

GSORTING

SPRING 2023 CAPSTONE PROJECT

PROF Henry Wong

CONGYING ZHANG



AGENDA



01

Project
Description

02

MVP

03

Technologies

04

Personas



AGENDA



05

Diagrams

06

Product
Backlog

07

Sprint 1
Backlog

08

Metrics



AGENDA



09

Retrospective

10

Github

11

MVP Project
Demo

To be continued
(sprint 2)





01

Project Description



Project Description

“Gsorting” is a mobile application developed by Pace University students for CS 691 and CS 692 projects.

- Primary goal- Identify waste types and give disposal recommendations
- Feature Function- text search and photo scan search.
- Better - Intuitive interface and user-friendly design, easier to use! Helps users stick with it easier!



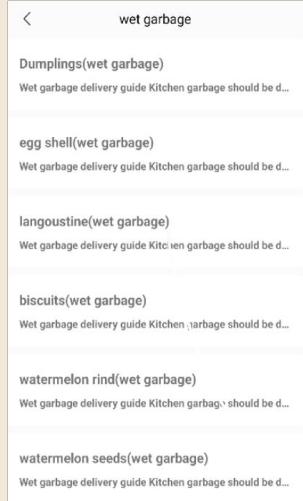
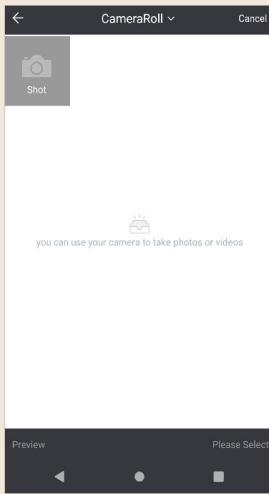
02

MVP





Minimal Viable Product





03

Technologies

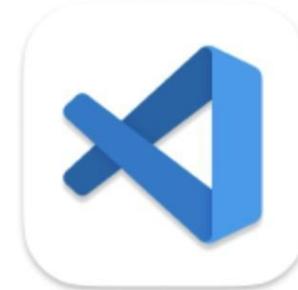




androidstudio



J·f JUHE API





04

Personas



Persona 1-Eco-Conscious Edith

Name: Edith Lucy

Age: 30

Environmentally conscious homeowner:
This person is environmentally conscious and actively seeks ways to reduce their household's carbon footprint. They may use the Gsorting app to identify and dispose of household waste in an environmentally friendly way.





Persona 2 - Busy White

Name: Mr. White & Mrs. White

Age: 33 & 28 (Mr. White & Mrs. White)

Busy Parents: This persona is a pair of busy parents with limited time to do household chores. They can use the Gsorting app to identify the type of waste and get quick disposal advice to get rid of household waste quickly.





Persona 3-Student Sam

Name: Sam Peter

Age: 20

Student tenant: He's a college freshman. He may not be familiar with the waste management regulations of the city where the university is located and he can use the Gsorting app to properly sort his household waste and avoid fines.





05

Architecture Diagrams





Architecture Diagrams

01 Conceptual Diagram

03 Class Diagram

02 Sequence Diagram

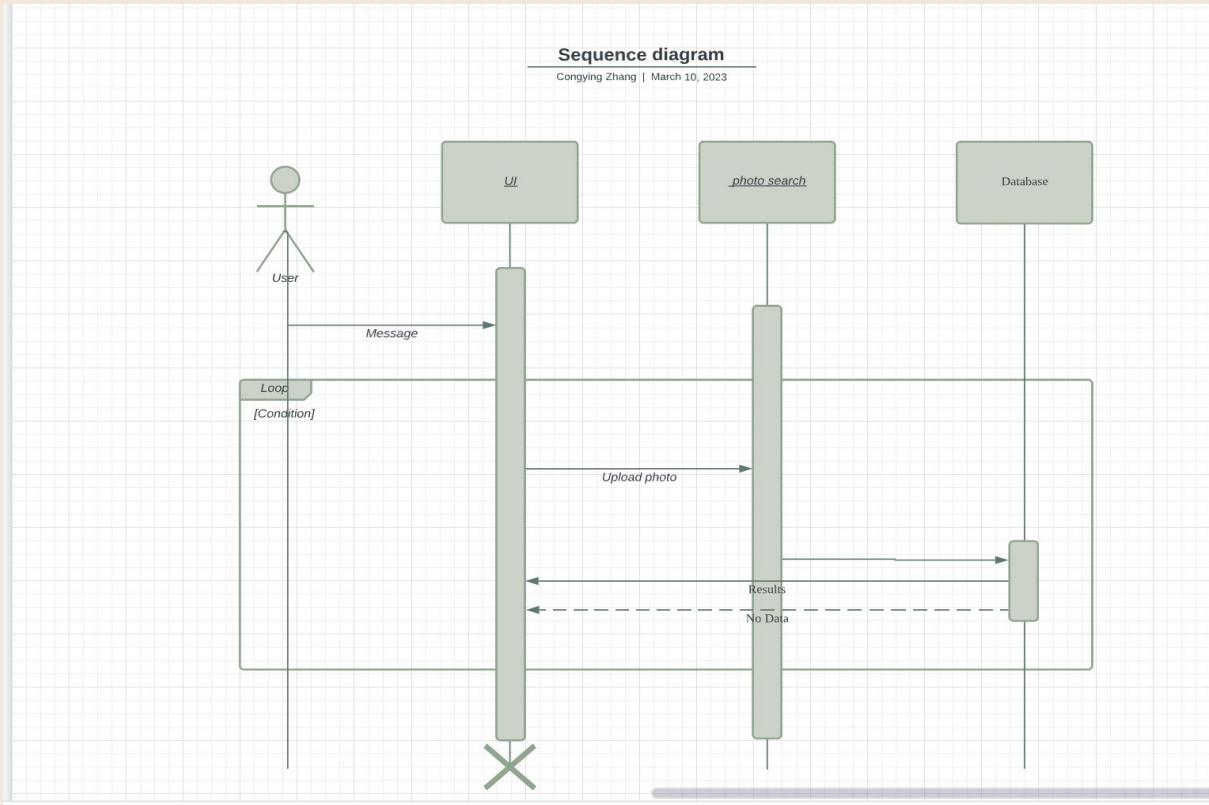
04 Use Case Diagram



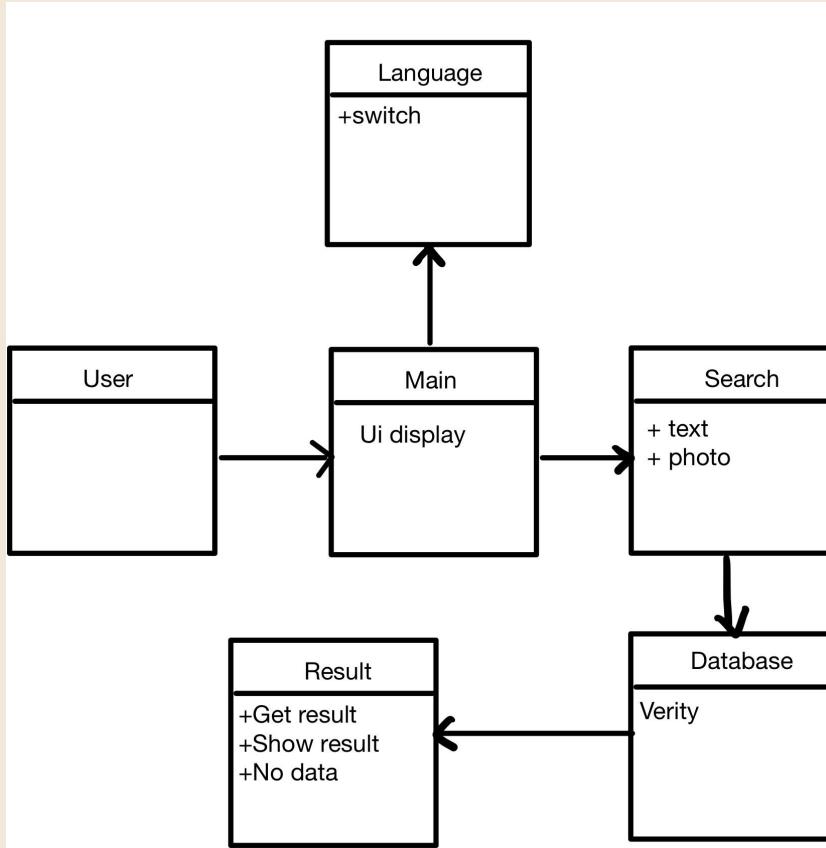
Conceptual Diagram



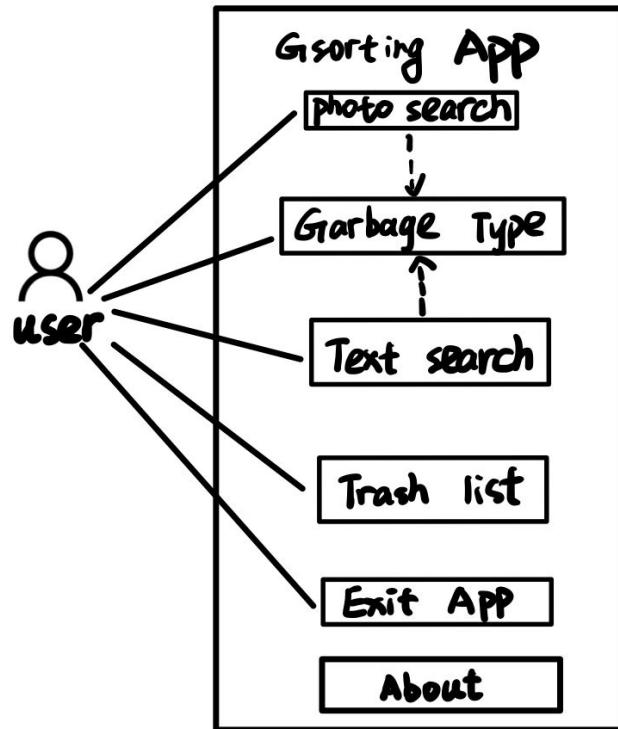
Sequence Diagram



Class Diagram



Use Case Diagram



06

Product Backlog



ID	Name	Type	Creation Date	Description	Size	Priority
US1	Menu	F	03/05/2022	As a user, I hope to have a menu button that allows users to switch UI from one to another so that I can freely choose which category of garbage I want to know/search for.	Medium	High
US2	App reliability	NF	03/05/2022	As a user, I want the app's reliability to be over 90% of successful running. This App would not be interrupted by other apps when it's working and it's compatible with different browsers.	Medium	Medium
US3	Setup Language	NF	03/05/2022	As a user, I want the app's ability to set up the language(Chinses, English, and so on). So I can use it no matter what language I'm using.	Large	low
US5	Language Switch	F	03/05/2022	As a user, the content of the app should not be confused by the language, I want to set a language change option so that people from a different country can use this app directly.	Medium	Low
US6	Warning Message	F	03/05/2022	As a user, I want to be warned when performing operations such as reset, so that I never lose my data.	Small	Medium
US7	Account	F	03/05/2022	As a user, I want my Settings and information to be recorded so that I can respond to my preferences more quickly when changing devices.	Medium	Medium
US8	Camera Scan	F	03/05/2022	As a user, I want to scan stuff so that I can search for more details on the app	Large	High
US9	Picture Viewer	F	03/05/2022	As a user, I want images to distinguish the types of junk I'm looking for so I don't have to read a lot of text while searching for information.	Large	High
US10	Word description	NF	03/07/2022	As a user, I need as detailed text description as possible to introduce the knowledge of garbage classification to me, so that as to improve my garbage classification ability.	Medium	Medium
US11	Help Button	F	03/07/2022	As a user, I want to be able to use the help page when I don't understand a feature in the app so that I can get help where I need it.	Medium	Medium
US12	About	NF	03/07/2022	As a user, I want to know the information of the developer of this app, which helps me to understand this app	Small	Small
US13	UI	NF	03/07/2022	As a user, I want the app to have a good UI design, so that I can use it more smoothly	Medium	Large
US14	Upload picture	F	03/07/2022	As a user, I want to upload the picture I would like to use for my profile.	Medium	Medium
US15	Settings	F	03/07/2022	As a user, I want to be able to change settings so that I can use the app with my preferred options.	Medium	Medium
US17	Searcher	F	04/06/2022	As a user, I want to search for this item to find out what category it belongs to, so that I can realize how to recycle or dispose of it.	Low	High
US18	Text editor	NF	04/06/2022	As a user, I need to edit the text to describe the garbage I want to search for, or to fill in the information I want to enter, so that I could use the app..	Low	High
US19	Password Change Function	F	04/06/2022	As a user, I don't want my current password anymore, so that I can click a button to enter a new one.	Low	High
US20	Exit Screen	F	03/07/2022	As a user, I want to see a "goodbye, see you next time" sentence when I close the app	Medium	Medium
US21	Clickable picture	F	2022-3-22	As a user, I want to have a clickable picture so that I can select the detailed spam classification information THAT I want to know/search for.	Medium	Medium
US22	Logout Function	F	04/06/2022	As a user, I want to have logout function so that I can switch to another account.	Low	Low

07

Sprint 1 Backlog



ID	Name	Type	Creation Date	Description	Size	Priority
US1	Menu	F	2023-1-24	As a user, I hope to have a menu button that allows users to switch UI from one to another so that I can freely choose which category of garbage I want to know/search for.	Medium	High
US2	App reliability	NF	2023-1-24	As a user, I want the app's reliability to be over 90% of successful running. This App would not be interrupted by other apps when it's working and it's compatible with different browsers.	Medium	Medium
US3	Setup Language	NF	2023-1-24	As a user, I want the app's ability to set up the language(Chinses, English, and so on). So I can use it no matter what language I'm using.	Large	low
US5	Language Switch	F	2023-1-24	As a user, the content of the app should not be confused by the language, I want to set a language change option so that people from a different country can use this app directly.	Medium	Low
US6	Warning Message	F	2023-1-24	As a user, I want to be warned when performing operations such as reset, so that I never lose my data.	Small	Medium
US7	Account	F	2023-1-24	As a user, I want my Settings and information to be recorded so that I can respond to my preferences more quickly when changing devices.	Medium	Medium
US8	Camera Scan	F	2023-1-24	As a user, I want to scan stuff so that I can search for more details on the app	Large	High
US9	Picture Viewer	F	2023-1-24	As a user, I want images to distinguish the types of junk I'm looking for so I don't have to read a lot of text while searching for information.	Large	High
US10	Word description	NF	2023-1-24	As a user, I need as detailed text description as possible to introduce the knowledge of garbage classification to me, so that as to improve my garbage classification ability.	Medium	Medium
US11	Help Button	F	2023-1-24	As a user, I want to be able to use the help page when I don't understand a feature in the app so that I can get help where I need it.	Medium	Medium
US12	About	NF	2023-1-24	As a user, I want to know the information of the developer of this app, which helps me to understand this app	Small	Small
US13	UI	NF	2023-1-24	As a user, I want the app to have a good UI design, so that I can use it more smoothly	Medium	Large
US14	Upload picture	F	2023-1-24	As a user, I want to upload the picture I would like to use for my profile.	Medium	Medium
US15	Settings	F	2023-1-24	As a user, I want to be able to change settings so that I can use the app with my preffered options.	Medium	Medium
US17	Searcher	F	2023-1-24	As a user, I want to search for this item to find out what category it belongs to, so that I can realize how to recycle or dispose of it.	Low	High
US18	Text editor	NF	2023-1-24	As a user, I need to edit the text to describe the garbage I want to search for, or to fill in the information I want to enter, so that I could use the app..	Low	High
US20	Exit Screen	F	2023-1-24	As a user, I want to see a "goodbye, see you next time" sentence when I close the app	Medium	Medium
US21	Clickable picture	F	2023-1-24	As a user, I want to have a clickable picture so that I can select the detailed spam classification information THAT I want to know/search for.	Medium	Medium

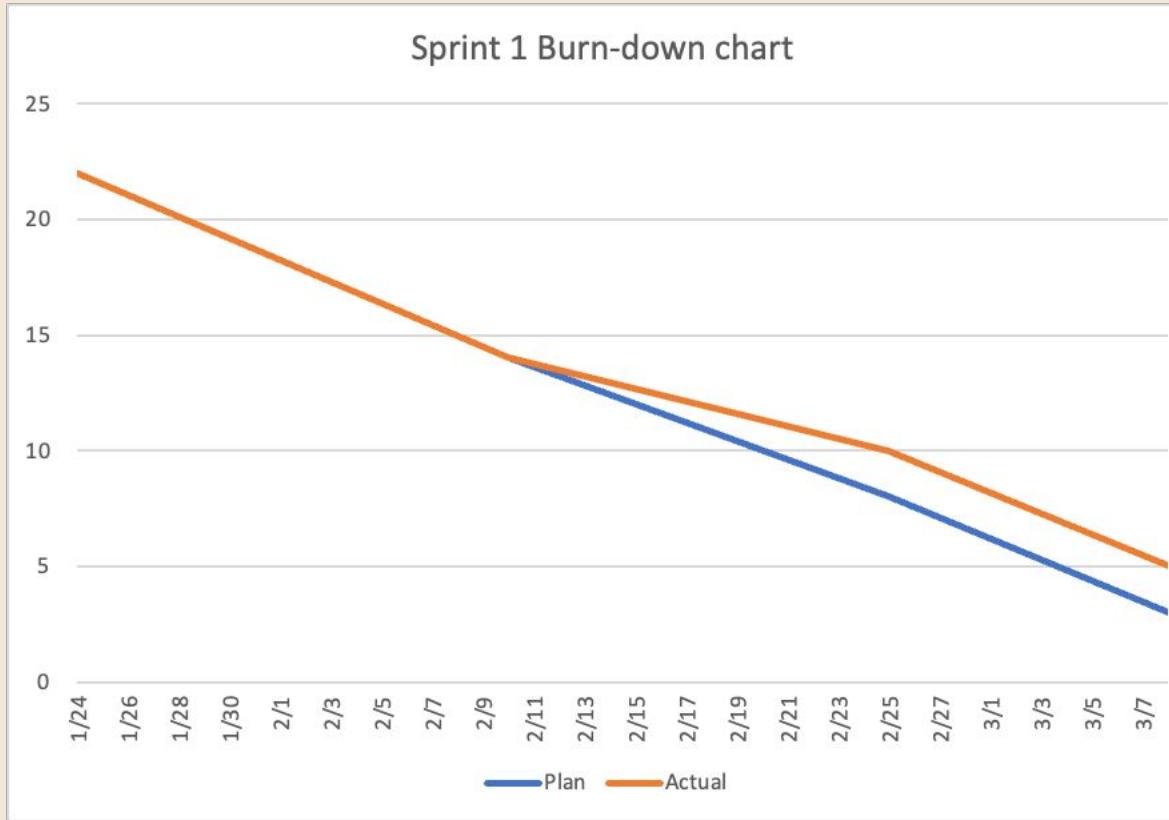
08

Metrics

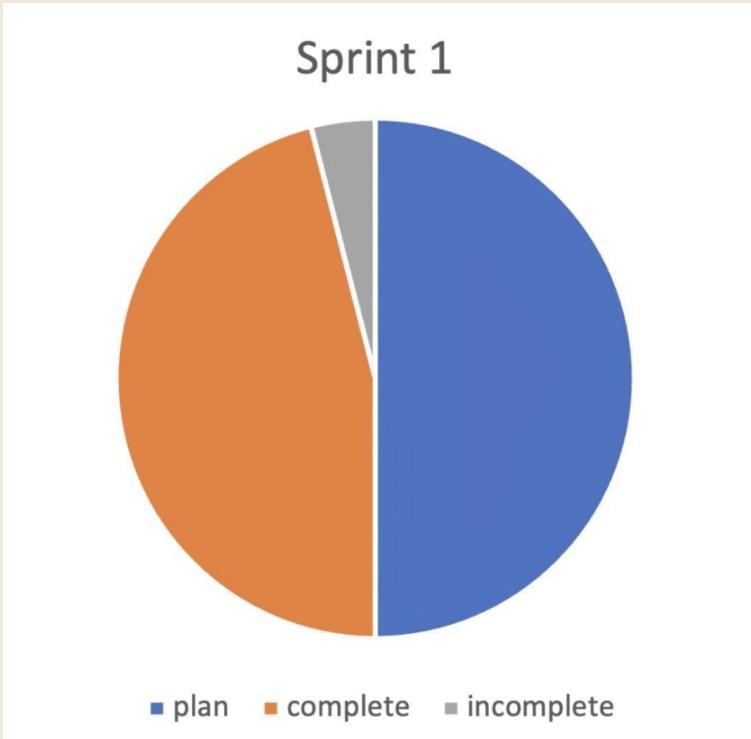


Team velocity and Burndown Charts

Sprint 1, I completed 17 user stories



Completed/Committed Ratio

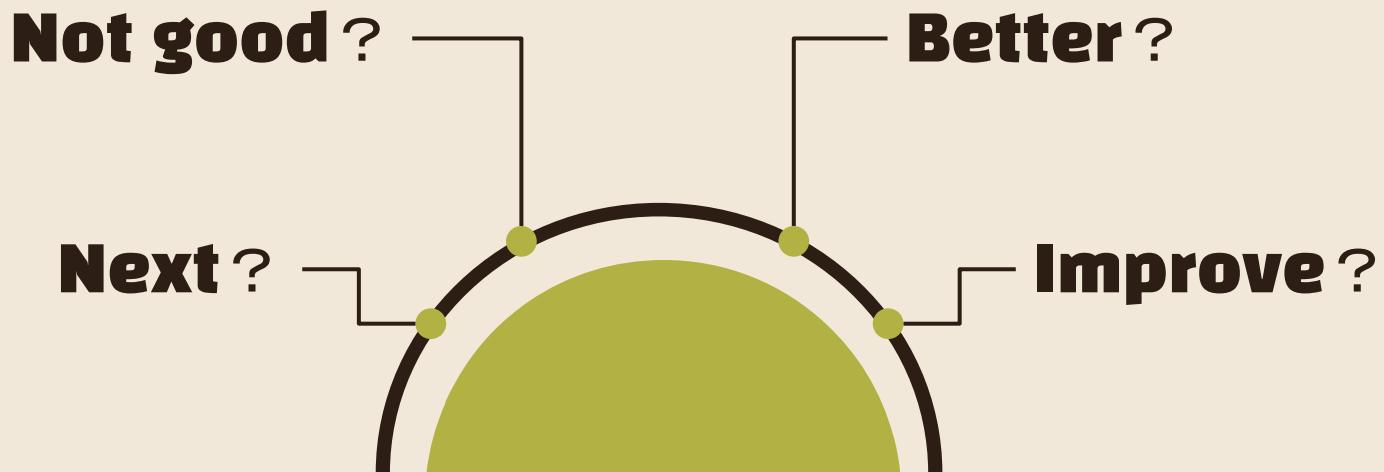


=17/19

=89.47%



09 Retrospective





Retrospective

What is going well ?

- *Gsorting's database accesses*
- *UI design is easy to use*



01

What to do next ?



03



- Access to AWS for the app

What needs to be improved ?



- Not yet using machine learning
- Haven't finished getting users to create accounts



10

GitHub

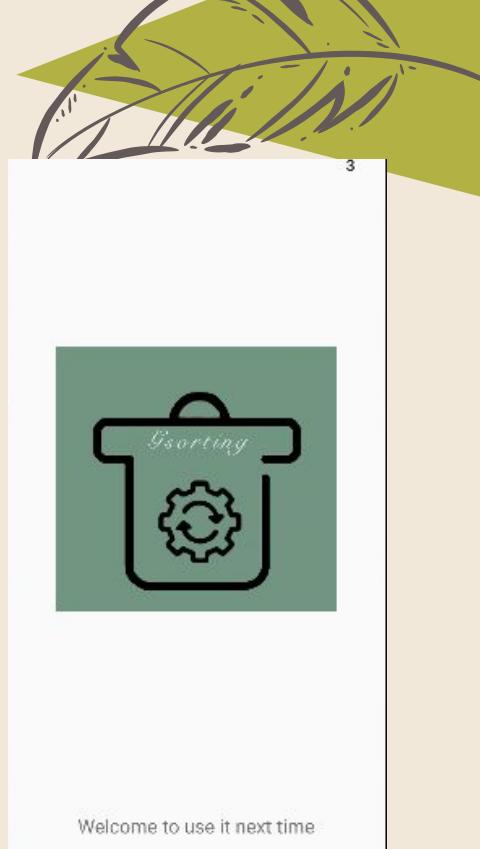
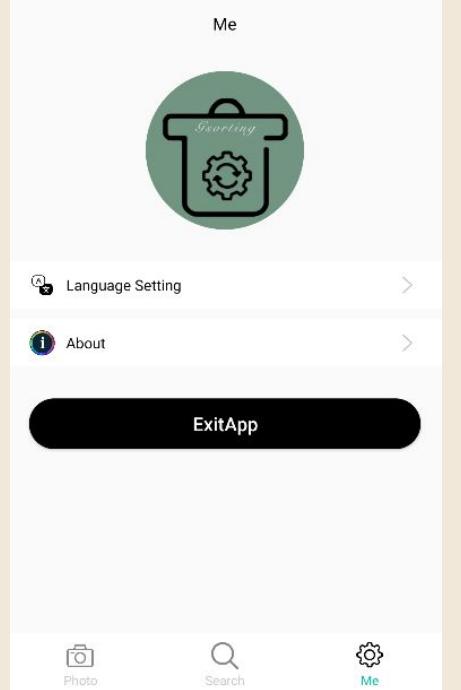
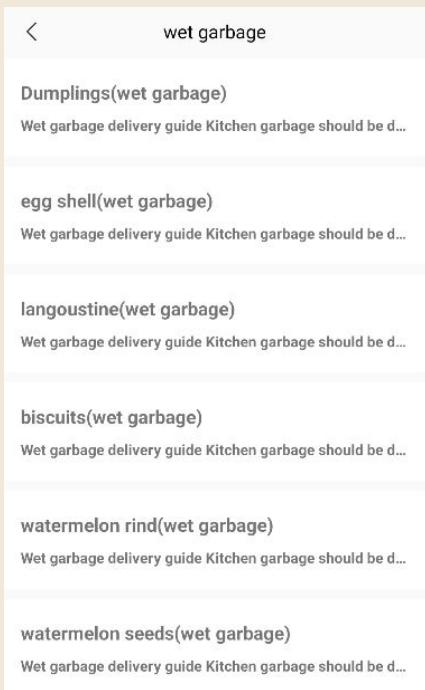
<https://github.com/htmw/2023S-czhang>



11. MVP Project Demo



11. MVP Project Demo



To be continued (Sprint 2)

ID	Name	Creation Date	Description
US4	Welcome Screen	2023-3-8	As a user, I want the home screen to be simple and easy to navigate through the different calculators so that the app is not difficult to use.
US5	Language Switch	2023-3-8	As a user, the content of the app should not be confused by the language, I want to set a language change option so that people from a different country can use this app directly.
US11	Help Button	2023-3-8	As a user, I want to be able to use the help page when I don't understand a feature in the app so that I can get help where I need it.
US16	Register	2023-3-8	As a user, before I have a account, I want to have a nickname and save my personal imformation on the app, so that I won't reveal my real name, and I won't be asked to re-enter my information when I switch devices.
US19	Password Change Function	2023-3-8	As a user, I don't want my current password anymore, so that I can click a button to enter a new one.
US22	Logout Function	2023-3-8	As a user, I want to have logout function so that I can switch to another account.
US23	Machine learning algorithms	2023-3-8	As a user, I want the app to use machine learning algorithms to accurately identify the type of waste I want to dispose of, making it easy for me to properly sort my waste.
US24	Tracking user habits	2023-3-8	As a sustainability advocate, I want Gsorting to use machine learning to track my recycling habits and provide advice on how to reduce my environmental impact.
US25	Provide more information and tips	2023-3-8	As a parent who wants to teach my children responsible waste management, I want Gsorting to use machine learning to provide educational information and tips on how to recycle and dispose of different types of waste.
US26	Analyzing user data	2023-3-8	As a user, I want Gsorting to use machine learning to analyze the type and amount of waste in my household so that I can develop more effective waste management strategies.
US27	Identify potentially hazardous materials	2023-3-8	As a sustainability consultant, I want to use Gsorting to help my clients track their waste management performance and identify opportunities for improvement, using machine learning to provide data-driven insights.
US28	Make recommendations based on user data	2023-3-8	As a waste collection worker, I want Gsorting to improve my job safety and efficiency by using machine learning to identify potentially hazardous waste materials.



Thanks

Live Application Demo:
<https://youtube.com/shorts/v-zTi1481Ak?feature=share>

