SMART CAR PARK DETECTOR (SMaCPaD)

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A project report submitted to the Faculty of Electrical Engineering

Universiti Teknologi MARA in partial fulfilment of the requirements for the

award of Diploma of Electrical Engineering

FACULTY OF ELECTRICAL ENGINEERING

(CONTROL & INSTRUMENTATION)

UNIVERSITI TEKNOLOGI MARA

MALAYSIA

JUNE – OCTOBER 2015

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ACKNOWLEDGEMENT

It is a grateful pleasure for us to acknowledge individuals who have contributed to the development of this report, in particular Universiti Teknologi MARA Kampus Pasir Gudang for giving this great opportunity for us to complete the credit hours for this final year project in this semester and also as a requirement to complete Diploma in Electrical Engineering. This project would not have been so successful, without the help, dedicated and comitment given by the supervisors, lecturers, panels, friends and especially parents who support in cost.

I would like to thank to Dr. Muhammad Asraf Bin Hairuddin, which is also known as our supervisor for this final year projects 2, who has giving full commitment and valuable time to contribute comments, suggestions, support, guidance and lesson along this semester. Through him, we have gained a lot of learning the new thing and valuable knowledge. It has been a pleasure for us to cooperate with him. Besides possessing with technical skills, he also reliable in software. All these have motivated us to be more responsible and dedicated to professional work.

During the completion of the project, many of our friends have directly or indirectly helped to ease the work by providing good idea, suggestion and cooperation. We would like to convey many thanks to them. Their concern and support during this project completion really makes us feel gratitude.

The last but not least, we would like to thank those who directly or indirectly gives supports to motivate us for all this while to complete this project successfully. May Allah bless all of you here after.

ABSTRACT

SMaCPaD Machine is a Smart Car Park Detector Machine that can display number parking on the LCD to user after push the button. These projects present about smart car park system. This project is to ease people to find their car in the shopping complex car parking as this project are design for them to just go straight to the chosen spotted parking.

This project is design to make people to park the car easily by refer to the number parking shown at the LCD. Usually when we go to shopping complex for sure we want to park our car but it is difficult to find parking site and always have to round more longer because there is no empty parking site. When this happen, with not thinking twice people are always just park overlap with other parked car in order to enter the shopping complex. This situation can invite fights between car owners. So to prevent this from happening, this system is very useful and easier for them to park car by refer the given number parking that is shown on the ticket.

There are some of objective for this project. This project is to ease the user to get parking site to park the vehicle by go to directed parking space. No need to look in circles for looking for a spot, but just follow the number on the LCD display. Beside that, it can save the time in searching vacant parking. This is because the user just go to the parking site by follow the number parking on the LCD display. Last but not least, the user can save the usage of the fuel. They no need to round more longer looking for empty parking space.

The smart parking system have a benefit to the user. It assists the user to park their vehicles quickly and easily at the directed parking space. This system helps to reduce amount of time in finding for an available parking that user have spent. Shorten the time taken to park the vehicles can save the

usage of fuel because no need to drive from lane to lane, zone to zone and level to level to search for a parking space.

In this project, the connection between the push button and the LCD is when the user press the push button, the LCD will display the parking number. The LCD can display the number parking because of the IR sensor on the parking space send information to the microcontroller. So, the LCD can give number parking that still empty. The function of LED for this project is when all the parking space is full, the red LED will lights on while the green LED shows that there is still have available parking to be filled by the users.

Next is about micro servo motor and IR sensor. The servo motor is to move the bar backwards and downwards. When the user press the push button and get the parking number that display by LCD, the bar will went up and go down about 90 degree as the car has passed through it. In addition, when the car entered the parking space, the IR sensor will detect it presence and directly send the information to the microcontroller. It also inform to the microcontroller to the LED that if the parking space is full, the red LED will turns on means the car cannot enter the level of parking lot. So they need to go another level which has the green lights of LED. The coding or programme of this project is very important to make this project perfectly succeed.