

Project Overview

The waste classification system is a Java-based project designed to assist in sustainable waste management by categorizing waste items into recyclable, organic, or non-recyclable groups based on user-provided characteristics. This system serves as a foundational tool to promote efficient recycling practices and reduce environmental impact.

Coding Summary:

- **User Input:** Utilizes the Scanner class to prompt users for waste characteristics.
- **Classification Method:** Implements a `classifyWaste` method that employs basic decision rules to determine waste categories.
- **Categories:** Identifies recyclable waste containing plastic or glass, organic waste, and non-recyclable waste.
- **Simplicity:** While simplistic, it highlights the potential of technology in advancing sustainable waste management.
- **Future Directions:** The project provides a starting point for more advanced systems employing machine learning for accurate waste classification.

While the current implementation relies on basic decision rules, there is significant potential for expansion and enhancement. Future iterations of the project could incorporate more sophisticated classification algorithms, such as machine learning techniques, to improve accuracy and versatility. Additionally, features such as database integration, image recognition capabilities, and real-time data analysis could further enhance the system's functionality and usability.

The waste classification system represents a foundational step towards more effective waste management and environmental conservation. By harnessing technology to empower individuals and organizations in their sustainability efforts, it contributes to building a cleaner, greener future for generations to come.