



Senior Design Project

**Sustainable Eco-friendly Reward Bin Using RVM
by Detecting Recyclable waste and Generating
points according to the weight of the Materials.**

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Declaration

This is to declare that no part of this report or the project has been previously submitted elsewhere for the fulfillment of any other degree or program. Proper acknowledgment has been provided for any material that has been taken from previously published sources in the bibliography section of this report.

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Approval

The Senior Design Project entitled “**Sustainable Eco-friendly Reward Bin Using RVM by Detecting Recyclable waste and Generating points according to the weight of the Materials**” by Md. Rubaith Adnan (ID#1510538042), Mehedy Hassan(ID#1521214042), Md. Anowar Hosen (ID#1512366043) and Mohammad Bin Khesru (ID#1321489042) has been accepted as satisfactory and approved for partial fulfillment of the requirement of BS in CSE degree program on September, 2019.

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Acknowledgement

First of all, we would like to express our profound gratitude to our honorable course instructor, **Mr. Zunayeed Bin Zahir**, for his constant and meticulous supervision, valuable suggestions, his patience and encouragement to complete the thesis work.

We would also like to thank the ECE department of North South University for providing us with the opportunity to have an industrial level design experience as part of our curriculum for the undergraduate program.

Finally, we would like to thank our families and everybody who supported us and provided with guidance for the completion of this project.

Abstract

In this project we present a system where the machine will receive three types of industrialized bottles and according to their weight it will generate some point for the user. With certain amount of points the user can collect money or some sort of reward depends on the system manufactures and the system service providers. First of all we will build a RVM (Reverse Vending Machine) and it can take three types of industrialized bottles like plastic bottles, Aluminum cans or Glass jars then it will measure the weight and pass to the next phase to sort it out. In the next phase the sensors will differentiate among these materials and will sort it and put them on desired container. While sorting the materials it already generated some points according to it's weight. As we already set the threshold weight for the different materials the point Generation will be valid. The user will get a slip with point mentioned on it and s/he can collect The reward using that slip. The service provider will decide what type of reward a user will get At what amount of points. This project idea was developed because of the excessive amount of Plastic bottles on the street and it is harmful for the environment also. The recycling industries Are very profitable but it needs lots of manpower and it is not cost effective, so with this Machine it will be cost efficient as well as environment friendly. The people will encourage to Use the machine as they are benefiting. Thus this project is profitable from economic aspect at the same time it is very useful for keeping the environment from pollution which can not be reversed these days. We can see people using trash here and there even the vast ocean is getting polluted with this types of material everyday. No government or organization can do anything on their own in this regard but making people interested to keep the environment clean can be the next step to save the environment from destroying completely.