

# IT249 – Software Group Project-II

December – April 2019-2020

**Guideline by: Prepared by:**

Prof. Harsh Patel 18IT097-Prince Patel

## TITLE : SMART SEGREGATION

**AIM :** The aim of this project is to provide smart and efficient way of waste management

## Synopsis:

Rapid increase in population has led to improper waste management in metro cities and urban areas which has resulted in spreading of diseases. It is estimated that 2.02 billion tones of municipal solid waste was generated universally in 2006. The segregation, transport, handling and disposal of waste must be managed properly to minimize the risks to the public, and the environment. An efficient method to dispose the waste has been designed in our project, "SMART SEGREGATION". This project proposes easy to use solution for a segregation system at households, so that the wastes can be sent directly for processing . I’ve used Arduino nano, Ultrasonic sensor, to build smart segregator The Arduino NANO to run the written code with the other devices. Ultrasonic sensors are added for monitoring waste collection process. The sensors would be placed in all the garbage bins. When the garbage reaches the level of the sensor, then the alert sound buzzed.

### Objectives :

### To Develop a model for segregate the waste properly.

### To use Arduino(IDE) software to generate a computer program in order to get signal for the real time

### Hardware Requirement

### Arduino NANO

### Ultrasonic Sensor HC-SR04

### Micro-SD Adapter

### Breadboard

### Jumper Wires

### Software Requirement

Operating System: Any Operating System

Language: Arduino c

## Functionality

## With the using of the smart segregation we can easily segregate the waste.

## Limitations

* This results initial cost due to expensive smart dustbins compare to other methods.
* The maintenance cost is very high.

**References:**

<https://www.wikipedia.org/>

<https://www.tutorialspoint.com/arduino/index.htm>