

Waste Collection Route Tracking System

Requirements:

Route Tracking and Optimization:

1. Design a system that tracks the predefined routes followed by waste collection vehicles.
2. Implement route optimization algorithms to enhance the efficiency of waste collection operations.

Real-time Monitoring:

1. Enable real-time monitoring of waste collection vehicles' locations and movements.
2. Implement a system that provides updates to the authorities on the progress of waste collection activities.

Geo-fencing and Outlier Detection:

1. Utilize geo-fencing technology to define predefined routes for waste collection.
2. Develop mechanisms to detect deviations from predefined routes and identify outliers.

Integration with Segregation Centers:

1. Ensure seamless integration with waste segregation centers to track the final destination of collected waste.
2. Implement a mechanism to verify and confirm the successful delivery of waste to the designated centers.

Alerts and Reporting:

1. Develop an alert system that notifies authorities in case of route deviations, delays, or any other anomalies.
2. Provide detailed reporting features for authorities to analyze the performance of waste collection activities.