Team member (re)introductions

Our capstone project is an SOS mobile application.

We are team(Bugs)

- Li Pan: Software Developer
- Abdelrahman Rabaa: Software Architect
- Renz Arram Rivero: Technical Lead

Brief project blurb(Li)

The traditional emergency call only takes voice calls. 911 call agencies require information from users to identify the category of the emergency. It will be more efficient through an audio call or some information automatically sent by users' mobile sensors.

The new generation of 911(NG911) agencies aim to take audio, video and text messages. Under the instruction of an RCMP Public Safety Communications Consultant officer, we are building a mobile application to make users able to have a video call and send a text message to the 911 agency. It will improve the work efficiency of call agencies, and prevent false positives.

Our mobile application especially focuses on a group of people who have a high probability of requiring medical help. Besides general emergency calls, we enable the user to save their medical information through public safety answering point (PSAP) to Emergency medical services.

Considering security and user privacy, all operations will be under the supervision of Public Safety Communications Consultant.

Project activity dates(Li)

Project activity(All)

Li: LoFi prototype of PSAP; finalized the HiFi PSAP; updated the profile pages layout, achieved the basic functionality of the profile we designed, enabled the function for fetching the mobile sensors information .

Rabaa: LoFi prototype PSAP; Working with sensors; Deployed CICD Pipeline; Modifying and fixing database; design testing plan; accelerometer now will give an alert in case the magnitude exceeds a certain limit.

Renz: LoFi prototype PSAP; worked on the SOS page for the client-side, initiated the PSAP-side application with a routed navigation system

Status description (Li)

Our project's current status is Green. We are working on both user mobile interface and PSAP dashboard interface at the same time.

Project issues (Li)

We weren't expecting work on two interfaces at the beginning of the semester. We have to work on both sides and keep our work consistent.

Project changes (Rabaa)

We are concentrating on the PSAP dashboard for the 911 dispatchers to communicate with SOS users as Renz is going to demonstrate it in a bit.

Documentation overview and/or project demo
Outline key research and analysis from initial project planning work. Demo what ya got working as-is if applicable.

Demo CICD (Rabaa):

For the CICD pipeline we decided to use github actions excluding third parties; easing the deployment and testing process. Each time a file is pushed to the main branch the github actions will run tests and deployments simultaneously as per the yml file.

As you can see our previous deployments were done before getting our yml file to work properly. Signifiers such as "Red" for when something went wrong, and "Green" for everything without any issues, are used in Github actions.

Demo Client Side Application (Renz):

Now, we will demo what we currently have implemented for the client-side application. We are referencing our HiFi prototype in developing this and a video explaining our design can be found on our github repository.

To start off, we can talk about the general look of the profile page. Here there will be "categorized" sections such as the general information section and the medical information section. Just to quickly note, the wording of everything in this application and the general layout is subject to change as we had just collected fresh information from our session with a PSAP dispatcher today. Anyway, in each section there will be a button that pops a window up to explain what the information inputted in that section will be used for. Also, there are sliders found in each section that signifies whether that section of information will be shared during an emergency call. If it is set to no, then it will not automatically send the information in this section. If yes, then vice versa. More on the functionality of this slider in a bit.

Next, we have the general layout for the SOS page setup as well. Currently, we have the back camera working in this simulated Android phone and are running into difficulties getting the front camera working simultaneously with the back. In terms of the calling functionality, we literally have just that as of now. If one was to press for a scenario call, a popup page will appear asking who the call is for and there they can choose whether it is for themselves, their emergency contacts inputted in the profile page, or if they are a bystander. Like said, if we were to press any of these buttons it will just go to a regular phone call that goes out of our application. This is not the intended looking at our HiFi design but it is still in the works.

As per the logs page, this is just to demo what Rabaa had alluded to earlier. The accelerometer is working and of course this is a device simulation so I cannot physically move the phone to show you but we have tested that it is working on a physical device. It's also worth mentioning that the information on where I am hovering is not hardcoded and are actual device sensors done via flutter packages/plugins. And on top, this information is fetched from our firebase server and is hard coded in the front-end as well.

That concludes our demo for this vlog for the client-side application and do make sure to watch the HiFi design prototype we are referencing from if you are curious

Next up (Rabaa)

Discuss your team's plan for the next several weeks with respect to software design and development activities. Discuss the overall team plan but also (again), team members must individually speak to their contributions that are planned by the next meeting (regardless if it is a project bazaar day, vlog, or team/instructor scrum)

After putting the main base of our application, next semester will be to make each scenario different. We will concentrate on each scenario differently as planned earlier in the current semester. Filtering sensor data will be looked at as well. As we used the test-driven technique during the planning week, we will make sure our application passes the intended tests at each stage while moving forward. The PSAP dispatcher front-end side will be working as well.The backend will be changed accordingly as our planning to suit the scenarios.

Retrospective (Renz)

- What went well?

We progress a lot more when everybody in the team is on the same page and has a clear idea for the vision of the project. Of course, this is made possible by meeting weekly and holding each other accountable for the tasks we had assigned.

- What will the team commit to continue or change in ENSE 477?

This is not to say that everything has to be planned out to the smallest of details before we do anything. But for the next semester, we expect to plan out some sort of approach before making any moves.

Team reflection (Renz)

Discuss:

- Does the team feel "on track"? (reiterate the above colour status)

Again, we are at a yellow status just because we did not expect the much needed implementation of a PSAP side application. It throws us off a little but not enough to put us on a red status just because the two applications are interconnected and relate to each other.

- What progress does the team particularly feel good (great) about?

Aside from the progress in terms of development, we particularly feel good about our meeting with Lori Kolybaba, a PSAP dispatcher. She provided valuable information as well as reassurance about the design choices we are making in terms of collecting personal information.

- What barriers (if any) does the team feel is a current impediment to success?

Currently, the only hindrance to our success is the fact that we are still learning how to use Flutter as we go but this is not such a big concern.

- What help (if any) does the team require to move positively forward?

To continually meet with our mentors, keep each other accountable, and really use the month of December to get most of the front end done to comfortably start the back-end next semester.