Baderia Global Institute of Engineering and Management, Jabalpur, Madhya Pradesh 482002

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Think Tanker

Profile Overview

- **Theme** – Green Tech
- **Problem Statement Title**- Design efficient solutions for managing and recycling solid and electronic waste to reduce environmental impact.
- **Team ID-** Think Tanker
- **Team Name-** Think Tanker

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IDEA TITLE

Proposed Solution (Describe your Idea/Solution/Prototype)

- Solution Overview: Our project makes waste disposal easy by connecting users with recycling services and sending reminders to stay eco-friendly. It reduces pollution and encourages responsible behavior through an accessible, reward-based system.
- Problem-Solving: This project aims to develop smart and sustainable systems for the collection, segregation, and recycling of solid and electronic waste.
- Innovation: Combines IoT, AI, and mobile technology for real-time waste tracking and efficient recycling.

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Technical Approach

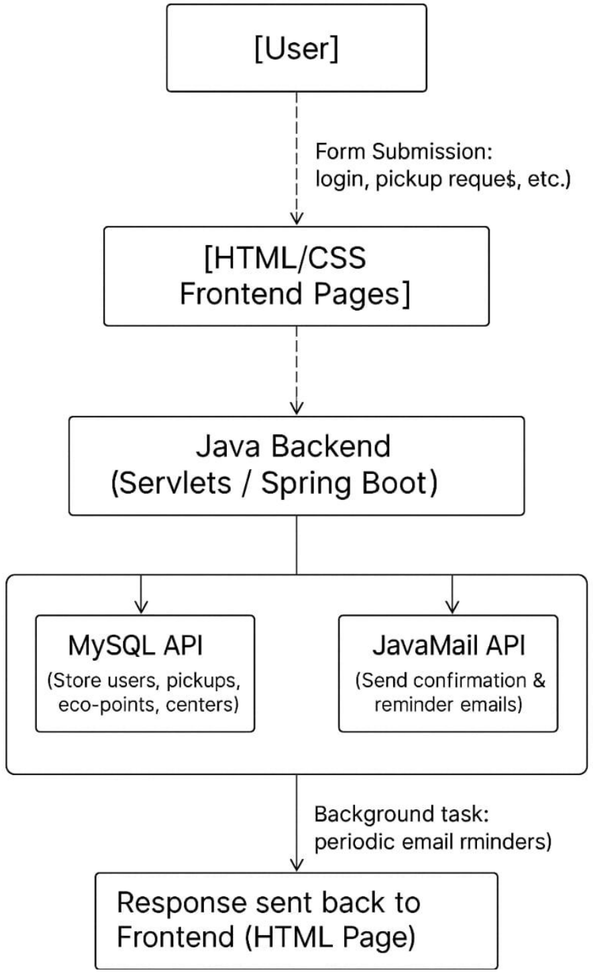
- Technologies Used:

Frontend: HTML, CSS, JS; **Backend**: Java(Servlets / Spring Boot),

JavaMail API, ScheduleExecutorServer ;**Database**: MySQL, JDBC

- Methodology: Our project follows a structured methodology to design, develop, and implement a smart waste management portal using Java (backend) and HTML/CSS (frontend)

- Process Flow:



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FEASIBILITY AND VIABILITY

- **Feasibility:** The project is technically feasible with Java for backend and HTML/CSS for a clean frontend, supporting database and email integration. It's realistic for a hackathon, scalable for real-world use, and hardware can be simulated if needed.
- **Challenges & Risks:** Scaling the system requires coordination with local authorities. Long-term maintenance and operational costs may also pose risks.
- **Mitigation Strategies:** Use simulations and middleware for easier hardware integration. Boost user engagement with rewards and refine data accuracy through AI and feedback. Scale gradually with local support and manage costs via efficient tools and partnerships.

IMPACT AND BENEFITS

- Target Audience Impact: Urban and Semi-Urban Residents, Local Municipal Bodies & Waste Management Agencies, Environment-Conscious Communities & Youth.
- Key Benefits: Environmental Impact Reduction, User Engagement, Data-Driven Insights, Scalability, Cost Efficiency.
- Long-Term Value: Sustainable Waste Management, Smart City Integration, Data-Driven Policy Making, Community Impact, Economic Benefits.

REFERENCES

Details / Links of the reference and research work:

-> World Health Organization (WHO): Provides insights into the health impacts of improper e-waste disposal .
https://www.who.int/news-room/fact-sheets/detail/electronic-waste-(e-waste)

-> IEEE Xplore: For research papers on IoT and smart waste management systems.
https://ieeexplore.ieee.org/Xplore/home.jsp

-> Green Electronics Council: Focuses on environmentally responsible electronics and sustainability practices.
https://globalelectronicscouncil.org/