



SMART DUSTBIN

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ABSTRACT

Microcontroller is the device is powerful device. Nowadays, the good things are the powerful component, microcontroller is one of the component best components and it is basically very simple. Microcontroller is the brain of any electronic devices. It is a simplest computer processor main brain for the future system. It has many type of microcontroller from the lowest to the higher number of pins with so many functions at the pins. It is need simple software to control it all and everyone can easily learn about has been developed.

The microcontroller has a large number of different types and software but it has many common similarities. When the power supply is turned off the program is loaded into the microcontroller. When the power supply is on everything is start at the high speed. The control unit is take part to keep under control. Then it disables all other circuit except the quartz oscillator. Power supply reaches the maximum and oscillator frequency become stable and all the pins are configured as the inputs. The overall electronics start operation in rhythm with pulse sequence. Microcontroller is compatible with any assembly language. The special feature of the microcontroller is it has Read Only Memory (ROM). ROM is the permanently memory and save permanently program being executed.

Unlike the integrated circuits, microcontroller has been programmed first. This is why many of electronics engineer do not use microcontroller. But actually the programming for the microcontroller is very simple. In these recent years, the technologies are move faster than before. Many applications have been invented for making life easier by using microcontroller. Microcontroller can be applying in the robotics, toys and house appliances. Microcontroller is widely used for inventor. Nowadays, even the primary and secondary schools are study about the microcontroller. People that are able to use microcontroller make it as a hobby to make a programming. By using the microcontroller they able to make such an interesting project and does not require so much cost because microcontroller are cheap. Microcontroller are do it yourself project because it small and easy to carry and the software for the microcontroller is can be install in the personal computer.

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CHAPTER 1

INTRODUCTION

1.1 Background of study

This project is to aim to design and develop the “Smart Dustbin”. This electromechanical dustbin is a new invention of that is controlled automatically by using microcontroller (PIC). The advantages of this electromechanical dustbin are user friendly and in addition safe where it can avoid human interference to the dustbin. This project is combination electrical and electronic engineering field to represent the new invention which is regarding the design and development process.

1.2 Problem Statement

This present, there are too many dangerous diseases such as dengue and malaria. This is because when human forget to close the dustbin, any animal like mosquito and flies will come and lay their eggs. This situation can make environment become dirty and can lead to disease.

Then manual dustbin needs physical contact that can lead to dangerous diseases. This is because usually children will forget to wash their hands after throw rubbish. So by using smart dustbin, it can minimize the spreading of bacteria. It also can minimize the human interference in collection and disposal of trash.