

Universiti Teknologi MARA

**Parent Monitoring Mobile Application
with Geofencing**

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STUDENT DECLARATION

I certify that this report and the project to which it refers is the product of my own work and that any idea or quotation from the work of other people, published or otherwise are fully acknowledged in accordance with the standard referring practices of the discipline.

A handwritten signature in Arabic script, enclosed in a circular flourish. The signature appears to read 'عبدالدين' (Abdul-Din).

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ABSTRACT

Child missing under eighteen years old is a very serious case than can lead to many other tremendously cases such as kidnaping, rape abuse and murders of children. According to research paper there are many reasons that can cause of child missing cases, including looking for freedom, following their lovers, not enough attention from their families and others. According to survey, parent also lack method of monitoring and can caused an unwanted event and will lead to child missing. This will increase the missing child cases and gives bad image to our country. As a way to solve these problems, the mobile application has been developed called Parent Monitoring Mobile Application using Geofencing technique to help parents monitor their children current location and set geofencing to aware their children whereabouts. If their children entering or leaving the geofence set by parent, parents mobile will be triggered and received push notification. This mobile application is developed using JAVA Programming to program the project, XML Programming language to design the project, Android Studio with Android Development tool (ADT) plugin, Google Map API to display current location of their child, Geofire API to create geofencing, and Firebase to store all the data. Iterative waterfall model is used in designing and developing the system. There are three tests has been conducted to achieve the objective of this project which is functional testing, accuracy of triggered alert push notification and geofencing testing, and accuracy of emergencies button push notification testing. Result obtained from the tests showed that all the function and features are work properly eventhough there are some limitation that need to be fixed for future improvement. As the conclusion, mobile application called Parent Monitoring Mobile Application using Geofencing have been complete and able to be used. For future reccommendation, there are some impreovement need to be added such as estimation time and distance between parent and child current location, and show history of data location of child past current location. This project can be improved in the future by adding these functions in the mobile application.

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