A. *Functional Requirements*

1. The system shall create a user profile based on their email address.

2. The system shall generate QR code for each collection request.

3. The System shall add rewarding points to the consumers after verifying the completion of the collection request.

   a. Consumer requirements

   1. The consumer shall specify their location.

   2. The consumer shall view the collection schedule.

   3. The consumer shall make a collection request.

   4. The consumer shall manage their collection request.

   5. The consumer shall view their requests' history.

   6. The consumer shall view their rewarding points.

   7. The consumer shall have the option to modify their profile information.

   8. The consumer shall have the option to receive collection schedule notifications

   b. Admin requirements

   1. The admin shall manage collectors.

   2. The admin shall manage the schedule of the collection.

   c. Collector requirements

   1. The collector shall view the collection requests.

   2. The collector shall view the consumer request's information.

   3. The collector shall view the consumer's location.

   4. The collector shall be able to scan the QR code of the consumer.

   5. The collector shall verify the completion of the collection process.

B. *Non-Functional Requirements*

1. Security: The user shall log into the system to access its services.

2. Performance responsiveness: The consumer shall receive the rewarding points in no longer than a minute after a successful QR code scanning.

3. Usability: The system shall have a map view for specifying and displaying location.

a. Use case description

A brief description of the "*Login*" use case

Name	Login
Actor	User (Consumer, Collector, Admin)
Description	This use case is used by users to access the system services.
Precondition	N/A
Basic Flow	1. The user enters their email 2. The system checks the email existence [A-1] 3. The user requests a verification code [A-2] 4. The system sends a verification code via email 5. The user enters verification code [E-1] 6. the system authorizes the user
Alternative Flow	**A-1:** New user 1. If the entered email does not exist, the system will prompt the user to request for verification code to assign a profile to them. 2. The use case completes in the basic flow step 3 **A-2:** User exists 1. If the entered email already exists, the system will show the user log in by password choice 2. The user request to log in by their password 3. The use case completes in the basic flow step 6
Exceptional Flow	**E-1:** Incorrect verification code 1. If the entered code is incorrect, the system will show a message to ask the user to enter correct code 2. The use case completes in the basic flow either step 5 or 3
Postcondition	The user logs into the system