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| GPS/Wi-Fi Location Tracker |
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### **Abstract**

The aim of this project is to design an Android application that is able to track and find the elderly easily. The elderly can get lost at some places or totally forget what they were doing, because of mental illnesses. So it is important to keep track of where the elderly are, allowing loved ones or friends to help them if they go missing. Tracking their GPS is needed to get their exact coordinates and Wi-Fi information is also needed if GPS information is unavailable. The application to track the elderly must be able to send the GPS coordinates and the Wi-Fi information around the elderly to another application on request. Therefore 2 different applications were developed to track the elderly with different methods.

The GPS/Wi-Fi Location Tracker has 2 versions of tracking the elderly. The first version is using SMS to communicate with the applications, this version does not require any internet and it is recommended if the elderly does not have a data plan. The second version uses an OpenShift server to collect and send information to the applications. This version will update the location information displayed on the application every second, but it requires being connected to the internet. So this version is useful to elderly with data plans or is connected to the internet a lot.

I tested the stability of the application and how fast the information updates, by using a GPS spoofing application, allowing me to change the location at any time and testing what it would be like if the elderly is walking. I also researched on different GPS tracking applications on the play store, letting me see what the standard for GPS applications is. Overall, the project went well and I managed to complete my objectives in time.