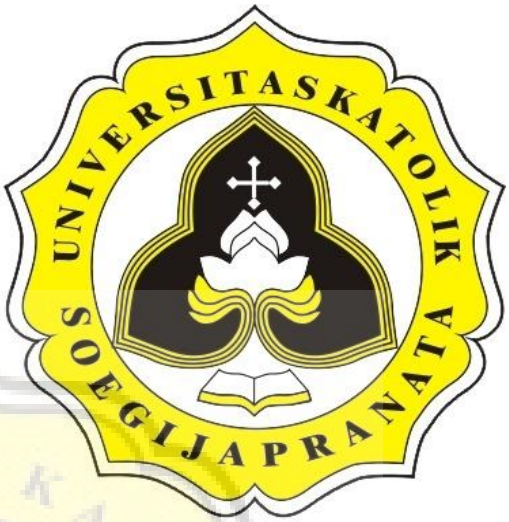

PROJECT REPORT
(PROTOTYPE OF AUTOMATIC-FLUSHING-URINOIR USING ARDUINO)

Tan Flash Stefen
12.02.0004
2016

INFORMATICS ENGINEERING DEPARTMENT
FACULTY OF COMPUTER SCIENCE
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APPROVAL AND RATIFICATION PAGE

PROJECT REPORT
PROTOTYPE AUTOMATIC-FLUSHING-URINOIR USING ARDUINO WITH ETHERNETSHIELD W5100
by
Tan Flash Stefen – 12.02.0004
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Certify that this project was made by myself and not copy or plagiarize from other people, except that in writing expressed to the other article. If it is proven that this project was plagiarizes or copy the other, I am ready to accept a sanction.

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ABSTRACT

Building A Prototype Automatic-Flushing-Urinoir.

This is a prototype of automation flushing urinoir that build using one Arduino UNO with Ethernet-shield W5100 , four Selenoid valves, Rellay modules four channel, and four Ultrasonic Sensors.

Arduino Uno is used to read Ultrasonic Sensor and Rellay module to controll the valve of the selenoid to open and close. Then the function of Ethernet-Shield W5100 is to connect between the Arduino Uno to Computer. After that the Selenoid valve to open the valve when it was triggered. And also the Rellay module for bridging between 5 voltage to 220 voltage. Finally the Ultrasonic Sensor to calculate the distance. The ethernet shield is integrated to php language and mysql in database. So we can monitored the data from web server. The web server will display the status of sensor hcsr04 is on or off to facilitate maintenannce when the prototype was not working properly. Not only for maintennace but how much the urinoir used and how much water flush in one month can be showed in the web server and Database.

Even this is only a prototype, with small changes it could be build in real project. Firstly The small changes like the design of schematic, Second change the Ultrasonic Sensor for better accuracy. Third change the Selenoid valve in low voltage for press the consume the electricity.

Keywords: *Arduino, Ethernet-Shield W5100, Selenoid Valve, Ultrasonic Sensor, Rellay Module, Prototype.*

PREFACE

This is a summary in each chapter from chapter one to chapter six. The chapter one is a background stories and scope of my prototype and also the main objective of this prototype. Second chapter describes about Literature of Study. This chapter describe how the program can work optimally with various devices which support the Arduino using ethernet-shield w5100. The literature of Study is explain about all devices that I use in this prototype. The third chapter Research Methodology and Project Management explain about step by step the implementation and deescribe what I'm doing from the first week until the end of week. The Point of fourth chapter is about analysis and design of my prototype. The analysis is tell about the problem that I found when I'm start to made my project and the design is how my prototype work. The fifth chapter is about planting the Implementation and Testing how my code and my design can be planting to Arduino. So when the code and my design was successfully planting the Arduino will work properly. The next step testing, In this Testing to setup the clearences of four Ultrasonic Sensors. The last chapter sixth I give my Conclusion and my suggestion to future research that can be accomplish optimally.

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