



**PROJECT REPORT**

**AUTOMATION INK CHARGING FOR WEB-OFFSET-  
PRINTING MACHINE BASED ON ARDUINO**

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**13.02.0154**

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# APPROVAL AND RATIFICATION PAGE

## PROJECT REPORT

AUTOMATION INK CHARGING FOR WEB OFFSET PRINTING  
MACHINE BASED ON ARDUINO

by

VINCENTIUS SARIONO – 13.02.0154

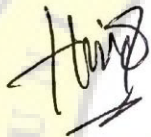
This project has been approved and ratified by the dean of Faculty of  
Computer Science on July, 14<sup>th</sup> 2016

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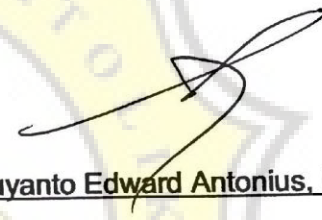
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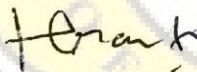
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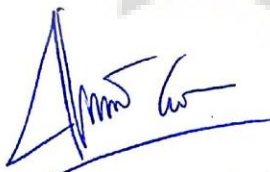
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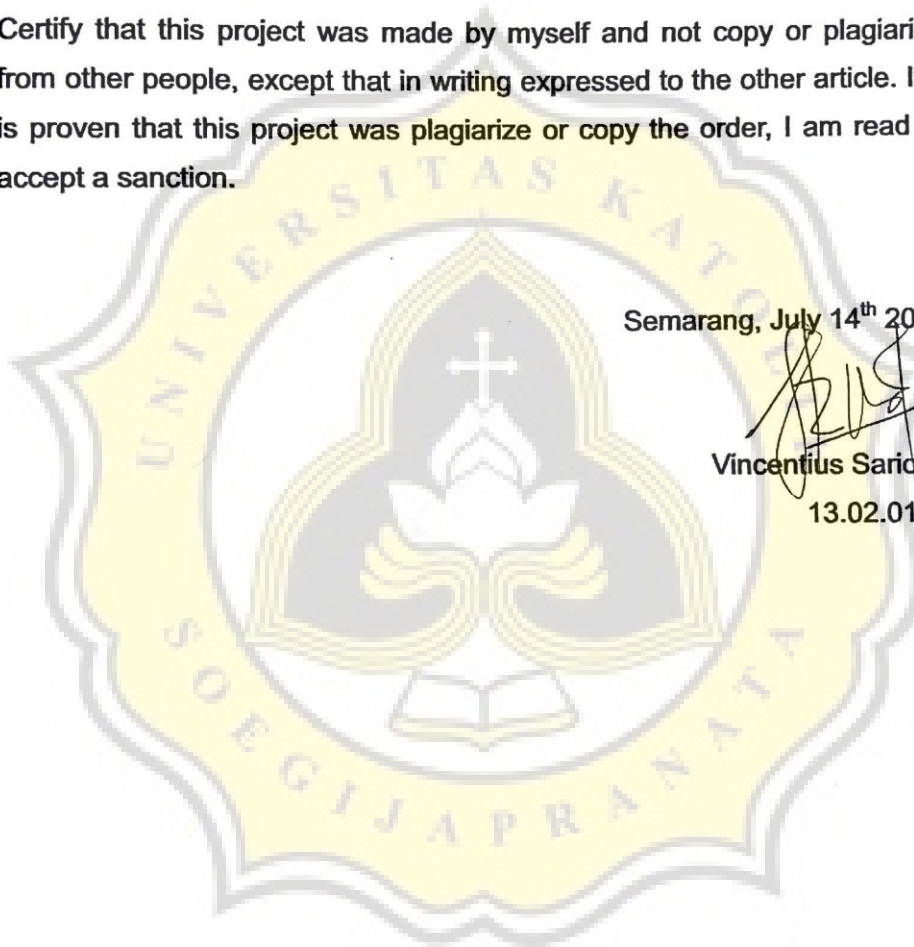
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## ABSTRACT

This project is about controlling automatic Ink System on Web-Offset-Printing Machine with Arduino Microcontroller, Ultrasonic sensor, Relay Module 4 Channel and Ethernet Shield Winzet 5100. It uses devices that can be used in real machine except the pump. This Project worked by reading the sensors of the ink surface. This Project also used for control the ink pump that has function to deliver the ink from the ink bank to printer. As the effect, the process of refilling ink is working.

Then the data which is read by the sensor and that data will be save to database, so the operator can see the database of the ink that is used every day. This system can be used as a daily report of the operator in term of the use of ink report.

The target of this project is for helping printing factory. Therefore, this project just produced the prototype that can be usefull for better future project especially for printing factory which still uses manual ink charging.

Note:

- \* ) Arduino Uno, Single Board Computer Circuit size of a credit card.
- \* ) HC-SR04, distance measuring sensors are popular, fairly easy to use and relatively inexpensive.

*Keywords: Arduino Uno, HC-SR04, Monitoring systems, Data Logging.*

## PREFACE

This automatic ink tool on web offset printing machine used the arduino microcontroller components, Ultrasonic sensors HC-SR04 and integrates with PHP and a MySQL database elaborate with an ethernet shield Winzet 5100.

This tool is used to monitor and control the ink in printing machines which is integrated with a database. In addition it helps the printing ink operator. Actually the refilling ink is usually done manually, but the writer modifies the machine into automatically.

This is a summary of the discussion of all the chapters. My first chapter explains the background of a tool made of automatic ink charging on the manual printing machine which used arduino uno and distance sensor HC – SR04. Chapter II contains of the definitions of arduino uno, distance sensor HC - SR04, Ethernet Shield Winzet 5100, and the type of programming language used and the design of the database used.

Chapter III provides project planning and project management for arranging the project schedule. Chapter IV contains of the analysis tools used, and design placement scheme Arduino Uno , Ethernet Shield Winzet 5100 and distance sensor HC – SR04. Chapter V contains the implementation of the project by using a prototype, and conduct testing projects. Chapter VI contains a summary of the project and future expectations in using this project.

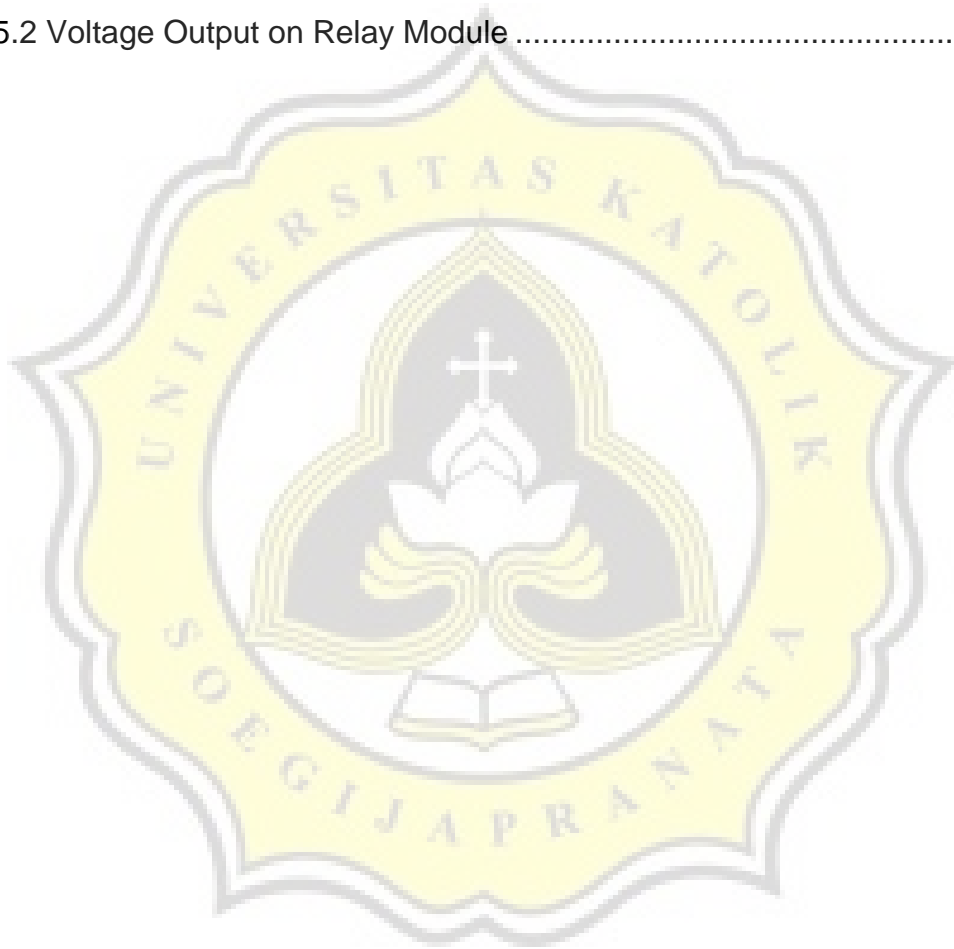
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