Milestone 4 Evaluation

1. FIT History Tours App
   - Cameron Miskell, cmiskell2020@my.fit.edu
   - Grant Butler, gbutler2020@my.fit.edu
   - Matthew Tokarski, mtokarski2018@my.fit.edu
   - Tyler Zars, tzars2019@my.fit.edu
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
Collect Coordinates for Building/Locations on Campus	30%	0%	0%	0%	30%	Continue collecting coordinates
Build Out Historical Database	45%	0%	5%	90%	5%	Continue gathering content Digitize Photos
Trivia UI Implementation	80%	40%	50%	0%	10%	Implement Upstream Changes
Game Question Generation	50%	5%	10%	15%	20%	Generate more trivia questions
Add Initial Routing	100%	0%	0%	0%	100%	
Add Map Layovers	80%	0%	80%	0%	0%	Add remaining location waypoints and some cleanup
Begin Other Game Implementation	30%	30%	0%	0%	0%	Implement Concepts to Geolocation Data
Build Geofences for Buildings	60%	0%	0%	100%	0%	Verify Accuracy Geofence rest of buildings and point of interests

5. Discussion (at least a few sentences, ie a paragraph) of each accomplished task (and obstacles) for the current Milestone:
   ○ **Add Initial Routing:** Now the factoids are in the application, the group will begin to lay out the routes and functionality to give the user a guided tour of campus. This initial routing will present a layout to see a tour with directions to the next stop in conjunction with the scrolling timeline at the bottom of the app to ensure that the user can see facts and have a guide on where to go next.
   ○ **Add Map Layovers:** Each building will have a clickable layover that will provide more depth and a short synopsis of the building clicked. We will need to add a layover to each building so the user can click on them. These layovers will have a designated shape to be distinguishable from other features of the app, allowing the user to know which buildings have clickable layovers to find out more information.
   ○ **Begin Other Game Implementation:** With the addition of the scavenger hunt (search and find), we will begin adding the option to select this game mode. With new questions to have the user seek out different things, this game mode will revolve around popups and input from the user to show they have found the correct answer after looking.
   ○ **Build Geofences for Buildings:** Each building will need a geofence to know if the user is close to it or inside it; hence, we will begin laying out these geofences to match with the application's history factoids. Each geofence will cover the building allowing the application to see if the user is inside a dedicated boundary of the building's geofence.
6. Discussion (at least a few sentences, ie a paragraph) of contribution of each team member to the current Milestone:
   ○ **Grant Butler:** For this milestone, I started building ideas for how the new game will work, designing games around the geolocation data being collected from the user so that they are prompted with questions as they start and move around campus. By querying the user based on what is around them, they are forced to look around for the information in their environment, and rather than be questions that could be looked up, they are only really easily answered by interacting with the campus directly. I also kept working on finishing up the routing implementation from react-router as they have finally fixed a dependency issue with a recent pull request on their repository. Finally, I have started to work with the archivist to begin digitizing photos to put into the application that will be linked to the locations and information with a database, but have yet to get a response from her to start doing that.
   ○ **Tyler Zars:** For this milestone, I worked primarily on building and implementing the navigation for the application. While the currently deployed application has clickable routing, upon users pressing a button on our current development build

they can begin taking one of the tours around campus. The current build uses the mapbox-gl-directions library which I read through the API and documentation to ensure that our tours can be guided by using this library. The implementation shows the full power of Mapbox routing and the defaults for future tours will only need the GPS locations to be added in a tour "loop" so users can be navigated around campus.

- **Cameron Miskell:** My task for this milestone was to implement the waypoints on an overlay for the tours map. Thanks to our use of Mapbox, there is an integration that already exists such that waypoints can be implemented without significant changes to the structure of the maps, instead using an image layer on top of the background map. The initial implementation does not add deep interactivity to the waypoints nor reactive design, though the integration allows for that to be modified in the future for cleaning up our UI. The majority of buildings/areas have been added in the initial push, but there will be more waypoints in the final release to cover all buildings we have collected content for. Further testing is needed to see if the waypoints can be used as targets for routing, which would make tour setup easier.

- **Matthew Tokarski:** For this milestone, I primarily focused on building the geofences for each building on campus. I used google maps to get the rough coordinates of each corner of each building and verified a few by physically going to the building and seeing if the coordinates on my mobile device matched up. Right now, the coordinates I have chosen are representative of rectangles around each building, with a midpoint being calculated by the most northwest corner and most south eastern corner. More of the buildings need to be verified if the coordinates are accurate but so far it seems reasonably accurate with what I was able to verify. Smaller things that don't appear on google maps such as statues and plaques may need to be physically located and marked down as they do not appear on google maps or any other map engine. Beyond building the geofences, I also have been in contact with the campus Archivist in which she is supposed to have data available that is not publicly available. The Archivist, while helpful, isn't always responsive and we aren't always able to keep good contact due to scheduling conflicts, this has led to me trying to find different sources of information to fill in what may be missing. So far I have discovered online archives of photos and some textual information, but the physical archives are imperative to this project due to how much isn't available outside of the physical collection.

7.   Plan for the next Milestone (task matrix)

Task	Grant	Cam	Matt	Tyler
Create full campus tours for the various routes	15%	15%	55%	15%
Design and implement settings menu for application settings and social media sharing	5%	85%	5%	5%
Finish All Game Implementations	55%	15%	15%	15%
Begin evaluation of the system for final analysis	5%	5%	5%	85%

8. Discussion (at least a few sentences, ie a paragraph) of each planned task for the next Milestone.
   - **Create full campus tours for the various routes:** This task revolves around us creating the actual routes we want to lead users on around the campus. With a few different tours depending on what the users want to experience, we'll need to pick the points that we want on each of these tours. With the tour points picked, we'll make some buttons for the user to select which tour they want to launch and begin the tours for them being able to walk along their currently chosen tour.
   - **Design and implement settings menu for application settings and social media sharing:** In order to bring some competitive aspects to the different games, we'll add some social media sharing for the scores users get in the Trivia/Scavenger Hunt/etc. This will also allow users to share interesting tidbits or pictures of our university on different social media.
   - **Finish All Game Implementations:** We will work on finishing all the game modes and questions. The games each will require an upkeep of questions for users to not get the same thing over and over so we will try and make solid lists of questions in a broad range of topics to ensure that users are able to find test information or play games they think are interesting. We will also finish the implementation of games into the main user interface so users can navigate and start each one of them.

- **Begin evaluation of the system for final analysis:** We will begin having other users test the application and collecting feedback and information to get a solid evaluation of our system. We will begin keeping an eye on different metrics of the application and work towards improving users feedback to ensure that we can make any needed improvements before the final presentation.
9. Date(s) of meeting(s) with Client during the current milestone: 02/10/2023
10. Client feedback on the current milestone
    - The client recommended we reach out to other facility members to gather photos that may have already been digitized.
    - The timeline should have consistent conventions for the year as seeing "1960s" inbetween the wrong years doesn't look good or make sense.
11. Date(s) of meeting(s) with Faculty Advisor during the current milestone: 02/10/2023
12. Faculty Advisor feedback on each task for the current Milestone
    - The user interface has a few UI elements that should get changed to allow for better visibility of elements on the screen so things aren't getting cut off.
    - Directions look good and usable but the CSS can get cleaned up to ensure that nothing is cut off the bottom.