AKU SMART PARKING

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ABSTRACT

RFID, Radio Frequency Identification is an inexpensive technology, can be implemented for several applications such as security, asset tracking, people tracking, inventory detection, access control applications. RFID technology which is a matured technology that has been widely deployed by various organizations as part of their automation systems. The main objective of this project is to design and implement an RFID automatic access control system which disabled people need to use their identification card to access the parking. This system consists of two main parts which include: the hardware and the software. The hardware consists of the arduino uno microcontroller, relay, switch, RFID t reader and power supply circuit. For the software of our project "OKU smart parking" are, which use to programming our project and design our schematic circuit. For our schematic circuit we had run it first in the software and it operate as we expected , so for the next step we had move to hardware which is solder for our project component. For our main part in hardware other than RFID and Arduino uno, we also include buzzer and LED which play a big part for our project. For the information for "OKU SMART PARKING" that we made start it operation by turn ON power supply, we use arduino as microcontroller that control our input and output which is RFID and limit switch for input and LED, buzzer as our output. Then for next step, the car will be parking into the parking lot. At the parking lot the car will press the limit switch and automatically LED will turn ON to indicate there is a car in the parking lot .After that, the disabled people need to scan the card on the RFID (radio frequency identification) and the operation end, but if the user if the user fail to show their identical card, in 3 minutes the buzzer will make noise until the user show their identical card and scan it on RFID or move their car to another parking lot to make the buzzer stop making noise.

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CHAPTER 1

INTRODUCTION

1.1   BACKGROUND OF STUDY

Now days, disabled people have their own space to park their car, but most of them usually did not had a chance to park their car and ordinary people always take an advantage on them. For our project "OKU smart parking" we were trying to help disabled people to get their right and it also important to make these disabled people to make their life more easier.

This project   concentrate on Arduino uno and RFID, without Arduino this project can not run because it control all the input and the output for our project which is RFID and limit switch, for output buzzer and LED. Power supply in this project ,voltage is important in implementing this project because the system does not required high voltage value. In this project once the microcontroller get the power supply all the component ready to operate, then the limit switch will be pressed by an object which is automatically the LED will turn OFF which mean that the car exist in parking lot but the buzzer and the user must scan their identical card which is disabled people id card to the RFID (radio-frequency identification). The RFID had been programmed in the arduino to detect identical card. Buzzer also had been programmed in the arduino, but it will only make noise if the user fail to show the card more then 3 minutes.

For these reason that we have stated, it comes to our project for final year project. We think that this project can be commercial to the society. As we have state, this project is not well known and not much of this product at the market or shop. Besides, we have make some improvements for this project.

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