



Description :

- Poor waste management practices in residential areas contaminate the environment and undermine neighborhood cleanliness.
- The task is to come up with creative ways to discourage neighbors from disposing of garbage bags carelessly and to encourage appropriate waste management techniques.
- The main goals of the solutions should be to increase public awareness through advertising, implement behavioral change techniques, include the community, upgrade infrastructure, and use technology to dispose of garbage efficiently.
- By implementing doable, scalable projects, the goal is to make the neighborhood cleaner and more sustainable.

Basic Details of the Team and Problem Statement

Ministry/Organization Name/Student Innovation:
Government Of Kerala

PS Code: **SIH 1322**

Problem Statement Title: **Domestic Waste Management**

Team Name: **Mushin Sharks**

Team Leader Name: **SACHIDANAND SINGH**

Institute Code (AISHE): **C-46232**

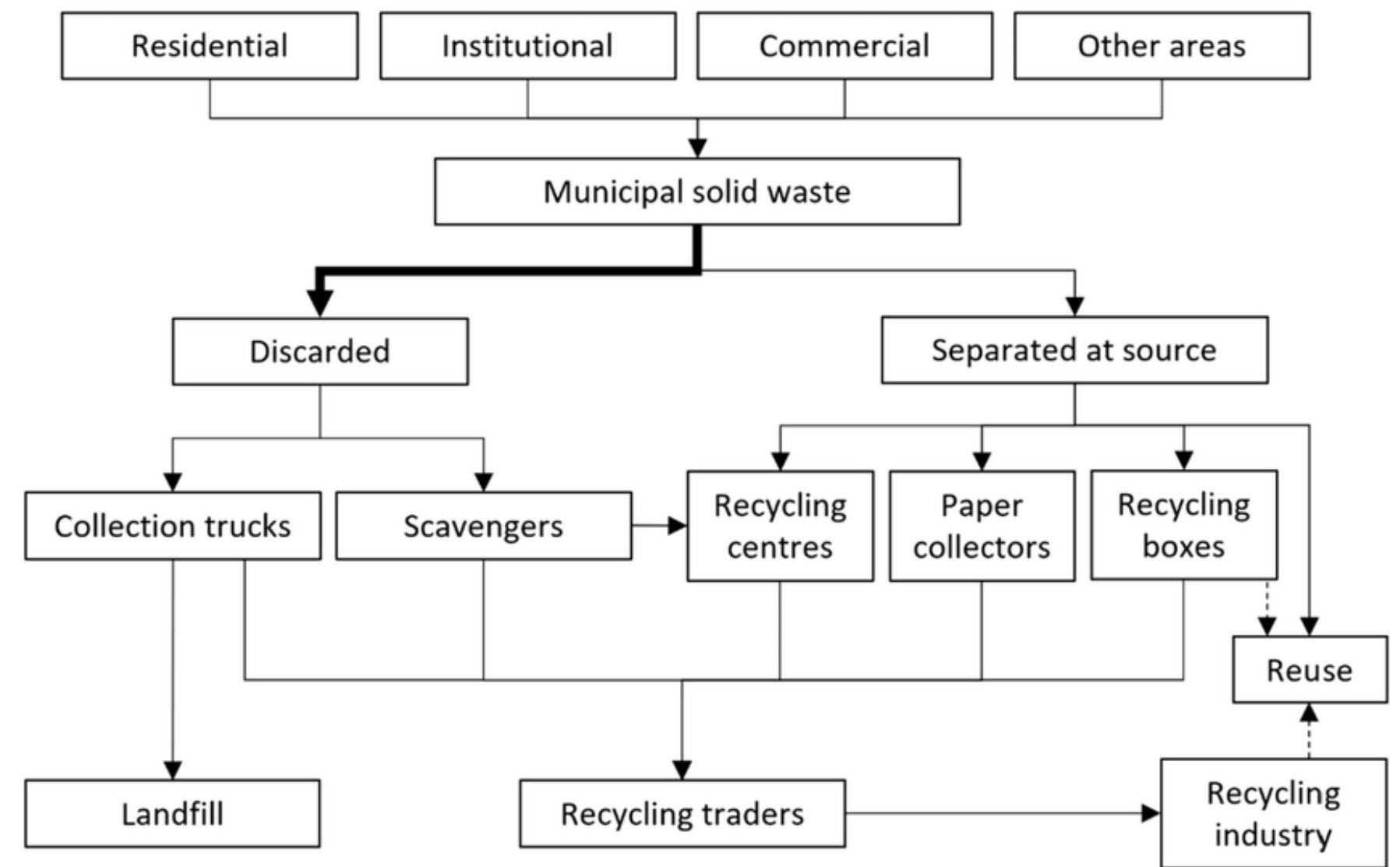
Institute Name: **Noida Institute Of Engineering & Technology**

Theme Name: **Clean & Green Technology**

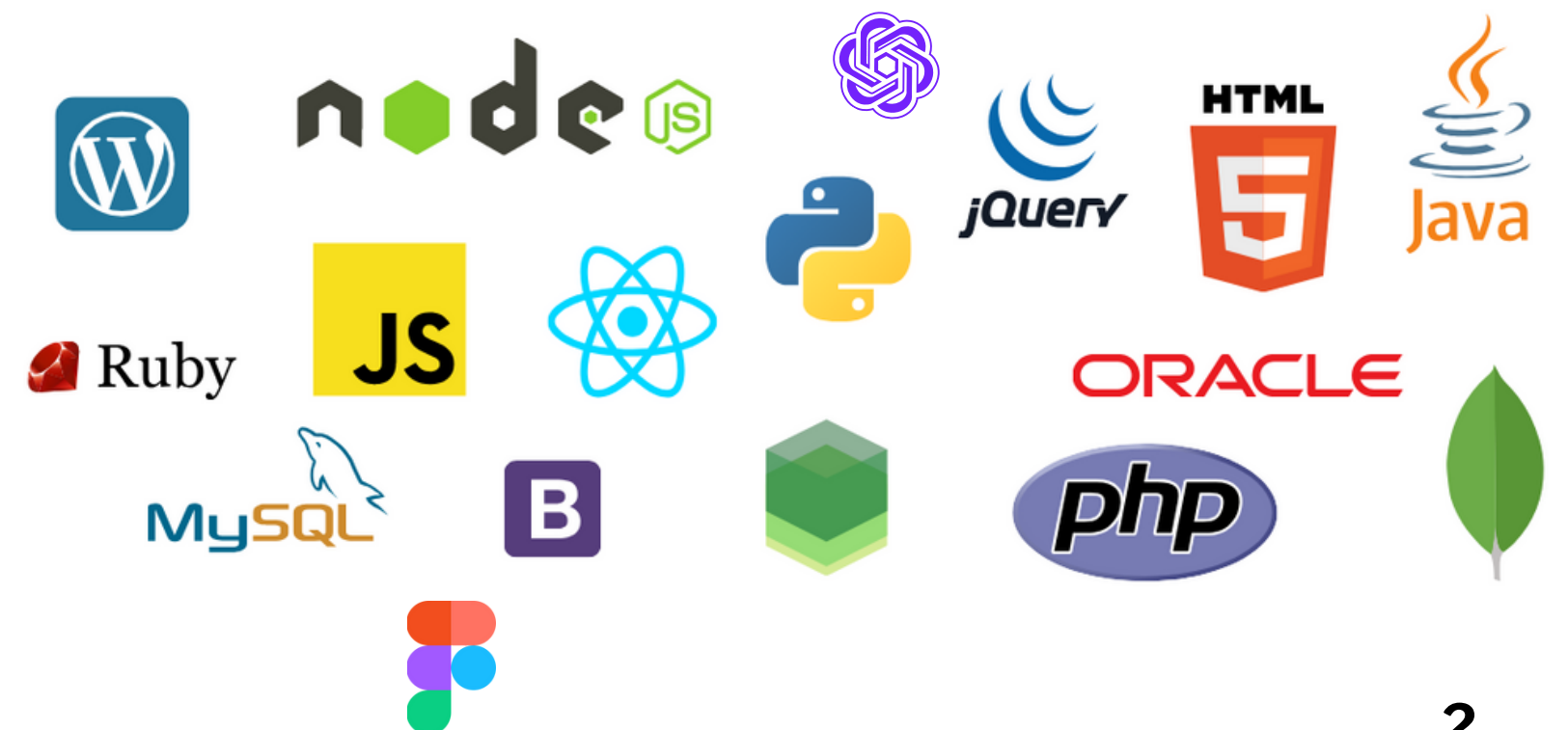
Idea/Approach Details

Developing an platform based on **android** and **web** based application that will serve as a platform to all **Municipals corporations** , **govt. authorities**, **Nagar Nigam** , **Public** , **industries** etc. to get rid of **Domestic Waste** , **pollution**, **Health issues**, challenges of dumping while also benefiting technologically & financially .The prototype will function as follows :

- **Community Recycling Center:** By creating a **central recycling site for locals**, the Community Recycling Centre promotes involvement and **provides rewards for recycling**. This facilitates appropriate recycling and strengthens community-wide waste management practices.
- **Neighborhood Cleaning Day:** Neighborhood **Cleaning Day** encourages **community cooperation** and a mutual dedication to cleanliness. Residents are driven to actively contribute, **assured of recognition and rewards** for their efforts
- **Prior Segregation of Waste:** Regularly **monitor waste segregation practices** and offer rewards or **recognition** for households that consistently practice effective waste segregation.
- **EcoSegra: Learn, Recycle, Earn:** This app provides users with an interactive platform to **master** the art of **waste segregation**, promoting **Eco-conscious behavior**. EcoSegra provides a user-friendly **recycling center locator** for easy **disposal access**. Regular **reminders** keep users updated on **waste collection schedules**, ensuring efficient and seamless recycling efforts.
- **Neighborhood Waste Sorting Stations:** Install **waste sorting stations** with clear signage and instructions for residents to separate **recyclables**, **organic waste**, and **non-recyclables**, ensuring regular collection and proper disposal of sorted waste
 - **Integration with Municipal Authorities:** this solution not only encourages **community involvement** in waste management but also **helps combat illegal dumping**. Providing incentives for reporting incidents **empowers residents to take an active role** in maintaining a clean and hygienic neighborhood.



Technology stack :



Idea/Approach Details

Describe your Use Cases here

- The user uses the web application or android to check the **location for dumping waste** and **recycling center** , and can participate in competitions for rewards.
- **Neighborhood Unites for Clean-up Day**: Residents join a community-wide cleaning day, ensuring a clean environment and **get instant rewards and goodies**.
- **Earns Points for Proper Waste Segregation**, for correctly sorted items and receives reminders for efficient recycling efforts.
- **Eco-Friendly Shopping with Rewards**: Emily checks the **app's reward catalog** for discounts at **local Eco-friendly stores**, encouraging sustainable shopping habits.
- **Interactive Recycling Challenges**: The **app hosts recycling challenges**, **motivating residents** to surpass their recycling goals and earn extra points.
- By **integrating various game** types, multiplayer competitions, the Waste Management Solution adds an **entertaining dimension**. This not only educates but also engages residents, **encouraging their active participation** in waste management practices.

Describe your Dependencies / Show stopper here

- **Active participation and cooperation** of residents and communities in **waste segregation** and collection are vital.
- Cooperation with **waste collection service providers**, both public and private, for timely and efficient collection.
- Effective data collection and analysis systems for **monitoring waste generation**, collection, and disposal.
- Dependence on **public awareness campaigns** and educational programs to **promote responsible waste disposal**.
- Efficient **rewards system management** requires accurate point tracking, incentive administration, and timely reward distribution
- **Integration with municipal authorities** relies on their willingness to collaborate, share data on **illegal dumping incidents**, and **support the reward system**.

Team Member Details

Team Leader Name: SACHIDANAND SINGH

Branch (B tech/M tech/PhD etc): B.tech Stream (ECE, CSE etc): CSE(AIML) Year (I,II,III,IV): III

Team Member 1 Name: RAJESH KUMAR

Branch (B tech/M tech/PhD etc): B. tech Stream (ECE, CSE etc): CSE(AIML) Year (I,II,III,IV): III

Team Member 2 Name: ANJANA KUMARI SINGH

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Team Member 3 Name: RISHABH KUMAR ARYA

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Team Member 5 Name: AHMAD MAAZ

Branch (B tech/M tech/PhD etc): B.tech Stream (ECE, CSE etc): CSE(IOT) Year (I,II,III,IV): III

Team Mentor 1 Name: Oshin Misra

Category (Academic/Industry): Academic Expertise (AI/ML/Blockchain etc): AI/ML/Image Processing/Information Security/Biomedical IP/Computer Forensic.

Domain Experience (in years): 4 years

Team Mentor 2 Name: Purnima Pal

Category (Academic/Industry): Academic Expertise (AI/ML/Blockchain etc): AI/ML/Communications Engineering/Image Processing/Biomedical Signal

Processing. Domain Experience (in years): 5 years