

Project presentation

Waste Management system

Team 6



Introduction

- Waste management or waste disposal includes the processes and actions required to manage waste from its inception to its final disposal .
- This includes the collection, transport, treatment, and disposal of waste, together with monitoring and regulation of the waste management process and waste-related laws, technologies, and economic mechanisms.





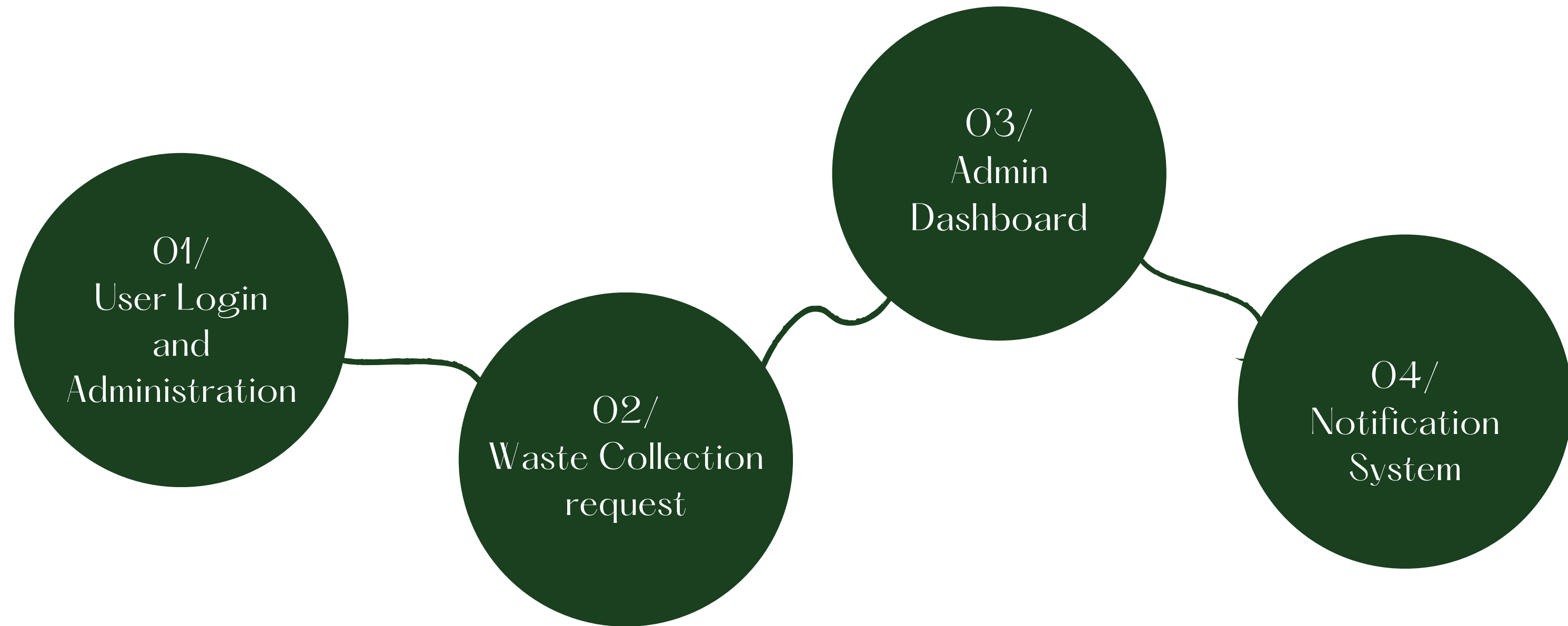
Problem Statement

- Build an online platform for efficient waste management where users can register, log in, and request waste collection services.
- The platform will allow users to schedule waste collection, track the status of their requests, and provide realtime notifications.
- Additionally, the system will include admin functionalities to manage waste collection and monitor the process..



The main objective is to streamline waste management, providing users with a simple interface to manage their waste collection requests and receive updates on their collection status. Admins will be able to manage requests efficiently, ensuring proper collection and disposal of waste.

MODULES



User Registration and Login:

- Users should be able to register using email and password.
- Users should be able to log in to access the platform's functionalities.
- Redirect users to their respective dashboards based on their role (user or admin).



Waste Collection Request Management

- Design the database schema for managing waste requests.
- Implement backend logic to manage waste collection requests and statuses.
- Allow users to submit waste collection requests.
- Users should be able to schedule waste collection time and location.



Admin Dashboard

- Admins can manage user requests, assign tasks to workers, and monitor the progress of waste collection.
- The system will display real time tracking of waste collection.

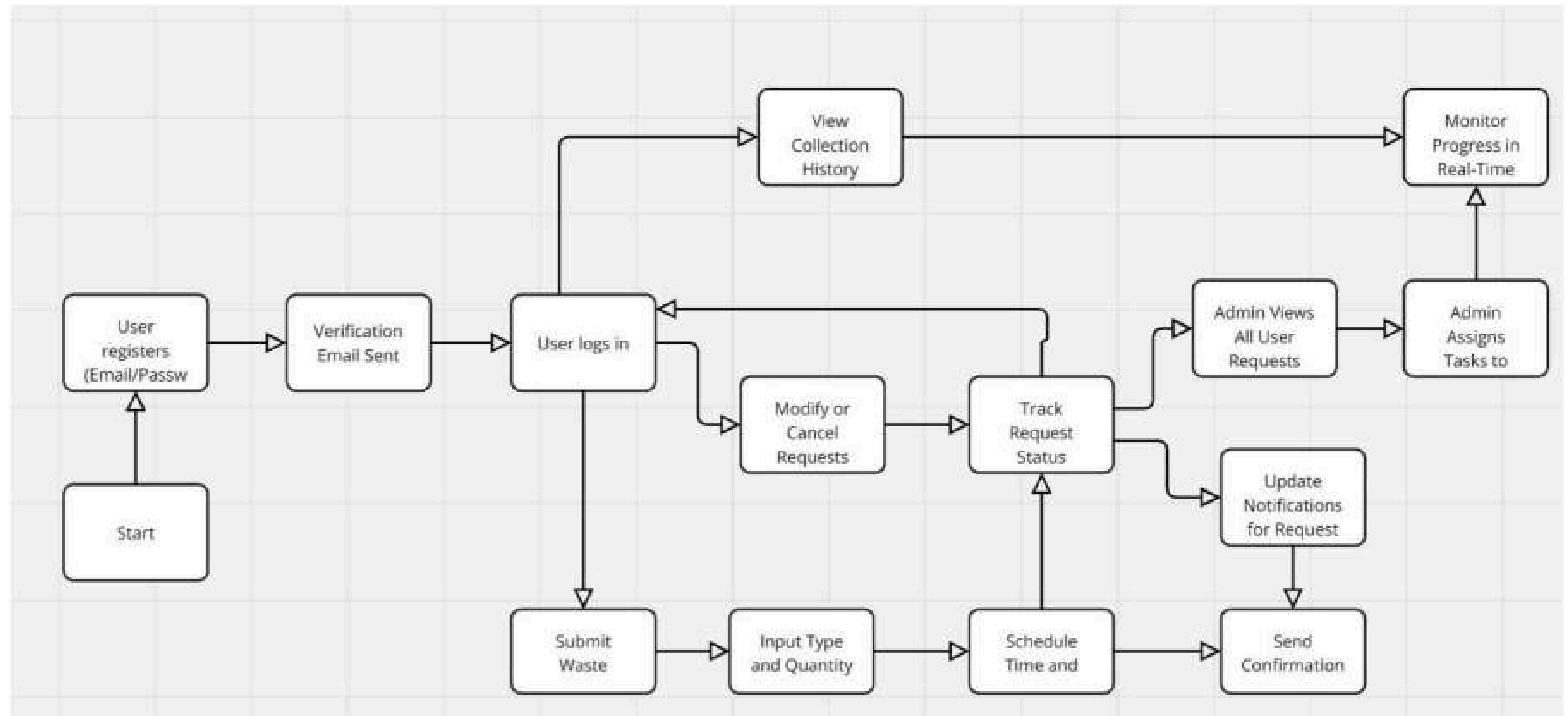


Notification System

- Implement email/SMS notification triggers to update users on request statuses, including confirmations and collection reminders.
- Ensure notifications are sent in real time based on user actions.



WORK FLOW



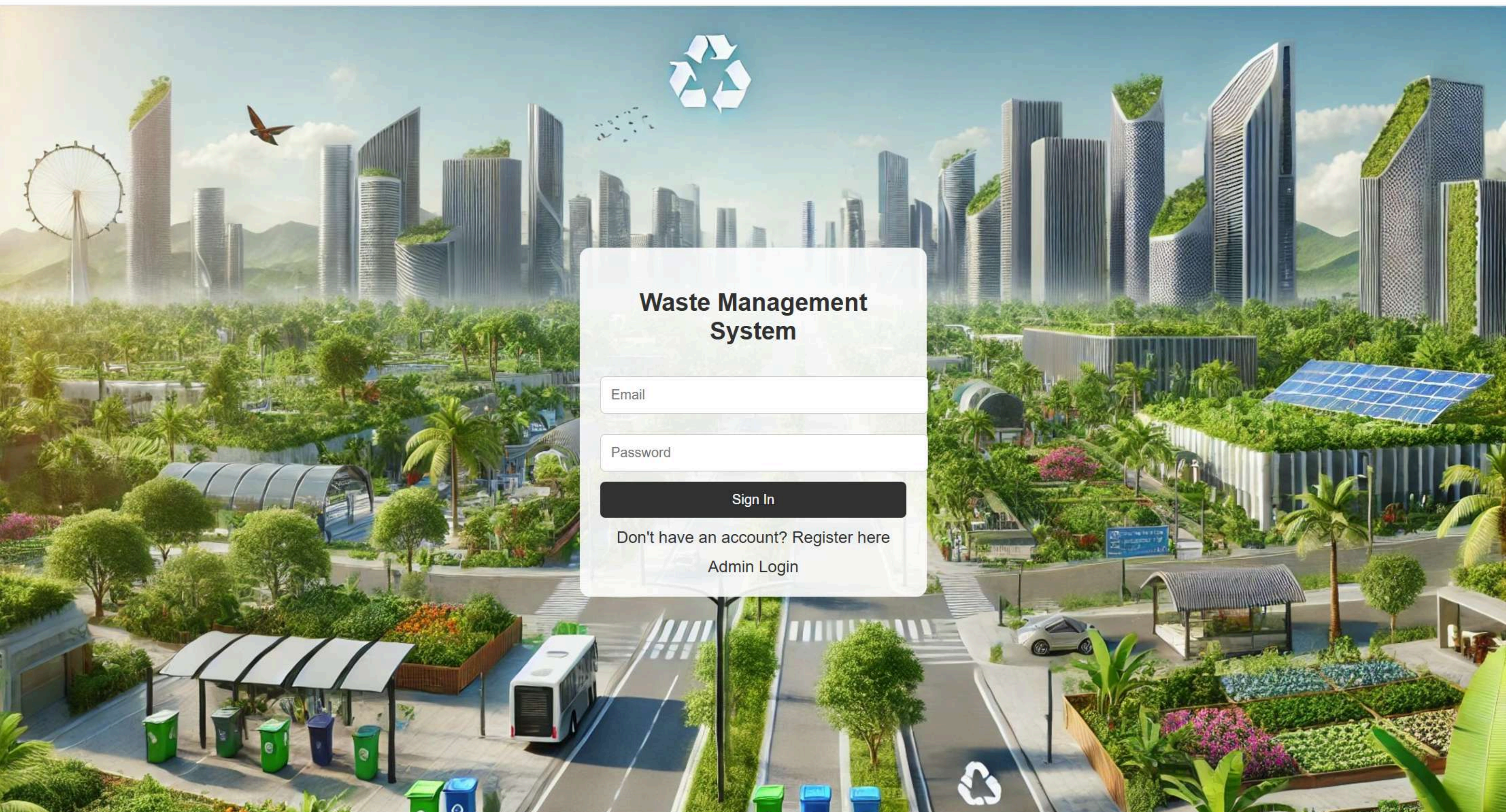


Waste Management System

Register

[Already have an account? Login here](#)





Waste Management System

Sign In

[Don't have an account? Register here](#)

[Admin Login](#)

Welcome to Waste Management

Efficient waste collection and management for a cleaner city

Waste Collections

View and manage all the waste collection activities across the city.

Request Collection

Submit a request for waste collection from your location.

Route Information

Check the routes and schedules for waste collection services.

Request Collection

Submit a request for waste collection from your location. Please fill out the details below:

Collector Name:

Collector Email:

Waste Type:

Quantity:

Collection Date:

Collection Time:

Address:

Waste Collection

Collector Name: hi

Collector Email: hi@gmail.com

Waste Type: wet

Quantity: 10

Collection Date: 2024-11-13

Collection Time: 19:52:00

Address: hyd

Delete

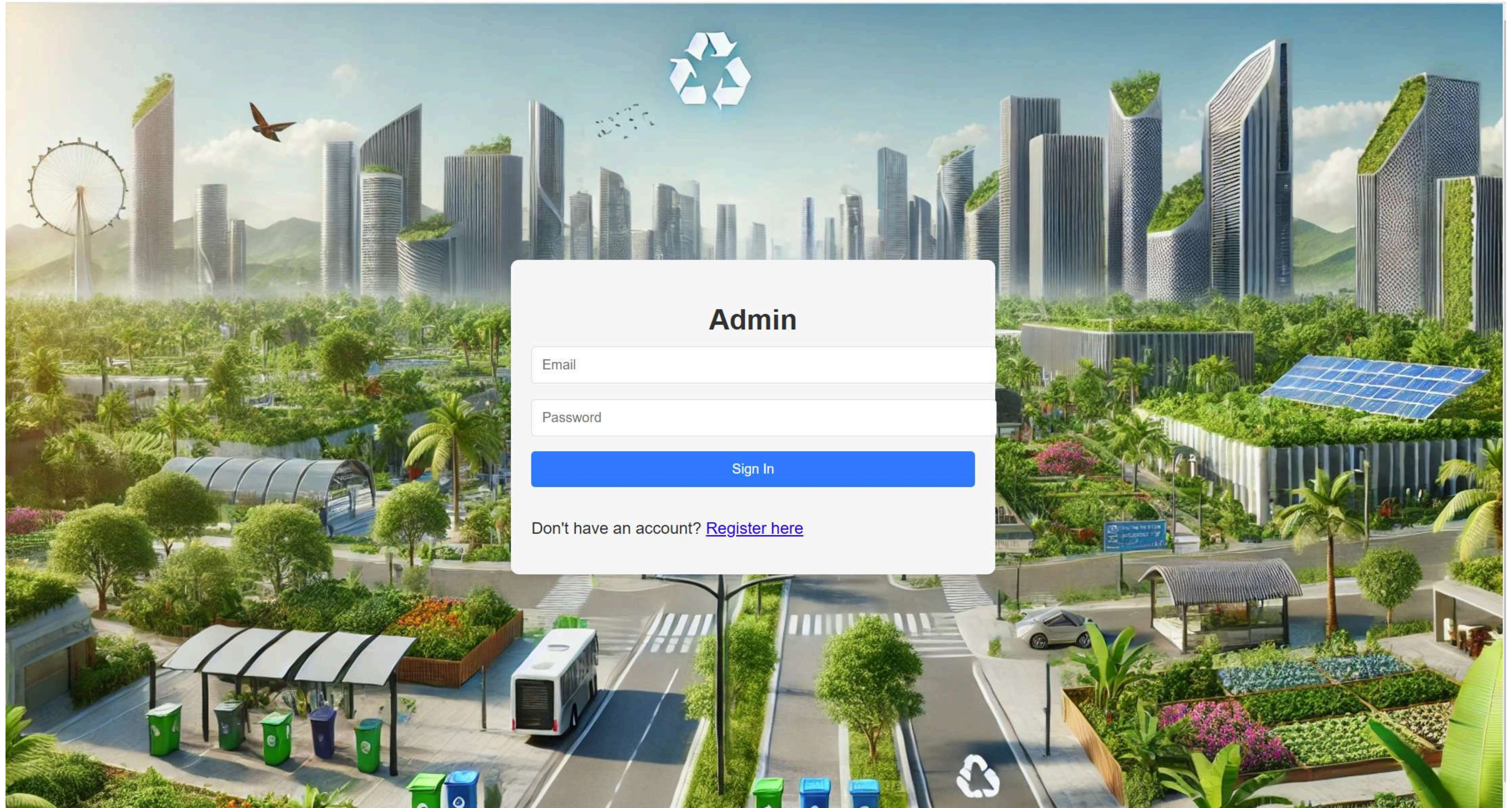
Select a City to view Waste Collection Routes

Select City: Hyderabad ▼ Select City

Select an Area in Hyderabad:

Banjara Hills

Madhapur



Admin

Email

Password

Sign In

Don't have an account? [Register here](#)

Collection Requests

Collector Name	Collector Email	Waste Type	Quantity	Collection Date	Collection Time	Address	Status
abc	tvarshitha.123@gmail.com	wet	1	2024-11-24	8:56:00	hyd	<div>Completed ▾</div> <div>Update</div>

Search mail



1 of 3



Waste Collection Status Update Inbox x



tvarshitha.123@gmail.com

to me ▾

17:54 (4 minutes ago)



Hello,

Your waste collection request (ID: 20) has been updated to 'Completed'.

Thank you for using our service!

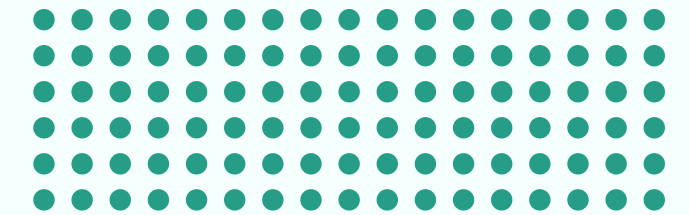
Best regards,
Waste Management System

← Reply

→ Forward



TECHNOLOGIES



Backend:

1.Flask: Framework for handling routes and building the web application.

Flask-SocketIO: For real-time communication (e.g., tracking vehicles).

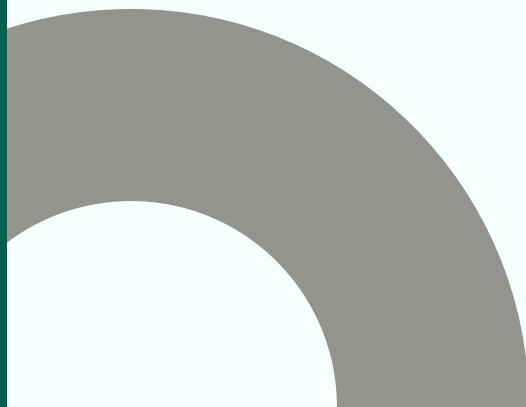
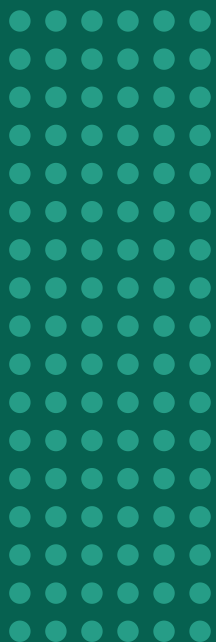
Flask-Mail: For sending email notifications.

2.Werkzeug Security: Used for securely handling user passwords

3.MySQL:Database for storing users, admins, collection requests, and other related information.

Frontend:

Jinja2 Templates: Rendering HTML templates dynamically with data passed from the backend.



DEPLOYMENT

I chose Render.com for deploying my Waste Management System for the following reasons:

- Ease of Use: Simple deployment with minimal configuration.
- Automatic SSL: Ensures secure HTTPS connection.
- Scalability: Auto-scaling to handle growing demand.
- Continuous Deployment: GitHub integration for automatic updates.
- Cost-Effective: Free tier with scalable paid plans.
- Reliable Performance: Consistent uptime and availability.
- Managed Databases: Simplified database management with MySQL support.

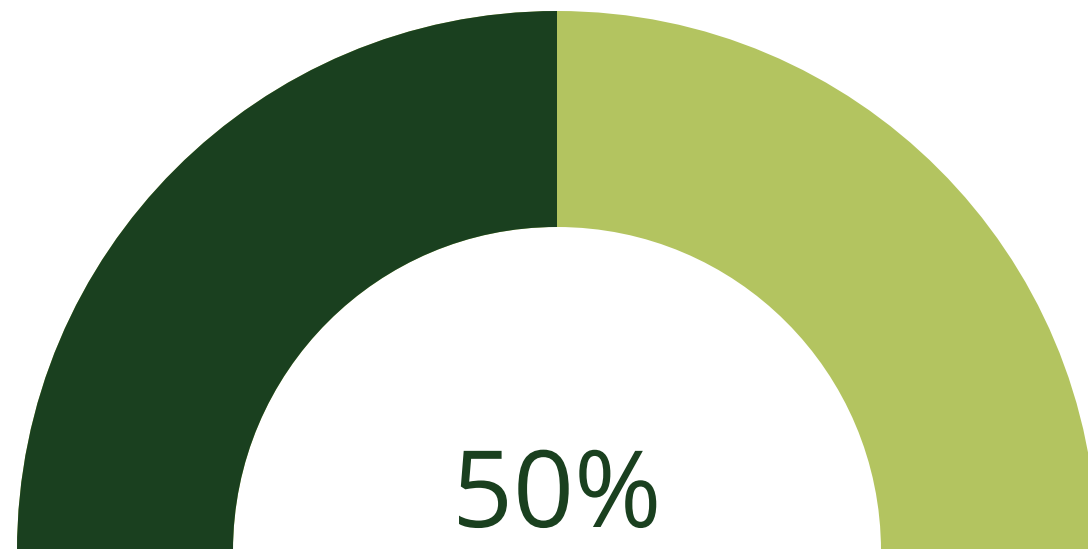
Render.com offers a seamless, secure, and scalable platform for deploying my project efficiently



CONCLUSION

This project can highlight the system's potential to promote sustainable waste management practices and improve the environment:

- Sustainable development
- Efficiency and cost reduction
- Waste classification
- Community engagement
- Environmental sustainability





Thank you
