UNIVERSITI TEKNOLOGI MARA

SMARTPHONE CHARGING USING RFID

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ABSTRACT

This project presents a smartphone charging using Radio Frequency Identification (RFID) for performance analysis. RFID are microchips which can be attached to products in order to allow their contactless identification via radio frequency. Smartphone has become one of the most technologies that are frequently used by human beings to stay connected with other people. However, a frequent charging using plug can increase the power consumption and may result in electricity wastage especially in public places especially in library of UiTM Shah Alam. Therefore, a new approach for charging a smartphone is presented in this paper to optimize the number of people using smartphone charger and save power consumption. It is designed at a lower cost as possible to make it safe to use and energy efficient. In this paper, Atmega 328p acts as a microcontroller to ensure the system works smoothly and reducing the complexity of the schematic circuit. This smartphone charger works when the RFID card is successfully scanned and allows the user to choose how long the charge is charging.

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CHAPTER 1

INTRODUCTION

1.1 BACKGROUND STUDY

Mobile phones also known as smartphone, cellular phone, wireless phone, or cellular telephone, which is a little portable radiotelephone. It is a combination of two technologies, which are telephone and radio. The mobile phones can be used to communicate over long distances without wires. The smartphone has becomes a vital devices that already started functioning more than just a communication devices. As his name recognizes, smartphone is attach to a rechargeable battery that works as a power supply to it. The growth of technology for smartphone that rapidly grows compared to the battery causes it to drain after some period of heavy used and need a frequent charging. Thus, the battery life has become a problem to the mobile phone users that still unresponsive.

Some solutions have been introduced to overcome this problem such as using power bank, increase the charging speed for the devices and slow down the updating of software for smartphones. These solutions are quite helpful but still not efficient enough to extend the battery life especially when it comes to the outdoor and public