# FORMAN CHRISTIAN COLLEGE (A CHARTERED UNIVERSITY)

# **Department of Computer Science**

# **COMP 468 Mobile Application Development**

# **WASTE WAGON**



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### 1. Project Overview

- Project Title: Waste Wagon
- Primary Objectives:
  - 1. **Enhance Environmental Preservation**: To reduce the environmental impact of waste by improving the efficiency of scrap collection and recycling.
  - 2. **Develop a user-friendly interface:** Create a simple and efficient mobile app interface that caters to a wide range of users, including individuals, businesses, and industries
  - 3. **Support Circular Economy**: To promote the principles of a circular economy by ensuring that scrap materials are effectively collected, processed, and reused.
  - 4. **Resource Conservation:** To conserve resources by maximizing the recycling and reuse of scrap materials.
  - 5. **Promote Public Health:** To mitigate health hazards associated with improper waste disposal by providing accessible and efficient waste management solutions.

### • Secondary Objectives:

- 1. **Foster Community Engagement**: To encourage active participation in waste management activities by incentivizing individuals, households, businesses, and industries.
- 2. **Economic Viability:** To create a cost-effective and economically sustainable waste management system that benefits all stakeholders.

#### • Target Audience:

- Primary Users: Individuals and households for scrap disposal and reward systems.
- Secondary Users: Small businesses, workplaces, and industries for efficient waste management and recycling insights.

### 2. Wireframe Screens

Designed wireframes (using Figma) for the key screens are as follows:

# 1. Splash Screen:

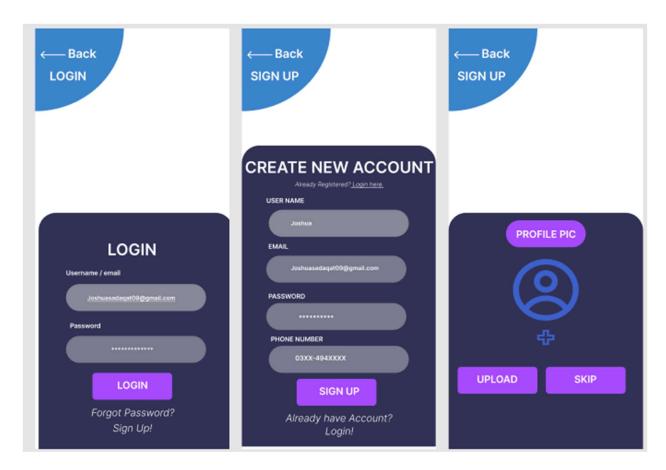
Our app's splash screen features the Waste Wagon logo and tagline "Your One-Stop Recycling Solution"





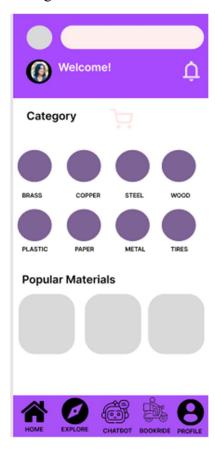
# 2. Login Sign-up Screen:

- o User login with email/social media integration.
- o Sign-up option with fields for name, email, and password.



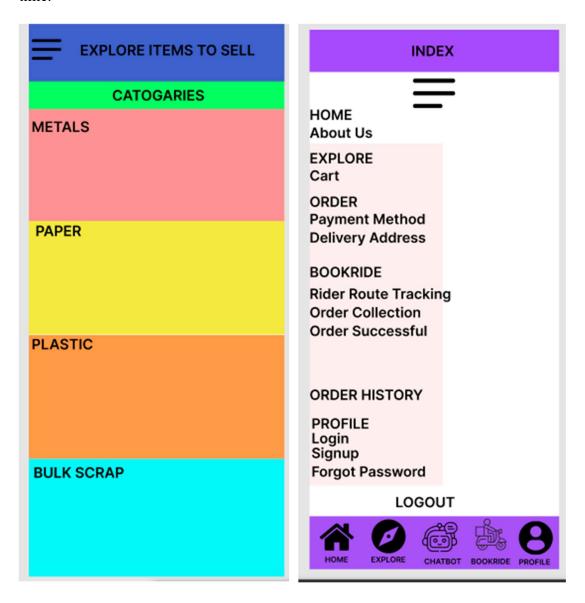
#### 3. Home Screen:

- o Display options like "Search Bar", "Categories of scrap" etc.
- Navigation bar with links to "Home," "Profile," and "Settings."



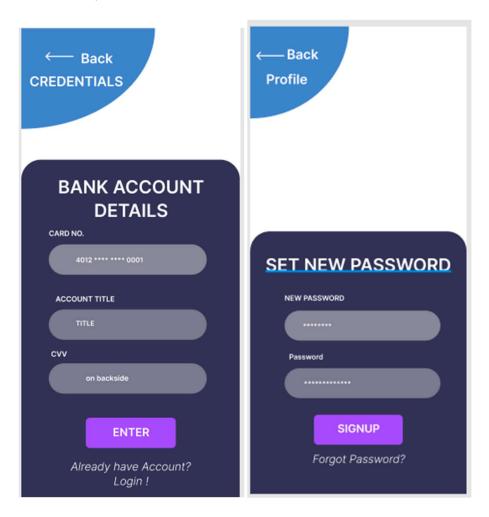
# 4. Key Features/Functionality Screens:

o Schedule Pickup: Allows users to select scrap type, weight, and preferred pickup time.



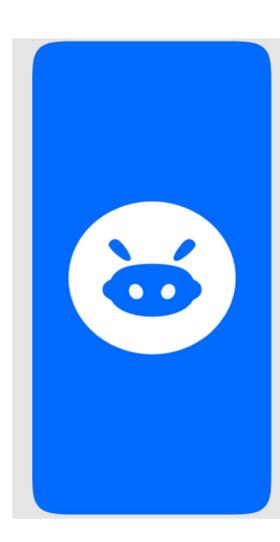
### 5. Profile/Settings Screen:

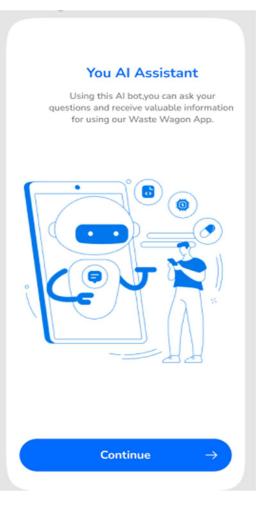
 User profile details and preferences (e.g., notification settings, saved addresses, bank details).

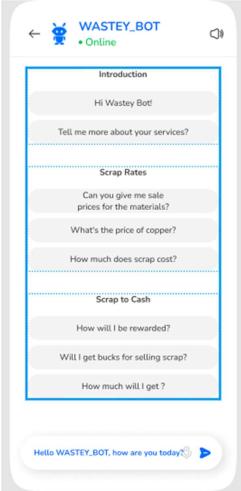


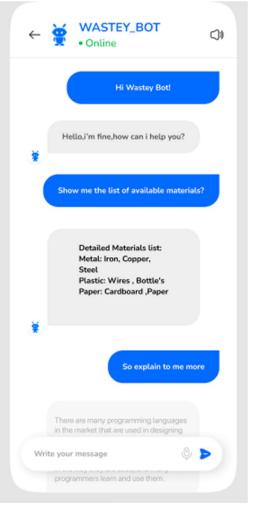
#### 6. AI Chatbot Button:

- **Header**: Displays a friendly chatbot greeting (e.g., "Hi! How can I help you today?").
- o Chat Input: Users can type questions like:
  - "What are the rates for metal?"
  - "How do I schedule a pickup?"







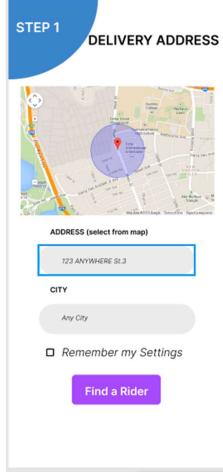


### 7. Delivery Address Screen:

This screen allows users to provide or select their delivery/pickup address for waste collection.

- Header:
  - o Title: "Pickup Address"
  - o Back button (top-left) and help icon (top-right).
- o Address Input Section:
  - o Fields:
    - Full Name (Text Field).
    - Phone Number (Text Field).
    - Address Line 1 (e.g., Street Name, House/Apartment Number).
    - City and Postal Code (Dropdown or Text Field).

• Use Current Location: Button to auto-fill the address using GPS (integrated with Google Maps).



### 8. Payment Method Screen:

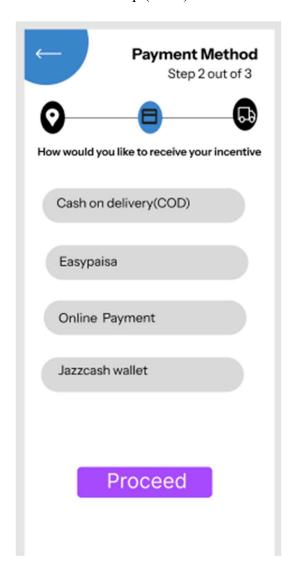
This screen enables users to choose and add payment options for redeeming rewards or additional services.

### 1. Header:

- o Title: "Payment Method"
- Back button (top-left) and help icon (top-right).

# 2. Payment Options Section:

- Available Options:
  - Credit/Debit Card (Radio Button).
  - Digital Wallet (e.g.Jazzcash).
  - Cash on Pickup (COD).



# 3. User Flow Diagram

Below is a **comprehensive UML flow diagram** for "Waste Wagon" app. It includes all key screens and features such as login, signup, home screen, profile, booking a ride, delivery address, payment method, and AI chatbot.

