

Babysitter Finder Mobile Application with Geofencing

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ABSTRACT

Babysitter is a person who takes care of children with paid amount of rate and working hour that demanded by babysitter itself. Working parents need babysitters to look after their children while they are working. Finding a babysitter is a tedious work as some parent has their own requirement. Moreover, they had limited time. Other than that, parent usually finds babysitter manually by asking their relatives, neighbor and friends. This may lead to imprecise information about the babysitter. Therefore, a mobile application is developed to solve the problem. This application uses geofencing technology that suit with the problem statement and objectives of the project. Geofence is used to fence babysitter's location within 500 meters from user. When parent enter in the babysitter's location, the application will trigger notification that there is a nearby babysitter. Parent also can view babysitter's profile such as age, contact details, location, availability and price. Thus, parent will get the accurate information about the babysitter since the information directly from the person. As conclusion, every function of the system has been tested and the result of each modules come out as the system expect. The objective of the system successful achieve which the system can pop up notification as indicator that user in the babysitter location. This is proved that the system can detect nearby babysitter location at the user current location. As well as user move out from the babysitter location, system can detect and give notification to user that they already exit from babysitter location

KEYWORDS: Geofencing, mobile application, babysitter

1 INTRODUCTION

Babysitter is someone who takes care of children while are working and someone pay to do this [1]. In recent news reported that for the past six years, government made initiatives to increase the amount of woman in workforce and decision making in the corporate sector that

strive to increase the contribution of woman in workforce to the economy and to promote greater inclusiveness in the workforce. According to former Prime Minister Datuk Seri Najib Tun Razak, during Talent Corporation Malaysia (TalentCorp) that by organized a Women in the Workforce Dialogue with a group of women represent for those who have a returned to work under TalentCorp's Career Comeback Programme [2]. He participation rate (FLPR) increase from 46.8% in 2010 to 54.1% in 2015, [2]. Most parents contribute for family income in order to survive and maintenance households. Working parent tend to send their children to daycare centers for children as long as they are cared for while out a work [3]. Thus, this leads to the increases of needed babysitter.

2 OBJECTIVE

The objectives of the project are to design a mobile application that be able to find babysitter which locate in Rawang, Selangor. Second objective is to develop a mobile application prototype by using geofencing technique and to test the functionality of the mobile application.

5 SIGNIFICANCE (S)

Developing a mobile application for parent to be able identify the babysitter in Rawang, Selangor. This mobile application is easy to use and less time consuming in terms of retrieving information about babysitter. Moreover, this mobile application opens an opportunity for those stay at home to make money by working at home.

4 METHODOLOGY/TECHNIQUE

The methodology has been used in the project is waterfall model. In this project there are four phases that include in the development of project which are analysis, design, implementation and testing. Waterfall model is a sequential process which is the progress is decreasing like waterfall. Each of the process must execute until finish one process in order to go to the next process. This application is developed to find the babysitter with ease and fast. Babysitter itself will provide their information and requirement in the application. Thus, parent able to retrieve clear information directly from the babysitter itself. Besides, this application uses geofencing technique that able parent to notified if there is babysitter in the radius. Geofencing is location-based services (LBS) where it is proactive that support smart notifications when user enters and leaves a specific geographical area [4].

Other than that, geolocation has been applied in the application. Geolocation have capability to detect and record where user is located. Geolocation information can be obtained from user's IP address, Wi-Fi connection or GPS coordinates [5]. Geolocation is used when babysitter's location is retrieved once she registered this application. Therefore, parents able to view babysitter's location in the map. The method of testing is functionality testing to ensure each function is working.

5 RESULT

This system has two main functions which user can directly find babysitter through the map and find the babysitter in list view forms. In the map, there is geofence with 500 meters radius from the babysitter locations. When a parent enters or exit from the babysitter's location, there will be triggered notification. Fig. 1 shows the slide notification (a) and popup notification (b) when parent enter and exit from the babysitter's location (c).

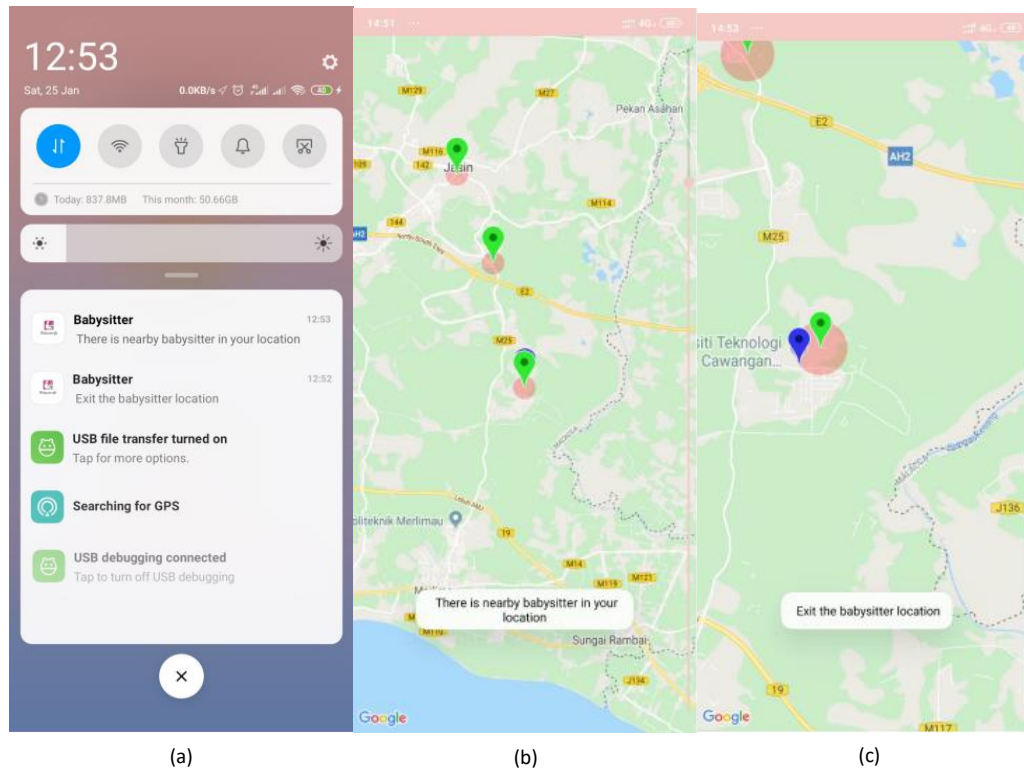


Fig. 1: Triggered notification

Parent also can view babysitter from the list view of registered babysitter. The list will display information about babysitter such as name, age, gender and address. Fig. 2 (a) shows the list of registered babysitters. After user click on the list, user will view babysitter's page details (price, contact information and working hour) as shown in Fig. 2 (b).

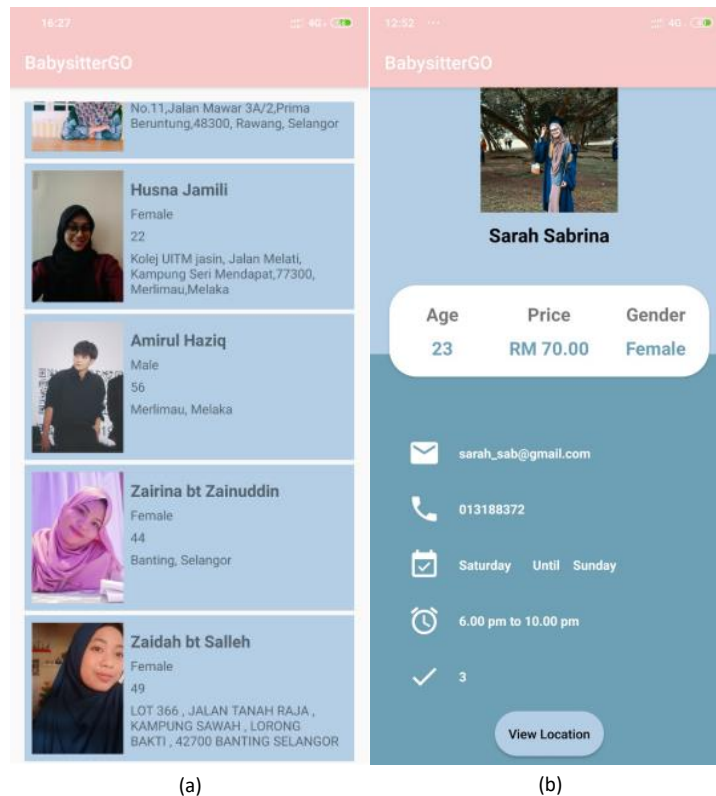


Fig. 2: List of babysitters

6 CONCLUSION

To summarize, this system involves two users which are parent and babysitter. For parent, geofencing method is used to find any nearest registered babysitter within 500 meters radius. Other than that, parent also able to find route from their current location to the babysitter's location. This application provides user friendly interface that easy to understand and use the application. Waterfall design methodology is used as the system flow to develop this application. This application has been tested for each function. Each of the functions successfully working and display expected output as the system program.

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