

## **Milestone 4 Script**

**Jaskirat:** Hello, we are team JRS and we are about to give a final update on our app for the semester. I'm Jaskirat. (\*Everyone introduces themselves\*). So the main gist of the problem presented to us was that the firefighter's are using outdated phone interfaces that children do not know how to use. This causes the firefighter's presentations to be ineffective and lose translation in a real-world situation where children are used to smartphone interfaces. Also, there is no opportunity for children to re-practice what they learned with their parents.

**Samuel:** So we knew we had to find a way to organize these thoughts and start categorizing and understanding. We started off with an Affinity Diagram which allowed us to gather some of our scattered thoughts. Affinity Diagramming helped us realize that the focus was on the education of the kids primarily, followed by some education for the parents. We also created Empathy Maps for the three main stakeholders we identified, which were: Candace, the firefighters, and the children. Creating empathy maps helped us understand common problems between the three target groups and helped us to understand what we should focus on when designing our app. An interesting problem that we identified was a mismatch between the kid's desire to please their parents or teachers, and the current method's to teach them. The kids aren't getting the up to date knowledge that would actually help them, so it is harder for them to feel good about themselves when learning it.

**Raymond:** Following our affinity diagram and empathy maps, we were able to come up with the initial USM and MVP vision. Our MVP focuses on the main three views in our application. These were: 1. a phone interface that allowed a kid to call 911 and practice answering the questions, 2. A list of the four questions a 911 operator would ask, and 3. Additional info about fire safety. It focuses more on the overall look/feel rather than a stable release. Our USM shows the main user flows of the application, showing the user's interaction with the developed product, in different scenarios. The USM also includes when in development we plan on implementing key features of the app. It changed with every deliverable as we talked more with Candace, and this is the final version of the USM that we have now. Everything under the heading of MVP 1 is finished, and anything under Release 2 and Release 3 would be the future development steps for our app.

**Samuel:** Once we had brainstormed amongst ourselves and shared our thoughts with Candace during the first meeting, we adjusted our game plan accordingly and created a few lo-fidelity prototypes with the experience of the kids in mind. To refresh everyone's memory, here are our three lo-fi prototypes that we created. (\*Samuel does #1, Jaskirat does #2, Ray does #3. 20-second blurb guys\*)

**Samuel:** For the first lofi, the main ideas were the positive and negative feedbacks after dialing 911, the progression of the questions with a next button to show that, and the final page showing that 'help is on the way'.

**Jaskirat:** For the second lofi, it's basically an expansion of the first lofi. However, in this one we had positive feedback after each question which was a nice encouragement for the kids. We also had a game-like feature where a child collects points as they move through the questions, which made it fun and interactive.

**Raymond:** Based on the feedback we got from Candace and Tim we were able to identify the best part of each lofi and adapt it to create one hi-fi prototype. Our hi-fi prototype focused on immediate feedback to the kid when they clicked the call button. If they made an error, they would be greeted with a try again smiley, and if they correctly dialed 911 then they would be rewarded with a 'good job'. The three main sections of the app, being the 911 simulation, the questions an operator would ask, and additional info for the parents, are accessible at all times from the bottom of the application. To speak a little about design concepts, the similarity of the icons, as well as their physical proximity, unconsciously tell the user that they are related. As well, on the phone interface, the only notable instance of color is the green 'call' button. This provides a focal point for the attention of the kid, as pressing that button is their ultimate goal on that page. The color green also serves as an unconscious semantic constraint for the kid, as it signals that the button is 'ready to be clicked'.

**Jaskirat:** So, just to briefly touch on individual responsibilities in the team and to highlight everyone's work: all the brainstorming and making of affinity diagramming and empathy maps was done as a group in order to ensure that we built a good rapport with one another and all understood each other take on the problem at hand. Other than that, Samuel and I were the lead designers for our project, and Raymond was the lead developer. We had to be cohesive and communicate well as we had to make sure that everything we could dream up with a design would be doable for Raymond in terms of coding within the time frame we had.

**Raymond:** To speak a little about the technology that we are using. Our application runs with Ionic, which is a JavaScript/TypeScript library that was created to build cross-platform apps using web development tools. In terms of app development, it gives the option of using the React, Angular, or Vue front-end frameworks as a means of rendering components to the pages. Since I had experience using React, that is the method that I went with. React allows developers to write HTML-like TSX code that will be rendered into proper HTML. Typical ionic development involves creating 'pages' filled with groups of components. These pages are navigated to within the app via path routing, and the corresponding components are rendered. Ionic provides built-in methods to create the native versions of an app for Android and iOS. It uses Android Studio to build and deploy the Android versions to emulators and devices. The iOS version is only available through XCode, which itself is only available on Mac. This was a pretty large limitation. Now I will demo the current version of our app.

**Jaskirat:** We did have some constraints while doing this project. Between the three of us, we had limited app developing experience and also limited testing strategies for our app. Time was also a major constraint as we all had multiple major projects for our other classes, along with

continuous assignments and labs and also extracurricular commitments. Furthermore, we did not have an opportunity to test with children and firefighters. We think that observing their interaction with the app would have been monumental in building the app.

**Samuel:** In our future deliverables for this app, we would like to roll out an IOS version for this app. It is still in production as we had some major technical difficulties in getting a simulator to run. Once complete, an IOS version of this app will also be available. We also have plans on making the game/practice part of the app more interactive, perhaps adding levels and badges. We are also looking into a functionality where we give users the option to be able to print out the fire escape plan and draw it themselves on the given template.

**Jaskirat:** Following through with the development process, we documented each stage on GitHub in a clear and concise manner, along with documentation that is user-friendly, readable and understandable to anyone reading it. The following image is a quick overview of our documentation on GitHub, which is divided into the four deliverables and the fire-safety folder, which is where the app sits. It also has our seal of approval.

**Raymond:** In terms of a group reflection, we all felt this was a really great experience to work with a client and get real-time feedback and have time and resources to implement it. The in-person meetings felt great. They felt like the perfect length of time, and we received amazing feedback on our designs during each of them. We also personally feel lucky to have worked with such a cohesive team.

**Samuel:** We were able to understand that everyone needs to come together to collaborate on a project such as this. We also learned that to ensure a great project experience, we must enhance and utilize each other's strengths.

**Jaskirat:** This project has taught us how to manage and organize a team in a way where everyone's skill set is utilized. Furthermore, we learned the importance of taking time to brainstorm and flesh out the problem statement and identify key components that could help us make the best product we can. This has been The JRS (The Juniors) semester work on this project. Thank you so much!!!!