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# Development of Andriod Application for Collection, Transportation and Disposal of Waste Products in Smart Cities

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**ABSTRACT:** Nowadays wastage pollution will increase at associate degreed rate everywhere in the globe, it's the foremost reason behind pollution. The center of a town depends on its purification of Air, cleanliness of the roads and highways and overall, it's close atmosphere. These trends support the development of Smart City concepts, which are intended to improve living in urban areas by using innovative technologies. Smart cities integrate multiple mobile or web solutions to build a comfortable human habitation. One of these solutions is to provide an environmental 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 app proposes a cost-effective mobile or webbased 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. ways that garbage becomes a precious wealth of the country.

**KEYWORDS:** Smart city, Garbage monitoring system, Check waste, Android

## I. INTRODUCTION

Waste management is one of the core concerns of modern age. As nations around the world are developing, their concerns and accountability for a healthier and sustainable environment is also increasing. While developed countries are inventing and implementing smart solutions for waste management and bringing about huge positive impacts, waste management seems to be a play out of the league for the under developed or developing countries. There are numerous categories and each with different classifications of waste materials, like clinical to nuclear, biodegradable to non-biodegradable and common household to industrial toxic waste. While developed countries are able to manage and treat these waste materials of different categories, developing countries like India and Bangladesh are still struggling with the collections and proper disposal of common household waste materials. Disorganized management and dumping of waste is a noticeable cause for ruining the environment in the major cities of these developing countries. Currently, according to a UNFPA report, Dhaka is one of the most polluted cities in the world and one of the issues concerned is the management of municipal waste. Implementing existing smart solutions for waste management systems in developing countries like Bangladesh is a far greater challenge due to many different factors e.g.: socioeconomic environment, and the unplanned infrastructural issues. Waste is carried and thrown improperly leading to unhealthy and inhabitable environment that costs the government insane amount of money with not at all positive impact. Therefore, wastes and garbage need to be packed, dumped, collected, transported, manipulated and recycled properly in such ways that garbage becomes a precious wealth of the country

## II. EXISTING APPROACH

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.

### III. PROPOSED METHODOLOGY

In this, we are using Location Based Garbage Management System for Smart City. We have developed an android application to notify the administrator when dustbin is full and other side to raise instant requests to admins then and there itself when the waste is identified by the user to clean them. The Fig 1.1 shows the flow chart of the proposed system

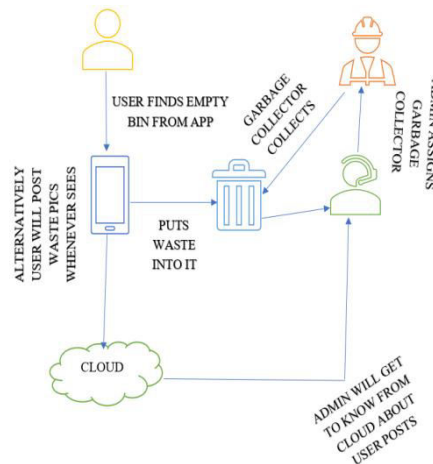


Figure 1. Flow chart of proposed system

Activity diagrams are graphical representations of workflows of stepwise activities and actions with support for choice, iteration and concurrency. In the Unified Modeling Language, activity diagrams can be used to describe the business and operational step-by-step workflows of components in a system. An activity diagram shows the overall flow of control.

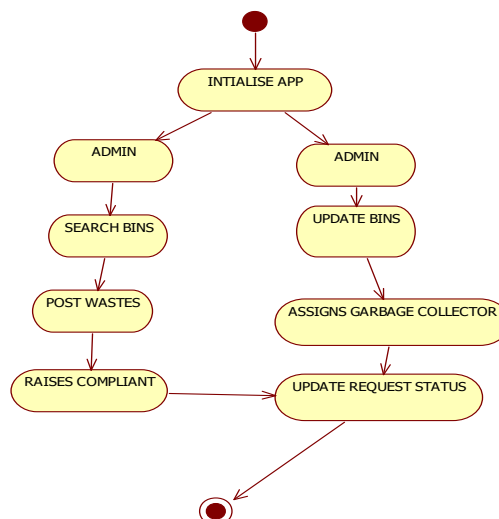


Figure 2. Activity Diagram

### IV. ADVANTAGES

This particular system has following advantages:

- [1] It is safe and ecofriendly application.
- [2] Preserving and developing open spaces.

[3] Efficient working.

[4] Making governance citizen friendly and cost effective.

## V. FUTURE SCOPE

In future, it can be implemented with more features using IoT, like

[1].Further we can add up features like tracking of garbage vehicles.

[2].Without any android application we create this garbage collection process as hardware process by using sensors

## VI. RESULTS

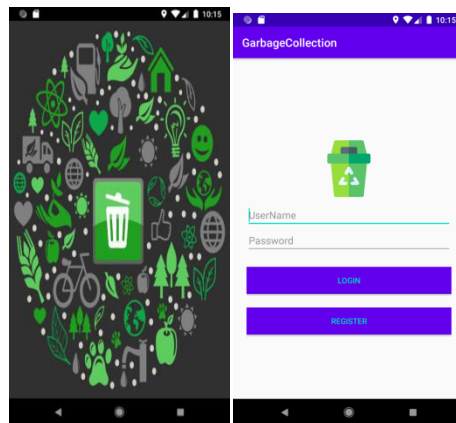
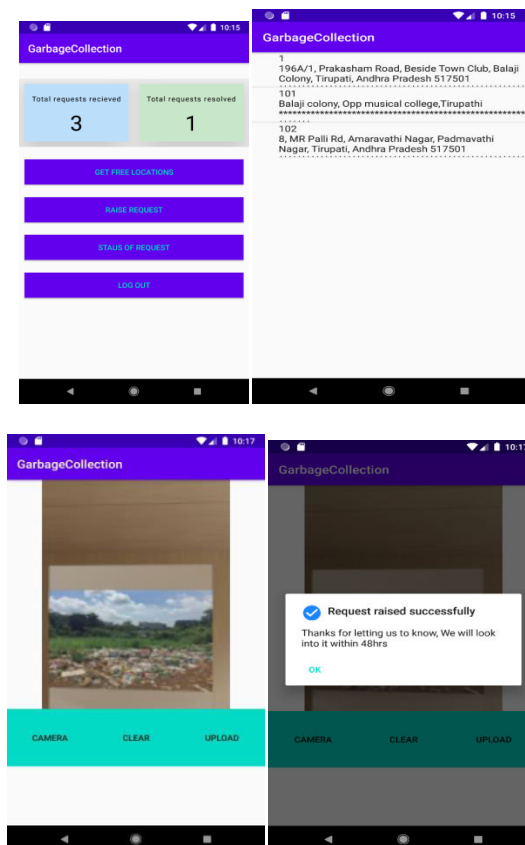


Figure 3.Login page's



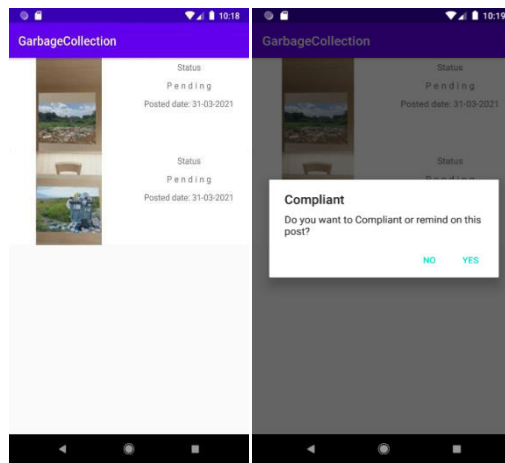
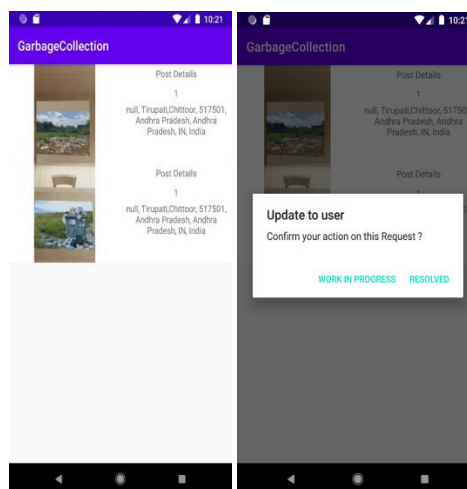
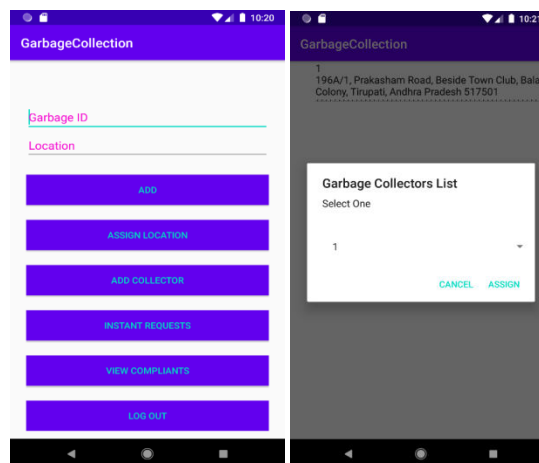


Figure 4. User page's





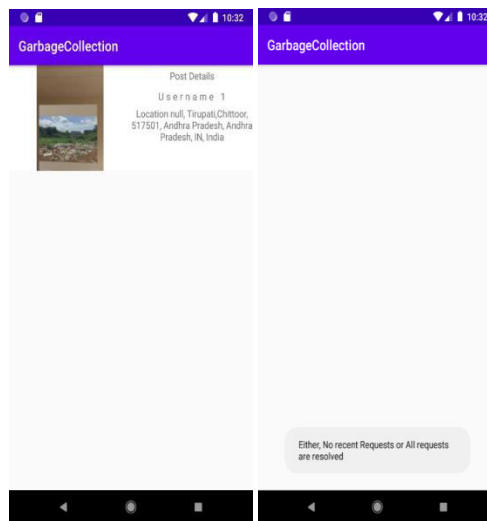


Figure 5.Admin Page's

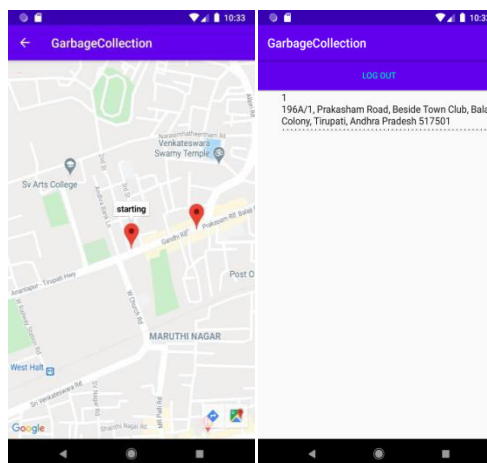
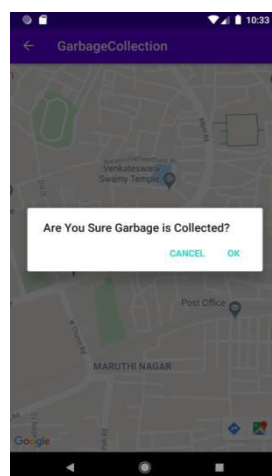


Figure 6.Garbage Collector Page's



## VII. CONSLUSION

Our Application Concludes by including that the user can easily get to know about empty bins around him and can post the waste pics around him and help the admi stators in keeping the city clean.

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