a list of completed trips and total distance walked
- Test Product

Final Report

- Weekly Activity Reports (WARs – Individual Assignment)
- Video Demo (Group Assignment)
- Peer Reviews (Individual Assignment)
- Presentation Preparation
- Present Prototype for Peer Review (Group Assignment)
- Final Report Draft
- C-Day Application/Submission (Group applies to C-Day but each member submits individual bonus points documentation in Individual Assignments)
- Poster Presentation
- Final Report Submission to D2L and Project Owner
- Final Report Package (Group Assignment)
- GitHub Link
- Software Files

Milestone Events (DISCUSSION AND GANTT CHART)

Milestone Event #1: Team Project Selection

This event involved choosing our group and determining a project that we are interested in working on together.

Milestone Report Date: 1/15/2024

Final Report Date: 1/23/2024

Status: Completed

Milestone Event #2: Requirements/Design Document

This event will involve developing all the requirements and generating a design plan for our project. This will give set goals to work towards with the development of our app and map out what we need to work on when designing parts of our system. The big milestone will be getting our requirements checked off so we can proceed with the design of our project.

Milestone Report Date: 2/1/2024

Final Report Date: 2/4/2024

Status: In Progress

Milestone Event #3: Test Prototype

This event will see the completion of the design section of our software development process. We will look to have the designs of the major systems involved in our app completed at this point and have a working prototype that allows for the function of our stated requirements. With this completed prototype, we will look to test it and make sure that all the functionalities are working properly. The completion of this step will present us with a working prototype for the presentation.

Milestone Report Date: 2/25/2024

Final Report Date: 3/10/2024

Status: Pending

Milestone Event #4: Prototype Presentation

This event marks the point where we have developed a prototype that is presentable to an audience so we can show and explain the current work that we have accomplished. We will look to have most of the major systems in place and be able to explain the steps we need to take to develop the final product. This major milestone will represent the time where we will move from design and delve more into the development side so that we can finalize the functionalities of our system. We will also need to have all presentation materials ready prior to the presentation, which will be taken care of beforehand. This milestone will conclude the prototype section of our process and move us into final production.

Milestone Report Date: 3/5/2024

Final Report Date: 3/21/2024

Status: Pending

Milestone Event #5: Test Product

This event will see the completion of the development section of the software development life cycle. We will need to add upon the prototype that we have created up until that point to meet our stricter requirements threshold and develop a final product that is presentable as a competitively designed app with a purpose. Development will be completed by this milestone and testing will show that our app runs well with all the functionalities that it can support.

Milestone Report Date: 3/20/2024

Final Report Date: 4/6/2024

Status: Pending

Milestone Event #6: Final Project Package

This event will see all of the necessary items needed to show the work done to develop our app completed and compiled into a product that can be turned into D2L. Before the completion of this package, we will need to create a draft of a paper explaining the final product that we have developed and get it approved by Professor Perry. This will be turned in and analyzed so that we have time to develop our final paper which will be turned in along with the rest of the final project package. We will turn in our source code and any other items needed in order to meet the requirements of the final turn-in submission. This will conclude our senior project.

Milestone Report Date (Rough Draft Turn-In): 4/7/2024

Final Report Date: 4/21/2024

Status: Pending

Meeting Schedule Date/Time

We will meet on Tuesdays and/or Thursdays every week from 4:00-5:00 on Teams to discuss work for the week and current progress made.

Collaboration and Communication Plan

For our major communication channel, we will be using text messaging on a daily basis in case any emergencies come up or we need to collaborate on work that needs to be done. We will use Microsoft Teams as our major communication channel when it comes to meetings and make sure to have our response time to any meeting or text be within 10 minutes in order to keep everybody in touch. In terms of work commitment, we will decide work for the week in either our weekly

meetings or over text and make sure that everything is outlined so that there are no issues in keeping track of work that needs to be turned in.

When it comes to a meeting plan, we will be doing these through Microsoft Teams either on Tuesdays or Thursdays every week from 4-5, depending on which day works better for us. These meetings will take place to outline what needs to be done as well as to check-in on the progress that was made the work prior. This will also be our main time for asking questions and helping each other out with anything that we are struggling with as well as determining if we need to go and ask Professor Perry any questions in person. In terms of taking and distributing meeting notes, Michael will be taking those and making sure to document key points that we talk about during our meeting times.

In terms of tools/platforms for communication and file sharing, we will be using Microsoft Teams for most of our communication needs. For file sharing, we will be using Microsoft in terms of file submissions so that we can all contribute to documents that need to be submitted and have editing shared in real time across one piece of work. In order to share files and do version control for our development code, we will use GitHub to see changes and alter what we need to in a common space, giving us a way to work together without having to meet up in a physical location. For Microsoft Teams, we will simply share a document to each other in order to edit it together, while for GitHub, we will create a repository under the accounts that will be set up for this project, and through that repository we will be able to work on the project at the same time.

For the regular status/policy updates, we will report to Professor Perry weekly through the use of our weekly activity reports so that she knows exactly what work we accomplished that week. These are individual assignments so we will each be turning them in on our own. We will also report to Professor Perry biweekly about our progress as a group or our group leader will, and that will also serve as a checkup on where we are in our progression of the project.

Project Schedule and Task Planning (GANTT CHART)

Project Name: Indy 1: Fitness App
Report Date: 1/30/2024

					Milestone #1				*Milestone #2*				*Milestone #3*				C-Day		
Phase	**Tasks**	**Complete%**	**Current Status Memo**	**Assigned To**	**01/19**	**01/26**	**02/02**	**02/09**	**02/16**	**02/23**	**03/01**	**03/08**	**03/15**	**03/22**	**03/29**	**04/05**	**04/07**	**04/14**	**04/21**
Requirements	Project Selection	100%	Completed	Michael	2														
	Project Plan	100%	Completed	Group	2	10													
	Requirements Document	80%	In progress	Group		3	15												
	Review requirements with Professor Perry	0%	Pending	SS			2												
	Get sign off on requirements	0%	Pending	Group			2												
Project design	Define tech required *	0%	Pending	Group				15											
	Project Systems Diagram	0%	Pending	Group				10	10										
	Design Interface	0%	Pending	Group				10	10	10									
	Design Database	0%	Pending	Group				10	10	10									
	Design Step Tracking System	0%	Pending	Group				10	10	10									
	Develop Working Prototype	0%	Pending	Group					10	30	10								
	Test Prototype	0%	Pending	Group							20	5							
Development	Website	0%	Pending	Group								15							
	Review Prototype Design	0%	Pending	Group									10						
	Rework Requirements	0%	Pending	Group									15						
	Design Enhancements to Systems	0%	Pending	Group									15						
	Document Update Design	0%	Pending	Group									20						
	Develop Final Product	0%	Pending	Group									10	30	30				
	Test product	0%	Pending	Group											10	20			
Final report	Weekly Activity Reports	0%	Pending	Group				2	2	2	2	2	2	2	2	2	2		
	Video Demo	0%	Pending	Group								6							
	Peer Reviews	0%	Pending	Group										2					
	Presentation Preparation	0%	Pending	Group								10							
	Present Prototype	0%	Pending	Group									1						
	Final Report Draft	0%	Pending	Group												5	20		
	C-Day Application/Submission	0%	Pending	Group								5							
	Poster Presenation	0%	Pending	Group														2	
	Final Report Submission to D2L and Project	0%	Pending	Group															8
	Final Report Package	0%	Pending	Group															10
			Total work hours	**500**	**4**	**13**	**19**	**57**	**52**	**62**	**32**	**43**	**73**	**34**	**42**	**27**	**22**	**2**	**18**

* formally define how you will develop this project including source code management

Legend
Planned
Delayed
Number Work: man hours

Risk Assessment

In terms of risk, any possibles areas of such come from additional systems that could be implemented in future requirements discussion. A major risk could be attempting to develop a system that might not be feasible with the current frameworks that are provided to work with and no prior or current ability to implement such systems. With this, we would need to make sure that we allocate an appropriate amount of time to researching certain possible improvements and weighing whether they are worth the amount of time or even possible based of our time window.

In terms of team member unavailability, we will hold ourselves accountable by attending meetings every week as well as collaborating with each other to make sure that everyone is doing what needs to be done and helping if there is an area of concern. If a team member is unavailable without providing reasoning, then we will make sure to contact that member so that everyone is on the same page.

Version Control Plan

For the version control plan, we created a repository in a new GitHub organization. Each member of the team has administrator permissions in the organization.