Problem Statement

We are using concepts of IOT to manage dustbins in a small model town. We will place dustbins attached with sensors that detect whether the dustbins are filled or not. The sensors from these dustbins are connected to an Arduino that will communicate with a server (C or PHP).

Arduino will communicate with the server through POST requests. The Server has different dashboards for users and garbage-collectors/management. The users can request to have the garbage collected in their homes, picked up. They can also order dustbins and garbage bags through the website. They can also view information regarding environment friendly way of life. In the Management’s dashboard, we will display the map of the town consisting of the houses of registered users and dustbins placed. Whenever the dustbins need to be emptied, an alert will be displayed here. Also, if a user requests for garbage collection from his home, an alert with the location of the house will be displayed. And there will be a separate list for the orders made by the users.

The Inputs are:

The height of garbage collected in the dustbins.

Request of garbage collection by a user.

Order of dustbins and bags by a user.

Notification of littering in an area by a user.

The Outputs are:

Alerts in the Managements Dashboard regarding dustbins that need to be emptied.

Alerts in the Managements Dashboard regarding houses that need to be visited to collect garbage and to deliver dustbins and bags.

This results in timely collection of garbage and decreased littering.