FACULTY OF ENGINEERING

DEPARTMENT OF COMPUTER ENGINEERING

DIPLOMA IN ELECTRONICS AND ELECTRICAL ENGINEERING

A DIGITAL CAR PARK MONITORING SYSTEM FOR LOCATING AN EMPTY SPACE IN A CAR PARK BUILDING.

By

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final year project report is submitted to the department of computer engineering in partial fulfillment for the award of diploma in electronics and electrical engineering from Busitema University

09TH/DECEMBER/2020

DECLARATION

We OKIA EDDY and WALUSITA FRANCIS, hereby declare to the best of our knowledge, that this project report is an outcome of our original work and that it has not been presented to any institution of learning for an academic award.

Name: …….

Date: …...../…...…../……...

Signature: ……

Name: …….

Date: …...../…...…../……...

Signature: ……

Diploma in electronics and electrical engineering

Department of computer engineering
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APPROVAL

This final year project report has been submitted to the Faculty of Engineering of Busitema University for examination with approval of my supervisors.

Supervisor

Date: …. /……. /……..

Signature: ……

Department of computer engineering

Busitema University

Faculty of engineering

LIST OF ACRONYMS AND ABBREVATIONS

LCD-liquid crystal display

LED-light emitting diode

ACKNOWLEDGMENT.

First and fore most we want to thank the almighty GOD for life and knowledge He has empowered to us up to date.

I extend sincere gratitude to my parents Mr. Sizomu Peter & Miss Kyamwine Barbra for the continued support they have rendered to my academic journey. I thank my Supervisors, Mr. Mugwanya Patrick for the technical guidance in writing this project report.

We acknowledge our lecturer's MR Mugwanya Patrick, MR Bwire Felix and MR Matovu and others that have guided us through our project development. Not forgetting our friends and DEE class of 2018 for their good peer and academic support throughout the project developing process

DEDICATION

This report is dedicated to my beloved DAD Sizomu Peter & Miss Kyamwine Barbra in appreciation for their selfless care and parental support provided to me since childhood, and for the mentorship of hard work and determination delivered to me, which attributes I have cherished with firmness and which have transformed me to this level.

ABSTRACT

Due to the proliferation in the number of vehicles on the road, traffic problems are bound to exist. This is due to the fact that the current transportation infrastructure and car park facility developed are unable to cope up with the influx of vehicles on the road.

To alleviate the aforementioned problems, the digital car park monitoring system has been developed. With the implementation of the digital car park monitoring system, patrons can easily locate and secure a vacant parking space at any car park deemed convenient to them.

Vehicle ingress and egress are also made more convenient with the implementation of hassle-free payment mechanism. With vehicle detection sensors aplenty on the market, the choices made may defer due to the different requirements in addition to the its pros and cons.

Subsequently, the various systems used in developing the systems in addition to the recent research and commercial system on the market are examined as vehicle detection plays a crucial role in the digital car park monitoring system.

The proposed system illustrates the counter for the cars entering the park and give the order to the park gate never to open to any entered car when the number of cars in the car reach the highest number. In addition, the same counter made for the exit gate (where is the same the entrance gate in this project) count in reverse order for the cars exit from the park.

The principle of operation of the park is the piezoelectric sensor depends on the weight of the car (here small push button) when the car presses the foot switch, the counter adds or subtracts one from the counter number.

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