

**Creation of a Location Based Notification
Application: Safety Locator**

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Abstract

In an ever increasingly connected world, people can communicate with one another in a matter of seconds. Mobile devices are no longer used for phoning someone or sending a simple text message, mobiles are now an integrated part of our everyday lives. From reading Emails, catching up with the news, friends, listening to music and even our alarm clocks, mobile operating systems such as Apple, Android, Windows and Blackberry are ever increasing the functionality that a mobile device can do.

This project looks to create an application, or 'app' which can utilise a device's location information to create a virtual barrier, or Geofence, around a location and automatically email friends or family when they leave that location. The purpose of this is to enable people, primarily the 16-30 year olds, to communicate when they have left someone so people can contact them to ensure they are okay.

Research was undertaken about the various types of software and languages needed to develop such an application. The application was designed within Android Studio, a Software Development Kit provided by Google to allow applications to access the many libraries available for development. Using Java, Android has built their own libraries and with integration with the Google API's allows developers to create feature rich applications.

The application was designed to work with an SQL table to store exit notifications via a PHP script, which also sends messages to the email contacts stored.

The findings from this report are that application can send the user themselves a notification when they have entered and exited a Geofence, and when the user leaves, an email is sent to a contact to notify them as well.