

Milestone 1 Evaluation

1. FIT History Tours App
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2. Faculty Advisor: Fitroy Nembhard, fnembhard@fit.edu
3. Client: Ryan Stansifer, ryan@fit.edu , Florida Tech Computer Science Department
4. Progress of current Milestone (progress matrix)

Task	Completion	Grant	Cam	Matt	Tyler	To Do
Select and Learn a JS Framework	100%	25%	25%	25%	25%	Implement and refine skills learned
Select and Learn Mobile Development Toolkit	100%	25%	25%	25%	25%	
Investigate Hosting Options and Needs	100%	3.3%	3.4%	3.3%	90%	
Compare and Select Collaboration Tools	100%	25%	25%	25%	25%	
Begin to Collect Historical Research	70%	10%	10%	40%	10%	Begin parsing into text or other form of data storage.
Requirement Document	95%	15%	45%	15%	20%	Future Requirements Needed
Design Document	95%	80%	0%	15%	5%	Expand as future software design is developed.
Test Plan	100%	7.5%	12.5%	0%	80%	

5. Discussion (at least a few sentences, ie a paragraph) of each accomplished task (and obstacles) for the current Milestone:

- **Select and Learn a JS Framework:** Our group had never used JavaScript before for any classes or much in personal life, so we all spent time working on learning and developing our understanding of the languages. We decided through chatting and research we liked the look of React Native which would allow us to deploy to almost all devices without much cross compatibility code needed. Our group prototyped locally with both browsers and mobile phones to see how React interacted with our devices.
- **Select and Learn Mobile Development Toolkit:** This milestone activity ended up overlapping significantly with the previous one, but our group decided to use React Native to deploy our application across multiple platforms. With ReactJS, something like Electron can be used if we wanted to dedicate resources to have an application running directly on the hardware instead of in the browser.
- **Investigate Hosting Options and Needs:** With so many options available, a table breaking down the differences between the options was created. With Amazon Web Services (AWS) Pay Per Second model for most web servers and virtual machines, this would be quite costly for us if we made a mistake or overloaded our server. DigitalOcean on the other hand does pay by the month with only overages of the allotted tier costed money. With DigitalOcean, after communicating with them they were happy to provide credit for the team to work and learn the platform before fully committing to it for the long term of the project.
- **Begin to Collect Historical Research:** To begin researching Florida Tech's History, we got two helpful books from the library: Dr. Patterson's "Florida Institute of Technology" and the university's own "60 for 60: Celebrating Sixty Years of Alumni of Florida Institute of Technology". Dr. Patterson's book is providing invaluable information dating from the start of the University all the way to the year it was published, 2000. The "60 for 60" book also provides useful information about the universities past. While it is mostly focused on the accomplishments of Florida Tech's alumni, it still provides lots of valuable information about the history of the university. As of right now, lots more research needs to be done, but we are well on our way to completing the historical research. Contact with the university's Archivist has been established and future plans to meet with her to see what information and material she can provide us are planned.
- **Requirement Document:** This document serves to elaborate on the purpose and functionalities required by our project to meet acceptance. The adaptive nature of requirements elicitation produced obstacles in the development of this specification, as the pre-production stages leave many fine details unfocused in the lens of requirements engineering. The SRS we have written to date will continue to evolve over the course of this project as more functionalities are realized.
- **Design Document:** This document describes the design of the software through in depth natural language descriptions, diagrams, and images. By doing so, the conceptualization of the software implementation is clearly outlined, making clear to stakeholders the system and how it interacts with

other systems, including application frameworks, application program interfaces (APIs), and users.

- **Test Plan:** This document was created to lay out the testing measure and plan for our group. We will be using a combination of white box and black box testing to ensure that all components and interfaces of the user interface are effectively tested. We laid out the plan for reporting anomalies and plans for deviation from the default reporting measures. We also set guidelines for how quick issues found should be solved.
6. Discussion (at least a few sentences, ie a paragraph) of contribution of each team member to the current Milestone:
- **Grant Butler:** My responsibilities for this milestone included investigating which JS framework and mobile development toolkit we would be using for the project, selecting collaboration tools, and writing the Requirements Document. With guidance from our advisor, I helped decide that ReactJS would be the best framework for us to use, as it has vast amounts of plugins and support due to its extreme popularity. The Design Document remained untouched throughout the duration of time for this milestone, so I have taken up the task of writing it out following IEEE 1061-2009 standards, including making UML diagrams, writing detailed conceptualizations, and completing the vast majority of it. The UI mockups that Tyler and Cameron made that were then redrawn by Matthew in Lucidchart are included.
 - **Tyler Zars:** My main responsibilities for this milestone was analyzing our hosting services and writing the test plan. I started this milestone learning about ReactJS and built a working prototype to get the GPS location and check if it is inbounds of the Florida Tech campus. This prototype was the main way learning JS but I did keep a personal repository that I built a few different test applications and deployed them to a Raspberry Pi. For deployment, I worked with one of my co-workers to get a full depth dive into Amazon Web Services with the cost and everything of running a properly secured web-hosted application. I also worked with DigitalOcean to understand their model and how we would be able to deploy our application there. I compiled my findings into a table that my group members checked over and we decided on DigitalOcean. Cameron asked me to do the Test Plan, and I utilized the IEEE standards provided to make a detailed test plan for our group with reporting procedures, anomaly detection, and techniques and tools our group will use to keep testing consistent across milestones and features.
 - **Cameron Miskell:** My responsibilities for this milestone primarily included the Requirements and Test Plan documents. In the development of our requirements specification I handled initial formatting, and took charge of elaborating the Introduction and functional objectives in the document. I also set the formatting for our Master Test Plan and Tyler, with greater experience in the field of deployment practices and error-reporting, stepped forward to fulfill a large portion of the content within the test document. Following this reevaluation of priority and responsibility, I began the definition of our processes and testing levels during the

project. The extensive and near-exhaustive nature of these definitions necessitates more worktime to fully realize within the document.

- **Matthew Tokarski:** My responsibilities for this milestone primarily consisted of beginning the historical research, making the UI mockups in lucidchart, and helping in various sections of the Test plan, design document and the requirements document. The historical research is underway and has begun with books being used as a foundation to understand FIT history as well as contact with the School's archivist being established. The UI mockups were hand drawn and then I took those drawings and translated them into lucidchart, using its UI mockup tools as well as its iOS mockup tools. I changed some things from the original drawings in an attempt to streamline the look of the app and improve user experience.

7. Plan for the next Milestone (task matrix)

Task	Grant	Cam	Matt	Tyler
Implement and Deploy Basic Web App/Mobile App	25%	15%	15%	45%
Choose GPS/Location Framework/API	25%	45%	15%	15%
Build Out Historical Database	15%	25%	45%	15%
Trivia UI Implementation	45%	15%	15%	25%
Game Question Generation	15%	35%	35%	15%

8. Discussion (at least a few sentences, ie a paragraph) of each planned task for the next Milestone.

- **Implement and Deploy Basic Web App/Mobile App:** We would like to build and deploy a basic version of our application across multiple devices. Using our hosting service, we would like to make the base app publicly available for our group to test with and engage with. With this deployment, we would work to ensure that CI/CD is done from our main GitHub repository to our webserver on DigitalOcean.
- **Choose GPS/Location Framework/API:** This framework/API is required for the movement inside of our application. There are some built in geolocation options with JavaScript but using something like the Google Maps API for the navigation

and positioning on the map. We want to choose something that is robust and precise but doesn't add a massive amount of size to our overall bundle.

- **Build Out Historical Database:** The information collected will begin to be built into a database that can be accessed by the application. By collecting as much information as possible before starting out database, we can ensure that the model and schema we choose are accurate to the overall data we will get. This will prevent changing elements of the database when new data is collected.
- **Trivia UI Implementation:** The trivia and game portion of this application is the most open ended to our building. By starting with the original proposed trivia idea, we would be able to get client feedback and continue to tailor the applications interactive games to the wants of the client. We'll begin some early implementation with overall ideas and some test questions to get client feedback.
- **Game Question Generation:** No matter what interactive content we want, there will need to be questions. With the historical trivia gathered and from other student knowledge, we would want to build the questions for either a scavenger hunt type game mode, trivia, or other game that might be recommended by the client.

9. Date(s) of meeting(s) with Client during the current milestone: 10/4/2022

10. Client feedback on the current milestone

- UX Misunderstanding
 - i. Seeing a difference between a guided tour, free roaming, and virtual tour modes. Stansifer seemed to be confused about the differences between them, so differentiating between them as we develop the UX is very important.
- User Refinement
 - i. As we develop, getting people to use the application and giving feedback to iterate on the design should be something we are looking to document and show.

11. Date(s) of meeting(s) with Faculty Advisor during the current milestone: 10/3/2022

12. Faculty Advisor feedback on each task for the current Milestone

- Task 1/2: JavaScript is a good way to deploy an application across multiple devices. React should work well and the fact that it has geolocation features built in is very helpful.
- Task 3: Application works with DigitalOcean and AWS spending can go crazy quickly.
- Task 5: Dr. Fitz wanted us to work on finding new ways to get data into the database without manually processing all of the data. He recommended that we should use an OCR tool to assist with scanning in pages of the book or other text from news articles.
- Task 6: Dr. Fitz recommended that this document be the main focus of some refinements as all other documents need to be based off of the requirements. He provided some insight for us to further elicit some information from our client and instructed us on how to narrow down some requirements we weren't sure how to solidify.

- Task 7: The demonstrated user interface was good but we need to show it on both platforms (mobile and desktop) inside this document.
- Task 8: The test plan was thorough and laid out strong guidelines for our group to follow while testing.

13. Faculty Advisor Signature: _____ Date: _____