

Abstract - Smart cities integrate multiple mobile or web solutions to build a comfortable human habitation. One of these solutions is to provide an environmentally friendly, efficient and effective garbage management system. The current garbage collection system includes routine garbage trucks doing rounds daily or weekly, which not only doesn't cover every zone of the city but is a completely inefficient use of government resources. This paper proposes a cost-effective mobile or web based system for the government to utilize available resources to efficiently manage the overwhelming amounts of garbage collected each day, while also providing a better solution for the inconvenience of garbage disposal for the citizens. This is done by a network of smart bins which integrates cloud-based techniques to monitor and analyze data collected to provide predictive routes generated through algorithms for garbage trucks. An android or web app is developed for the workforce and the citizens, which primarily provides the generated routes for the workforce and finds the nearest available smart bin for citizens.

Existing System

employees heading for their workstations every morning. For all those people, there are just not enough garbage bins available. On the streets of urban cities, hundreds of people are passing the same location around one minute.

The obvious solution to this is for the cleaning staff to stay near garbage bins every day till they fill up to clean them. This is not a real solution.

There are some notable negative effects when considering the garbage bins always being full. One of the main effects is the surrounding area starting to smell and be very unpleasant. When the garbage bins are full people put their trash on sides of the garbage bins.

PROPOSED System

- The proposed system overview for this system. Solid waste management can be broadly categorized as segregation, collection, and transportation.
- The server will collect the data and store them only a database. This data will be analyzed and displayed on two different dashboards that can be accessed by the workforce and clients.
- Using data analytics, reports will be generated which can be monitored by the admins through the admin dashboard.
- Based on the data collected, garbage trucks can be given routes generated through various algorithms and google maps API to efficiently route through all necessary garbage bins and finally reach the dumping site

Software Requirements: -

Front End: HTML5, CSS3, Bootstrap

Back End: PHP, MYSQL

Control End: Angular Java Script

Tools:

Android Emulator

xampp-win32-5.5.19-0-VC11

Android SDK - adt-bundle-windows-x86

IDE: Eclipse Mars

jdk-8u66-windows-i586

Module Description

By using garbage update information of worker, general public can communicate with adminstrate. Communication is possible among the workers, general public and administrator.

System Features

In the life of the software development, problem analysis provides a base for design and development phase. The problem is analyzed so that sufficient matter is provided to design a new system. Large problems are sub-divided into smaller once to make them understandable and easy for finding solutions. Same in this project all the task are sub-divided and categorized.

System Modules:

- **Administrator**
 1. Login
 2. Create Garbage bin
 3. Update/Delete garbage bin
 4. Assign best route for drivers
 5. Manage driver
 6. View Garbage Report
 7. View complaints from public
- **General Public**
 1. Register
 2. Login
 3. Register complaint
 4. My complaint & status
- **Driver**
 1. Login
 2. Check daily work updates
 3. Choose best route
 4. Update garbase load