

E-Plastic Waste Management System

Sai Kishore Tadi¹, Subhan Saheb Shaik², Sai Kiran Tirukkovalluri³, Sandeep Ponnada⁴, Tanveer Basha Shaik⁵
^{1,2,3,4,5}B. Tech Students, Department of Computer Science and Engineering,
 Sri Vasavi Engineering College, Tadepalligudem, Andhra Pradesh, India

Abstract:- Plastic waste is a major environmental problem. Every year, millions of tons of plastic end up in landfills, oceans, and other waterways. This plastic can take hundreds of years to decompose, and it can harm wildlife and pollute the environment. Recycling plastic is one of the most efficient ways to reduce plastic waste. When plastic is recycled, it can be reused to make new products. This helps to reduce the amount of new plastic that needs to be produced, which can help to protect the environment. In this paper, we propose a new system for managing plastic waste. The system would use a web-based platform and a mobile app to allow users to register their plastic waste and receive payment for it. The municipality would then collect the plastic waste and recycle it. The proposed system would have a number of advantages over traditional methods of recycling plastic waste. It would be more convenient for users, as they would not have to travel to a recycling center. It would also be more efficient for the municipality, as they would be able to collect more plastic waste. We believe that the proposed system has the potential to be a major breakthrough in the fight against plastic pollution. The system could be implemented in cities and towns around the world, and it could help to reduce the amount of plastic waste that ends up in landfills and oceans.

Keywords:- Plastic, Waste, Recycling, Efficient Method, Global Warming, Sustainability, Environmental Impact, Waste Management, Innovation, Technology.

I. INTRODUCTION

Plastic is required for all of this. It is more than just a convenience. Modern technological products, for example, would be impossible to manufacture without plastic; plastic packaging saves product weight, transportation costs, and the usage of fossil fuels. And most medical equipment, such as the ventilators that saved so many lives during the Covid-19 outbreak, is made of plastic. Plastic has become a fundamental part of our daily lives. It is used in everything from food packaging to clothing to electronics. Plastic has also a significant environmental impact. Plastic waste is a major problem worldwide. Every year, millions of tons of plastic end up in landfills, oceans, and other waterways. This plastic can take hundreds of years to decompose, and it can harm wildlife and pollute the environment.

Recycling plastic is one of the most efficient ways to reduce plastic waste. When plastic is recycled, it can be reused to make new products. This helps to reduce the amount of new plastic that needs to be produced, which can help to protect the environment. In this paper, we propose a new system for managing plastic waste. The system would use a web-based platform and a mobile app to allow users to register their plastic waste and receive payment for it. The

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II. RELATEDWORK

There are a number of existing systems for managing plastic waste. However, these systems have a number of limitations. For example, they are often not user-friendly or efficient. The proposed system would address these limitations by being designed to be user-friendly and efficient.

One existing system is the Recyclebank system. Recyclebank is a website and mobile app that allows users to earn points for recycling. These points can then be redeemed for discounts or other rewards. However, the Recyclebank system is not as user-friendly as the proposed system. It is also not as efficient, as it does not allow the municipality to collect plastic waste directly from users.

Another existing system is the TerraCycle system. TerraCycle is a company that collects and recycles hard-to-recycle waste, such as plastic bags and straws. However, the TerraCycle system is not as convenient for users as the proposed system. Users have to mail their plastic waste to TerraCycle, which can be inconvenient and time-consuming.

The proposed system would be a significant improvement over existing systems for managing plastic waste. It would be more user-friendly, efficient, and convenient for users. It would also be more environmentally friendly, as it would help to reduce the amount of plastic waste that ends up in landfills and oceans.

III. PROPOSEDSYSTEM

The proposed system would consist of the following components:

- A web-based platform for users to register their plastic waste.
- A mobile app for users to upload photos of their plastic waste.
- A system for the municipality to collect and recycle the plastic waste.

The web-based platform would allow users to register their plastic waste by providing information about the type, quantity, and location of the waste. The platform would also allow users to upload photos of their plastic waste. The mobile app would allow users to upload photos of their plastic waste. The app would also allow users to track the status of their plastic waste (e.g., whether it has been collected, recycled, etc.). The municipality would collect the plastic waste from users and recycle it. The municipality would use a variety of methods to collect the plastic waste, such as door-to-door collection, drop-off centers, and mobile collection units.

IV. TECHNOLOGIES USED

The proposed system would be implemented using the Django framework and Python. The Django framework is a popular web framework that is used to develop web applications. Python is a popular programming language that is used for a variety of tasks, including web development.

The Django framework would be used to develop the web-based platform and mobile app. Python would be used to develop the backend of the system.

V. IMPLEMENTATION

The proposed system could be implemented by a municipality or a private company. The system would require a web server, a database, and a mobile app. The system would also require a team of developers to maintain and support the system.

VI. ADVANTAGES

The proposed system would have a number of advantages over traditional methods of recycling plastic waste. These advantages include:

- It would be more convenient for users.
- It would be more efficient for the municipality.
- It would be more profitable for users and the municipality.
- It would be more environmentally friendly.

VII. PYTHON

Python was chosen for a variety of reasons. Depending on your view point and background, For programmers, it was created. Python is among the most well-known programming languages. One of the simplest programming languages to learn is Python.

VIII. DESIGN & WORKFLOW

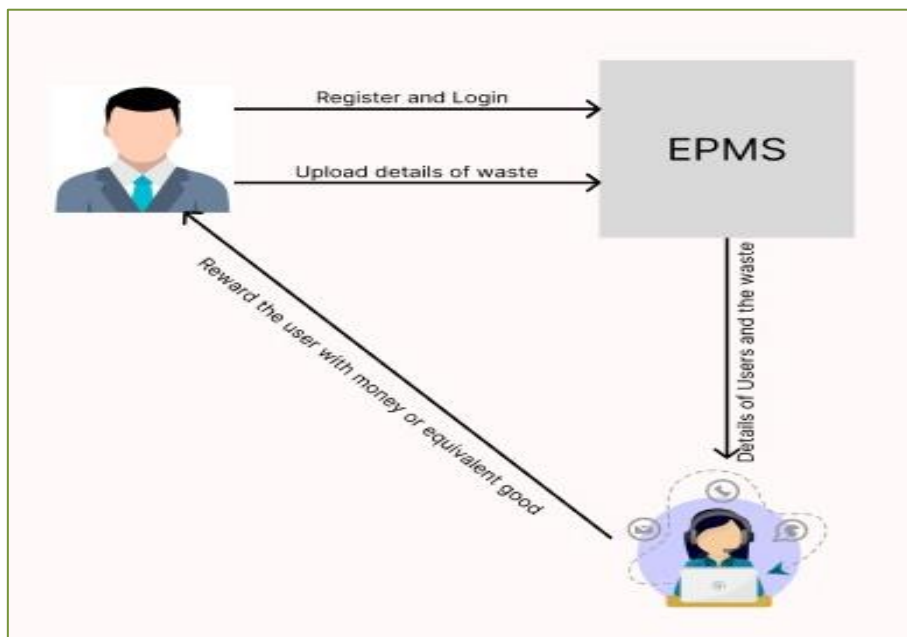


Fig. 1: Workflow Of EPMS

➤ *From Design :*

The proposed system would be designed to be user-friendly and efficient. The system would be designed to be easy to use for both users and the municipality. The system would also be designed to be efficient, so that the municipality could collect and recycle the plastic waste as quickly and easily as possible.

The workflow of the proposed system would be as

follows:

- A user registers their plastic waste on the web-based platform or through the mobile app.
- The user uploads a photo of their plastic waste.
- The municipality collects the plastic waste from the user.
- The municipality recycles the plastic waste.

The user receives payment for their plastic waste.

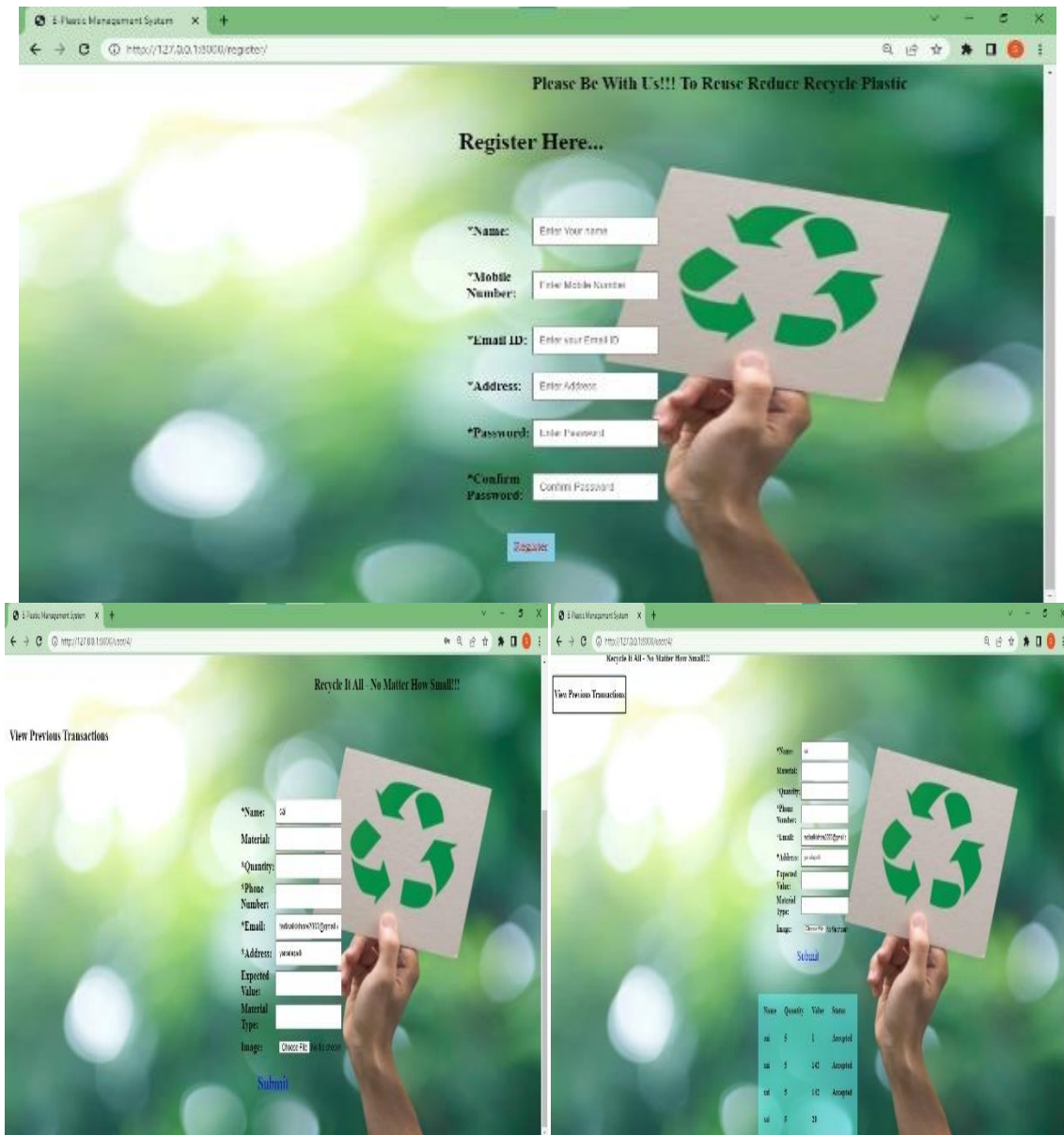


Fig. 2 : Screenshots of EPMS

IX. RESULT ANALYSIS AND DISCUSSION

From Fig1, It illustrates the system architecture that the communication of user and the admin(municipality) with the EPMS -web application .And in Fig2,illustrating that how user gives the amount of plastic waste that he/she is having through EPMS,and He/She can able to see the status of their request whether it is accepted or not and previous transaction details are also visible to the user if applicable.

X. CONCLUSION

The proposed system would be a new and innovative way to manage plastic waste. The system would be user-friendly, efficient, and profitable. The system would also be environmentally friendly, as it would help to reduce the amount of plastic waste that ends up in landfills and oceans.

XI. FUTUREWORK

The proposed system has the potential to be a major breakthrough in the fight against plastic pollution. The system could be implemented in cities and towns around the world, and it could help to reduce the amount of plastic waste that ends up in landfills and oceans.

The system could also be expanded to include other types of recyclable materials, such as paper, metal, and glass. This would make the system even more environmentally friendly and would help to reduce the amount of waste that is sent to landfills.

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