

Universiti Teknologi MARA

**SMART PARKING SYSTEM-RFID CARD AND
READER**

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“By the name of Allah, the Most Gracious and Most Merciful”

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ABSTRACT

The attraction of large shopping malls with the increasing the number of cars have lead to parking issues and concerns at shopping malls' car parks. These problems not occur in shopping mall only, but also in large hospitals or somewhere that provide covered parking space. Drivers have to find an empty parking space in such a large area, thus wasting a lot of time. Moreover, in a larger parking area, driver tends to forget the location of their cars because of the similar look of parking lot at every level. Therefore, this thesis is to ease the driver in finding a vacant parking lot by using RFID technology. Since RFID can store data in its card, thus it can tell the driver the exact location of his/her car and also calculating the amount that user has to pay. The main idea is to stored the data from the RFID card to the database, such as in-time, exit-time and also the parking lot number when the user tag the card to the card reader and the data be retrieved whenever the user tag the card before they make the payment. The development of this project is based on the iterative agile model. The development phase is started by planning, analysis and design, development, testing and maintenance, result and conclusion and finally ending it with documentation. Therefore, the implementation of this project ease the user as they did not have to wasting their time anymore in order to searching for their own cars.

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CHAPTER 1

INTRODUCTION

1.0 BACKGROUND OF STUDY

As the number of vehicle as rapidly increases, thus there are lots of problem that arises. Traffic jammed, accident, even searching for a vacant parking lot also could be an issue to the driver. Private cars have become an important sign of economic level for this rapid development in our life.(Shaobu.D. & Shibao.S, 2012)

Thus, a solution is needed to overcome this problem. In fact, in our country, there are up to 9,441, 907 registered motorcycles and 9,114, 920 private vehicle are registered to the JPJ, at the end of the 2010, according to the MOT (Ministry of Transport, Malaysia). Can we imagine, the rapidly increasing amount of vehicle every year, more over nowadays each family tends to have more than one vehicle.

If this situation continues, the amount of people using the parking lot such at the hospitals, shopping mall, etc increase thus making the user a lot harder to find their own vehicle if they forget where they park their vehicle are.

Thus, the implementation of this Smart parking system (SPS) is to cope with the problem of rapid development of transportation upon the closed parking lot. By the development of this project, problems of findings a vacant parking lot can be solved. The customer did not have to remember the exact location of their car anymore since it is recorded into the database, by the implementation of the Radio Frequency Identification (RFID) technology and