Week 12 Blog

Sree Ram Boyapati	a1775690@student.adelaide.edu.au
Course	Comp Sci 7092 - Mobile and Wireless Systems
Group	CovidGuard-F
Supervisor	Zach Wang

What have I done this week?

I have personally worked on fixing some bugs in the system for the final demo.

Improper request time logging

One of the bugs was cron jobs rescheduling if the previous job failed for some reason and fixing the request time in the logs.
https://github.cs.adelaide.edu.au/2020-Mobile-and-Wireless-Systems/CovidGuard-F/commit/69c2833c0da753561b1b6dbba08b540f17362dbd
I tried to do it by manually logging the request and exposing the variable lambda. However, It has not worked.

These logs were useful for us to add warmup requests to reduce the latencies of the first request in the app.yaml. This has helped us in testing for apps faster.
Ref:
https://cloud.google.com/appengine/docs/standard/python3/configuring-warmup-requests

RPI Filtering

We have set bluetooth range as very low and we were still receiving RPIs at a distance greater than 1.5m. For a stop gap solution, We have used altbeacon distance estimation technology to estimate the distance which was not very precise. We are collecting all the RPIs and only using the RPIs with distance less than 3m. This helped us test some scenarios.
PR:
https://github.cs.adelaide.edu.au/2020-Mobile-and-Wireless-Systems/CovidGuard-F/commit/bf906ea0d90d1a901986364f305f5ba1ca8c571b

Alert Boxes

https://github.cs.adelaide.edu.au/2020-Mobile-and-Wireless-Systems/CovidGuard-F/commit/975daed8031d9c9a39efed98843d86f1f6354aa4
I have added an alert box instead of toast message to display that the user is not tested positive to upload keys

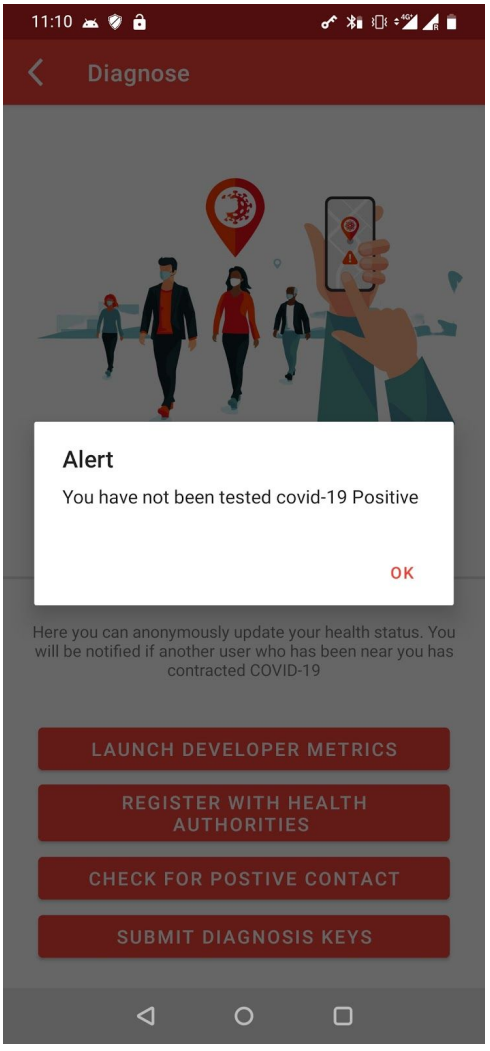

Figure 1: Not tested covid-19 positive

Google-Wide SSL Pinning

https://github.cs.adelaide.edu.au/2020-Mobile-and-Wireless-Systems/CovidGuard-F/commit/97f6a71db33097631fa2099db52b0c70274c8bd7

We have pinned the certificate to *.appspot.com, However we were using other services from google as well. We faced issues with the certificate pinned to the appspot.com. This certificate does not guarantee the location will be in Australia as it is a wildcard certificate. In future, we would like to use Australia based DNS servers with Australia based web servers and have distinct certificates generated for all the services we are using.

Presently, We are using the google certificate signed by the global authority certificate which is the parent certificate of appspot.com.
Ideally, We would like to check why the hash collision happened. However, using a google certificate provided a stop gap solution and made more sense.

Testing Scenarios

1. I have worked with Amal to test the pocket scenarios and provided some ways to test it which he has detailed in his blog.
2. I have worked on recording the developer functionalities of the app and edited the video with my teammate.
3. I have worked on the video making for the scenarios and handled device loading.