Universiti Teknologi MARA

TRAINTRACKER: A PROTOTYPE OF ANDROID APPLICATION FOR TRAIN SCHEDULE REAL-TIME SYSTEM

Fariqh Falahi Bin Alias

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Peace and blessings of Allah be upon Prophet Muhammad.

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ABSTRACT

The development of modern technologies especially in communication and extensive usage of Smartphone enable us to utilize numerous applications provided by the developers. The non-stop expanding of technologies have improved the transportation services by providing us a lot of applications in online trading and services such as train ticketing application, train tracker application, travel guide application and much more. There is no such application that can keep track and gives the real time schedules to the public transport users in Malaysia, especially train users where most of the users were having the same problem to allocate time for waiting the train which the possibility for the users to miss the train and not getting on the train because of it is too packed especially during peak hours is high. The motivation for the improvement of an embedded system for train schedule is to replace human experts to smart phones due to the evolution of the technology. In this project, a prototype of the Android development application system for train schedule real-time forecast is built in order to solve this problem which focusing on our country's light rail transit (LRT). There are three objectives of this project that is to identify the requirements, to design and to develop the mobile application prototype of RapidKL real-time schedule system. The scope is narrowed down and focused on Kelana Jaya line, which is from Kelana Jaya to Gombak. This project is expected to create a prototype of the Android application system that able to help all light rail transit users in managing their time with the use of their smart phone. In terms of commercial value, the application for train real-time scheduling application is novel and the outcome of the project can be used by Rapid KL itself. This project proposes a developing process by using the Prototype Model which has four major phases that should chronologically conducted. The first phase is identifying the user's need while the second phase is developing a working prototype. The third phase of the development process is implementing the system and conduct a live test and last but not least, the fourth phase where the system is revised and enhanced. The result indicates that the prototype application created can be implemented in Rapid KL where the probability for any new development needed is varied. As for recommendations,Traintracker should do a joint venture with RapidKL to get the data integration for the real-time scheduling to happen and notification alert can be done as it makes the user aware with the train whereabouts.

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CHAPTER 1

INTRODUCTION

1.0 Background of Study

Syarikat Prasarana Negara Berhad (Prasarana) is a wholly-owned government corporation formed by the Ministry of Finance in 1998 to simplify, initiate as well as ease public infrastructure projects approved by the Government. In order to establish the operation have more space to grow and become more focused, Prasarana is forming four subsidiaries which are Rapid Bus Sdn Bhd, Rapid Rail Sdn Bhd, Prasarana Integrated Development Sdn Bhd (PRIDE) and Prasarana Integrated Management & Engineering Services Sdn Bhd (PRIME). A transit rail service for both monorail and LRT are operated under Rapid Rail Sdn Bhd while bus services are operated by Rapid Bus Sdn Bhd. RapidKL is the brand name for one of the services of Prasarana in the Klang Valley. RapidKL operates the Kelana Jaya Line LRT (previously known as PUTRA-LRT) from Kelana Jaya to Gombak and the Ampang Line LRT (previously known as STAR-LRT) from Sentul Timur to Ampang and Sri Petaling while the RapidKL buses operate daily on 167 routes in the Klang Valley.

The evolution of technology has changed people's life style and their way of life as the aforementioned affects people's lives. Technology such as Android smartphone assists public transportation as it helps people to check the real-time schedule of train through the existing applications in Google Play Store. According to the report from International Data Corporation (IDC), Android is growing and becoming the reigning powerhouse among smart phones (Nigel, 2012). Android has earned tremendous popularity to all over the world because the rising demand of smart phone to build stylish as well as a utility application for business and personal use.