MANIPAL UNIVERSITY

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SMART-DUSTBIN DISPOSAL WITH REWARD SYSTEM

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OUTLINE

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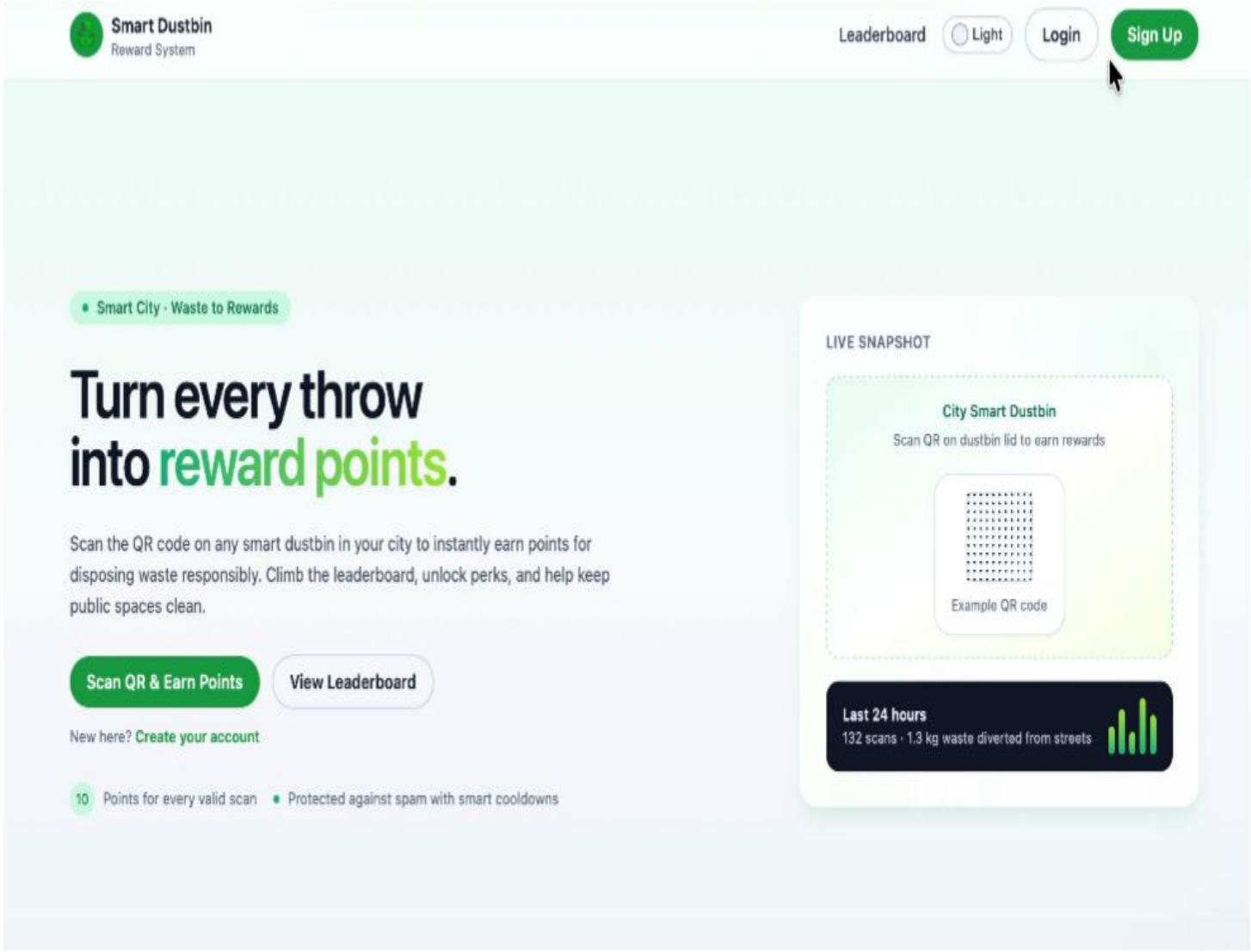


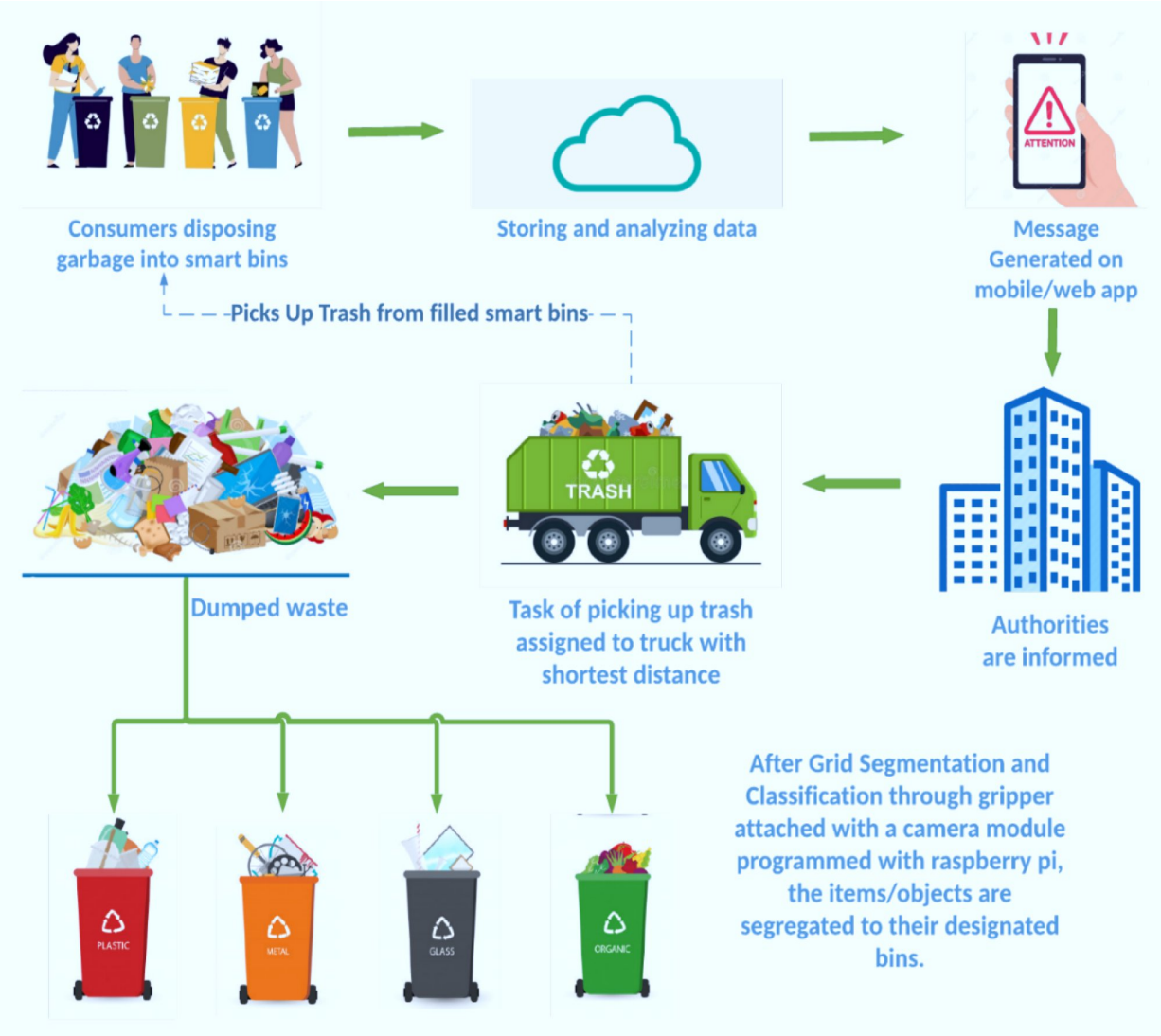
INTRODUCTION

GLOBAL CHALLENGE

Effective waste management is a critical challenge for modern society.Rapid urbanization has led to increased waste generation,polluted streets,and health hazard.

MOTIVATION GAP

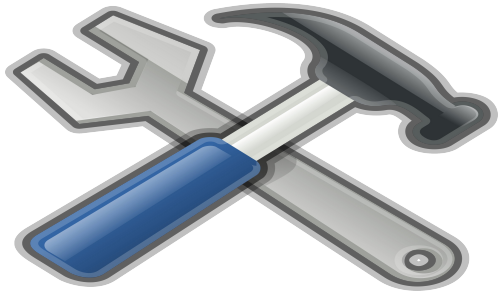
A primary driver of this issue is the lack of public motivation.Current system rely on compliance rather than incentivization.This project proposes a solution that makes waste disposal rewarding.



LITERATURE REVIEW & BACKGROUND

CURRENT STATE

Traditional waste management is reactive.It relies on citizens' instrinsic motivation,which often fails,leading to degradation.



ENFORCEMENT LIMITATIONS

Punitive measures and strict enforcement are difficult to scale and maintain.They do not create long-term behavorial change.

GAMIFICATION GAP

There is a lack of systems that utilize "Gamification" effectively-turning the chore of waste disposal into rewarding activity.

PROBLEM STATEMENT

- Traditional waste management fails due to a lack of citizen engagement.This project addresses the critical need for an incentivized system to motivate responsible waste segregation and disposal in urban environment.
- Manual monitoring is inefficient and time-consuming.
- No reward or ranking system for waste management performance.

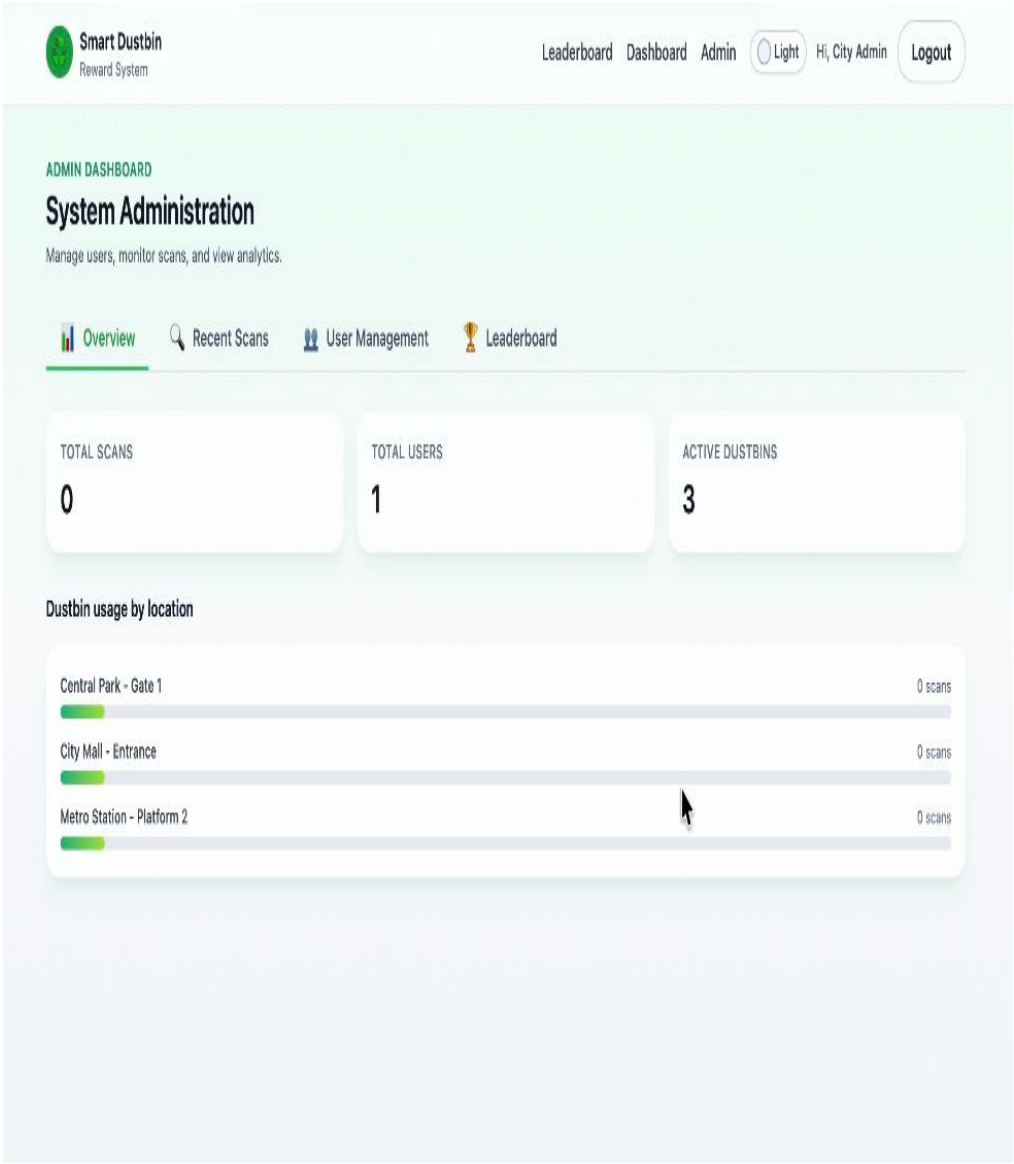
PROJECT OBJECTIVES

- ✓ Smart Identification:Design a high-tech system identifies and accurately measures desposited waste.
- ✓ Website Interface:Develop a comprehensive website for user interaction and reward tracking.
- ✓ Reward System:Implement a real-time mechanism that credits points to user upon verified waste disposal.
- ✓ User Experience:Create a smooth and intuitive UI/UX to maximize user adoption and behavorial change.

SYSTEM OVERVIEW

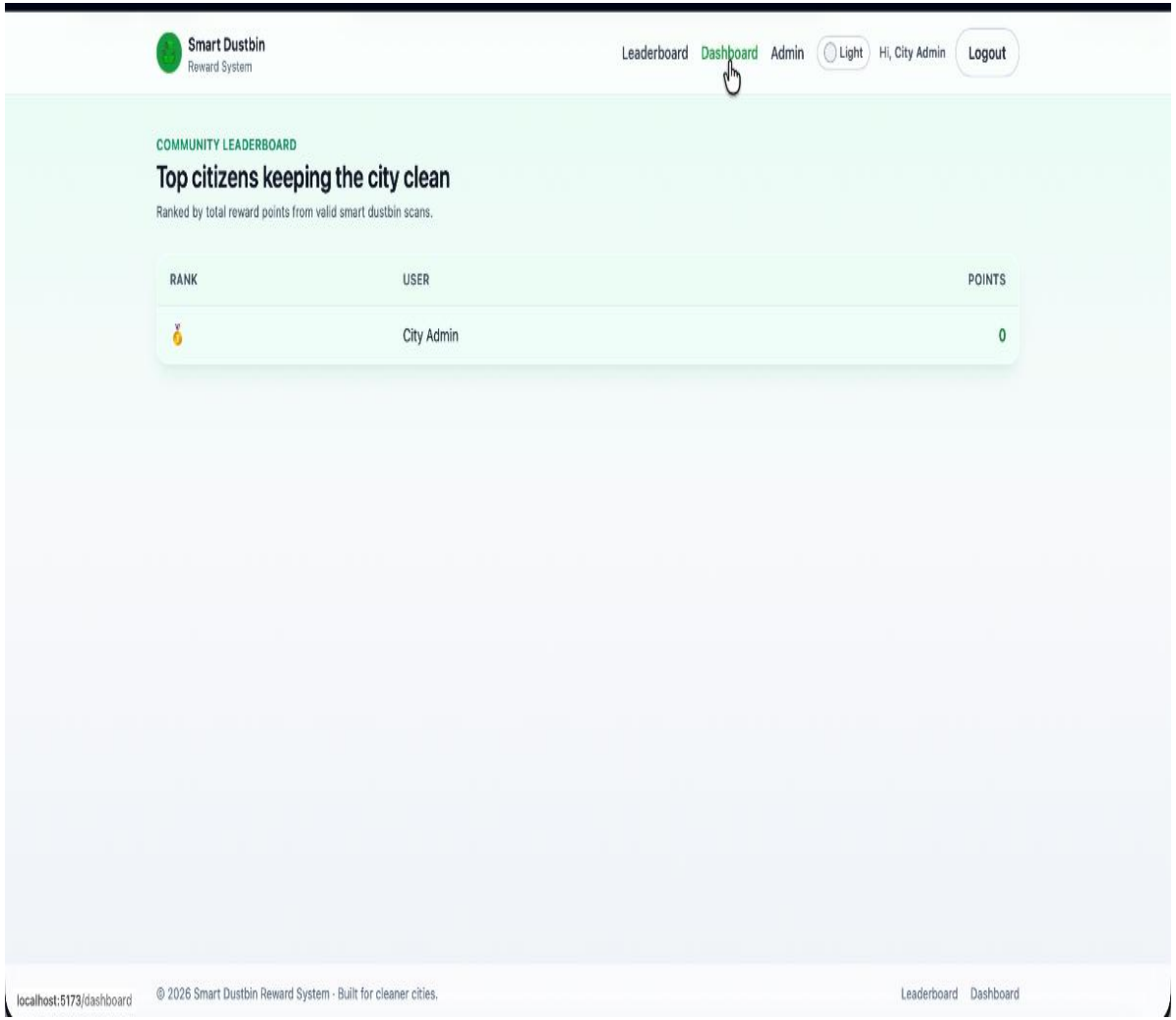
Web Application developed for waste management.

- Role-based login (Admin & Client).
- Dashboard for monitoring dustbin status.
- Leaderboard for ranking performance.
- Centralized data storage and management.



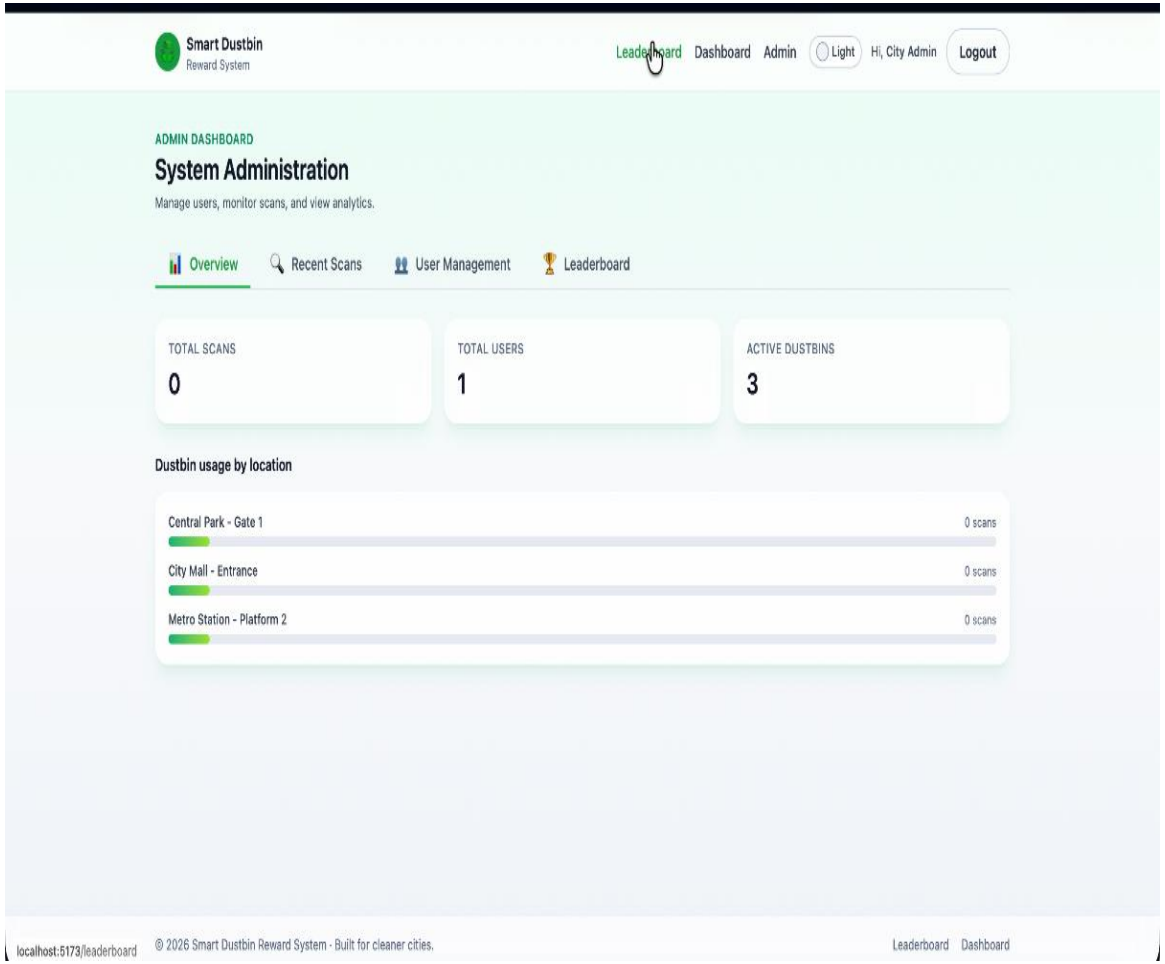
DASHBOARD

- View all registered clients.
- Monitor dustbin status and waste levels.
- Manage users and system data.
- Track overall performance statistics.
- Access leaderboard rankings.



LEADERBOARD SYSTEM

- Ranks users based on performance metrics.
- Encourages healthy competition
- Improves accountability in waste collection.
- Displays top-performing clients.



WORKING PROCESS

1. User logs in (Admin/Client).
2. Dashboard displays real-time data.
3. Data updates when waste is collected.
4. System stores data in database.
5. Leaderboard updates automatically.

ADVANTAGES

- Reduces manual monitoring effort.
- Improves cleanliness and efficiency.
- Transparent performance tracking.
- Scalable for smart city implementation.

FUTURE ENHANCEMENT

- Integration with IoT sensors.
- Mobile application version.
- AI-based waste prediction system.
- GPS tracking for waste collection vehicles.

CONCLUSION

- Smart Dustbin Disposal System improves waste management.
- Website-based dashboards enhance monitoring and control.
- Leaderboard motivates better performance.
- Supports sustainable and smart city initiatives.

THANK YOU!