

**REDESIGNING A SMALL-SCALED REVERSE VENDING MACHINE TO
IMPROVE THE PROCESS AND PERFORMANCE**

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STATEMENT BY THE AUTHOR

I hereby declare that this submission is my own work and to the best of my knowledge, it contains no material previously published or written by another person, nor material which to a substantial extent has been accepted for the award of any other degree or diploma at any educational institution, except where due acknowledgement is made in the thesis.

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ABSTRACT

REDESIGNING A SMALL-SCALED REVERSE VENDING MACHINE TO IMPROVE THE PROCESS AND CONTROL

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The purpose of this thesis is to redesign and rebuild the reverse vending machine with an implementation of barcode scanning as the sorting system and load cell to check whether the drinking container is empty or not. The machine will receive the container from the conveyor station, check the weight, and finally transfer it to the sorting station. The container will be sorted as cans or plastic bottle by the aid of barcode scanning and compare it to database. Furthermore the plastic bottle will be sorted as clear or color. Unrecyclable container will be returned to the user through the outlet passage.

This thesis project focusses on redesign and rebuild reverse vending machine to improve its process and performance. It includes container type accepted, faster processing time, high reliability, sufficient database entries, user interface, and interactive design.

Keywords: Reverse Vending. machine, Barcode, Loadcell, PET bottle, Cans, Barcode Scanning, Database



DEDICATION

I dedicate this works to the almighty God, my beloved family, and Indonesia.



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