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MEC299

DESIGN AND FABRICATION OF SMART DUSTBIN

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ABSTRACT

The main objective of the project is to design a smart dustbin which will help in keeping our environment clean and also eco friendly. Nowadays technologies are getting smarter day-by-day so to provide a clean environment, This project it to design a smart dustbin by using Arduino. This smart dustbin management system is built on the microcontroller based system having ultrasonic sensor on the dustbin. In this proposed technology we have designed a smart dustbin using Arduino uno, along with ultrasonic sensor, servo motor and source power. After all hardware and software connection, now smart dustbin program will be run. As for this project, dustbin lid will open when someone comes near at some range than wait for user to put garbage and close it.

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CHAPTER 1
INTRODUCTION

1.0 Introduction

The rate of increasing population has increasing rapidly and also have an increase in garbage which have increased environmental issue. Dustbin is a container which collect garbage or store items which recyclable or non-recyclable, decompose or non-decompose that people use in daily whether at work or at home etc. But in case they are full no one is there to clean it and the garbage will spilled out. The surrounding of a dustbin is also conducive for increasing the pollution level. Air pollution due to full dustbin can produce bacteria and virus which is can produce life harmful diseases for human. Therefore, this project have designed a smart dustbin. The smart dustbin are designed with the help of some hardware and software.

In this modern together with super advanced technology and the fast development in the human population, the waste problem has become one of the worst environmental problems in many countries. The reason of this problem become more worse is due to the way of controlling waste collection and management in the country where the waste is not managed efficiently and effectively. Wastes are created from different types of sources where it could cause the environmental pollution. It also can give a risk to the health. Lack of proper management solutions is one of the big difficulties in managing the landfill for the responsible party. Therefore, to get more information of the collection and management of the waste there are some interviews and site visits which were conducted. It was conducted by the company which are responsible for the waste management.