

**CSC2058 Peer Assessment 2: Sustainable Development Challenge –  
The Working System (**Sustainopoly**) and the Final PDF Report, including Design Documentation,  
Implementation-Related Documentation and Adherence to Process**

This Assessment Document is intended to provide you and your assessor with an overview of each group member's involvement in delivering the final components of the CSC2058 Project.

Each group should complete one Peer Assessment 2 Document **and its content must be agreed by all group members**. The completed form should be included at the start of your group's PDF report. ***Don't forget to fill in the Group Number.***

There are three main parts to the Assessment Document – the Evaluation, the Declaration and the Personal Statements (**spaces for each team member's personal statement are provided at the end of this document**). All parts must be completed – otherwise your group's report will not be marked. Arrange a group meeting to discuss the evaluation and personal statements, **and please carefully read the note on the following page!**

**This evaluation concerns work that was undertaken and completed during the Second Semester.**

**Team members are expected to maintain a high level of engagement with the project across both semesters.**

Evaluation		Group Number: 36		
Name	Contribution to team-working and motivation <sup>1</sup>	Contribution to PDF Report 2, and the Video Demo <sup>1,2</sup>	Contribution to methodically developed and functioning system code <sup>1,2</sup>	Peer Score (Range 85 – 115)
Hailin Weng	5	5	5	115
Yueying Xie	5	2	5	110
Peilin Zou	5	3	4	108
Ziwen Xu	5	3	2	105
Yikai Wu	4	2	3	90
Yong Yang	4	2	3	90

<sup>1</sup>Values for contribution: 1 = Minimal Contribution; 2 = Reasonable Contribution; 3 = Good Contribution; 4 = Very Good Contribution;  
5 = Excellent Contribution

<sup>2</sup>This value should consider contributions in the round – direct contributions this semester to required deliverables, and contributions this semester that have made the deliverables possible.

Declaration		
"I declare that I have read the Queen's University regulations on plagiarism, and that any contribution I have made to the attached submission is my own original work, except for any elements that I have clearly attributed to third parties. I understand that this submission will be subject to an electronic test for plagiarism and will also be subject to the University's regulations concerning late submission if it is received after the deadline."		
Name	Date	Confirmation ( <i>use the words shown in the example below!</i> )
Hailin Weng	23/03/2023	I agree to the terms of the declaration
Yueying Xie	23/03/2023	I agree to the terms of the declaration
Peilin Zou	23/03/2023	I agree to the terms of the declaration
Ziwen Xu	23/03/2023	I agree to the terms of the declaration
Yikai Wu	23/03/2023	I agree to the terms of the declaration
Yong Yang	23/03/2023	I agree to the terms of the declaration

**A note on the Evaluation:**

Complete all the columns in the Evaluation Table, **including the Peer Score column**. The Contribution columns are intended to help team members quantify each other's input to the project, before they award agreed **Peer Scores**. There will not necessarily be a precise correlation between the Peer Score and the Contribution values. However, high Contribution values, as an indicator of the importance of the team member's work to the success of the project, should normally result in a high Peer Score for a team member. Likewise a low Peer Score would be the expected outcome if Contribution values are low. Students who have made a high-value Contribution in all three contribution categories (e.g. 5,5,5) should expect to receive a higher Peer Score than students who have made a lower-value Contribution in one or more categories (e.g. 5,5,3).

If, having reviewed the Contribution values, the team agrees that Team Member 1 made an 'only just adequate' contribution overall, a Peer Score of 85 would be appropriate for Team Member 1. If Team Member 1's contribution was excellent (critical to the success of the project in all areas of engagement), consider a peer score of 115. If Team Member 1 made a generally good contribution, doing what was expected of them, they could expect to receive a Peer Score of 100. It may be that a team member (for whatever reason) has disengaged from the project entirely, and in such circumstances a **Peer Score of 0** may be acceptable. **Please inform the module Lecturer if a team member has left your group or has ceased to play an active role in the group.**

P.T.O.

Each team member's overall score for the Semester 2 deliverable will be calculated according to the following formula, where  $S_i$  is Team Member  $i$ 's overall score,  $P_i$  is the Peer Score received by Team Member  $i$ ,  $N$  is the number of members in the team, and  $M$  is the raw mark awarded to the Semester 2 deliverable by the assessor.

$$S_i = \frac{P_i}{\frac{1}{N} \sum_{j=1}^N P_j} \times M$$

Peer Scores within the range 85 – 115 will normally be accepted by the module Lecturer. **However, students are expected to award a range of Peer Scores within a team: it is very unusual in a project for everyone to display exactly the same level of ability and commitment, and the Peer Scores should reflect this. (See the following paragraph also!)** Be fair: be prepared to recognise someone who has adopted a leading role in the project, and acknowledge the fact that some contributions will be weaker than others. Uniform scores, or scores outside the range 85 – 115, may require that the Team discuss its decision with the module Lecturer, in order to agree a fair distribution of scores. Throughout the project, team members should use appropriately named folders in GitLab to help them co-ordinate their work and maintain a record of their contributions.

**Where team members cannot agree a distribution of Peer Scores, or the distribution is unreasonable, the module Lecturer's judgement will be final.** In such circumstances the Lecturer will normally consider: individual contributions to the module, as evidenced by uploads to GitLab; minutes of meetings that name attendees and document the progress of their work; sections of the PDF report that clearly identify lead and secondary contributors; the personal statements in this document; other relevant evidence. **If your team is unable to agree a distribution of Peer Scores, please inform the module lecturer before you make your final submissions.**

**All team members should ensure that their contributions are clearly identifiable in the Git record and in the content of the PDF report** (e.g. – in the PDF report – [heading:] 'Sequence Diagrams: Principal: A.B; C.D; Support: E.F.; G.H.; I.J.; K.L.').

**Each team member is expected to be actively involved in all aspects of the development process, even if they take a primary or leading role for some components and a secondary or supporting role for others.** A leading role might mean that you identify candidate classes, attributes and operations for the class diagram, complete the first draft of the class diagram, and approve the final version; a supporting role might mean that you review the class diagram and prepare corrections and additions, or that you provide the written commentary on the diagram, having consulted with the lead designer.

**Taking the agreed Contribution values and Peer Scores into account, each team member must enter a personal statement in one of the boxes on the following pages.**

## Personal Statements

<i>Personal statement of (enter name):</i>	<i>Hailin Weng</i>
The following were my most significant contributions to the Semester 2 Deliverable (100 words or less):	
<ol style="list-style-type: none"><li>1. Design real-world solutions for Govan</li><li>2. Program the Sustainopoly game (Login &amp; Register, Voice Announcement, Video Player, Events, Game Music (BGM, throw dice sound), Menu Bar (File, Setting, Help), the Rank of Players, etc)</li><li>3. Improve the Sustainopoly game UI (Choose background pictures, design the game map, design the layout of interface elements, etc)</li><li>4. Principal for the Final PDF Report</li><li>5. Record the Demo video</li><li>6. Assign tasks and organise meetings</li></ol>	

<i>Personal statement of (enter name):</i>	<i>Yueying Xie</i>
The following were my most significant contributions to the Semester 2 Deliverable (100 words or less):	
Creation of a web page for the mental health module and design of character images.	

<i>Personal statement of (enter name):</i>	<i>Peilin Zou</i>
The following were my most significant contributions to the Semester 2 Deliverable (100 words or less):	
In this team work, I completed the design of the game class diagram in terms of graphics. Using code to realize the role selection interface for the user to start the game, and using code to realize the movement of the game interface characters and combine it with the rotation of the dice, also realizes the function of displaying the character information of the character, and finally uses the code to realize the game end interface, so that the user can see the ranking.	

<i>Personal statement of (enter name):</i>	<i>Ziwen Xu</i>
The following were my most significant contributions to the Semester 2 Deliverable (100 words or less):	
<ol style="list-style-type: none"><li>1, Made the Food Bank webpage alone</li><li>2, Chose the BGM for the game</li><li>3, Made the animation of the game</li><li>4, Made the Sequence diagrams</li></ol>	

<i>Personal statement of (enter name):</i>	<i>Yikai Wu</i>
The following were my most significant contributions to the Semester 2 Deliverable (100 words or less):	
My biggest contributions to this semester's project lie in representing the team to communicate and discuss issues with the teacher during each advisory session, and serving as the team's interpreter after the teacher gives suggestions. In terms of programming, I am responsible for completing most of the white box tests and some of the black box tests.	

## Personal Statements (continued)

<p><i>Personal statement of (enter name):</i> <b>Yong Yang</b></p> <p>The following were my most significant contributions to the Semester 2 Deliverable (100 words or less):</p> <p>I am responsible for writing and maintaining unit test code in Java projects, covering various scenarios to ensure correctness and reliability of the code. I am adept at using testing frameworks such as JUnit and Mockito to enable comprehensive testing of code. Through my efforts, the unit test coverage of the project has improved significantly, helping us to find and fix problems in the code in a timely manner.</p>
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## Summative Statement concerning the Real-World Problem

(1)

The EwB (Engineering with Biology) Design Brief addresses social, environmental, and economic issues that need to be considered in the real-world design of a game. In designing a game to address the issues of food and mental health in the community of Govan, these three factors have played a significant role in shaping our sustainopoly game.

### Social Issues:

The social issues surrounding food and mental health in Govan have influenced the design of the game in several ways. Firstly, the game aims to raise awareness among community members about the importance of a healthy diet for both physical and mental health. It seeks to educate the community on the impact of diet on mental health and how healthy eating habits can help reduce the risk of mental illness. Secondly, the game encourages community involvement, promoting a sense of belonging and inclusivity. It aims to bring together community members from different backgrounds and age groups to work together towards a common goal of improving their community's health and well-being.

### Environmental Issues:

Our solutions are shaped by environmental issues such as food waste and sustainability. We encourage the use of local and seasonal produce, reduce food miles, and promote sustainable practices. Our solutions also educate the community on ways to reduce food waste through meal planning, using leftovers, and composting. The game aims to promote eco-friendly habits such as cycling and walking to help reduce the community's carbon footprint.

### Economic Issues:

Our solutions design takes into consideration the economic issues faced by the community, including food insecurity and poverty. Our objective is to provide affordable and nutritious food options, as well as mental health care, for community members by promoting food banks and developing information websites for food and mental health resources.

In conclusion, the social, environmental, and economic issues outlined in the EwB Design Brief have had a significant impact on the design of the game aimed at addressing the issues of food and mental health in Govan. The game seeks to educate, involve and promote community participation, sustainability, and affordability, making it an effective solution to the challenges faced by the community.

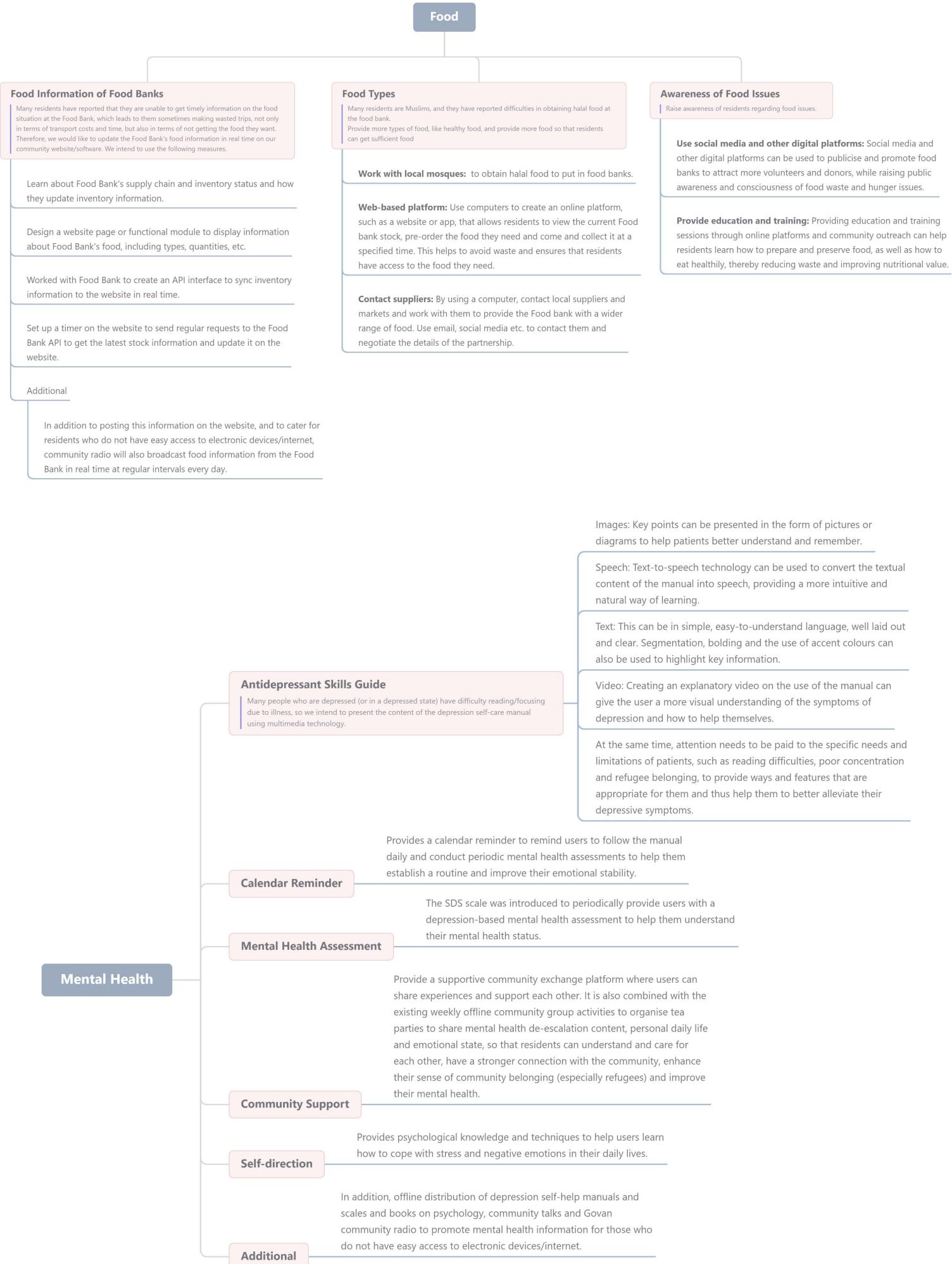
(2)

Steps	Components	Deployment
<b>Researched and analyzed root causes</b>  Resource: EWB Forum & Design Brief 2022 - 23	 <b>Poverty</b>  <b>Lack of access to healthy food options</b>  <b>Limited mental health resources</b> 	<i>Secured funding and partnerships with local organizations and businesses</i> <i>Worked with community leaders and residents to develop and implement the solutions</i> <i>Recruited and trained volunteers for the food program</i> <i>Coordinated with foodbanks, mosques and markets to provide healthy food options</i> <i>Developed and delivered the food bank website, the mental health website and support program</i>
<b>Identified target audience and their needs</b> Resource: EWB Forum & Design Brief 2022 - 23 & Govan Community Website	<b>Food website that provides real-time food information</b> <b>Partnered with local mosques and markets to increase access to healthy food</b> <b>Developed a mental health website and mental health support in community centers</b>	<i>Regularly evaluated and adjusted design based on feedback and data on the effectiveness of interventions</i>
<b>Developed design principles</b>	<b>Affordability, Accessibility, Sustainability</b>	

### Reflect in Sustainopoly Game:

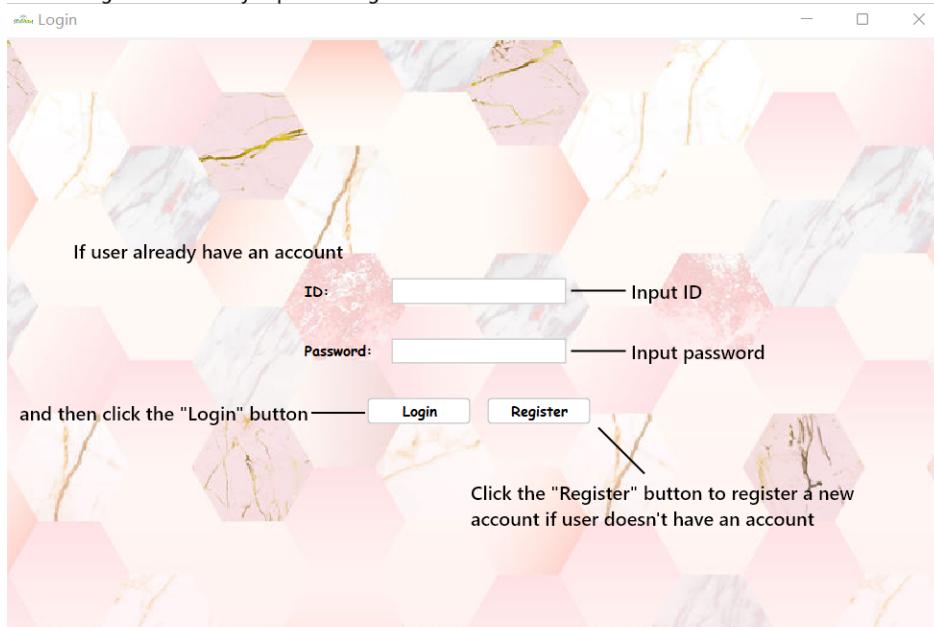
In sustainopoly, we have placed solutions to real-world problems in different development areas. Each development area has step-by-step tasks that the player can choose to do or not do when they land in the development area. If the player chooses to accept a task, they will pay a price to complete it and will also receive a reward. When all the tasks in the development areas have been completed, the game ends and the player will be able to see an egg animation of Govan being improved, simulating the reality of how Govan has changed after the measures taken to improve it.

# Solution



The entire game's UI also features a fresh, comfortable and cartoonish colour scheme and patterns. To fit the cartoonish and cute style of the entire game, all fonts are in Comic Sans MS font and all pictures are cartoon style. Each event triggered by the player involves a change in points that would tell the player in the form of a dialogue. And players have some autonomy to make certain choices in the game. Players can also check their information at any time as well as make some simple game settings (e.g. BGM, Voice Announcement).

In this frame, user can use the account to login, or can click the register button to jump to the register frame

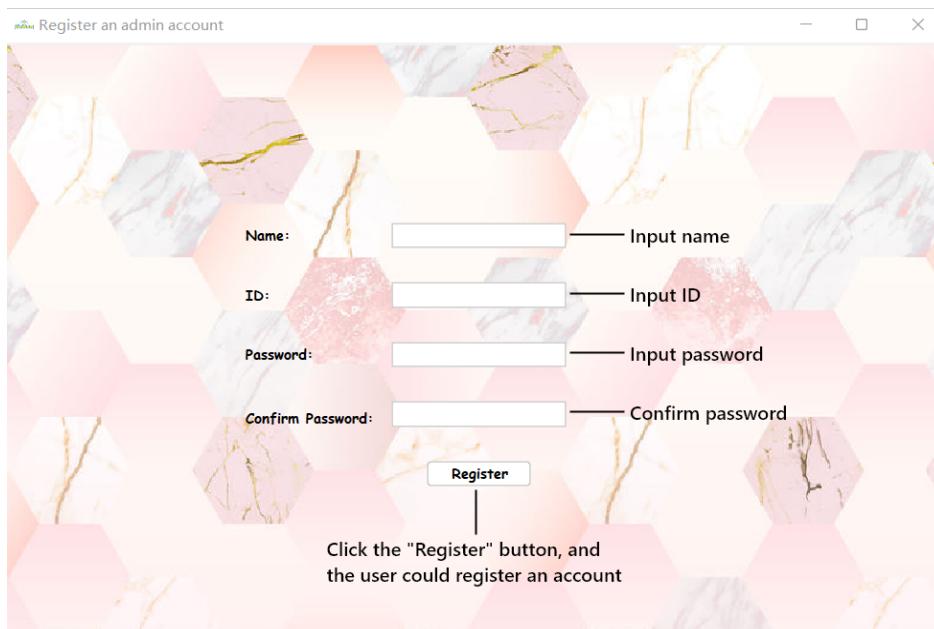


If the user login is successful, it will show an information dialogue

Login successful

**Login successful**

In this frame, user can register an account.



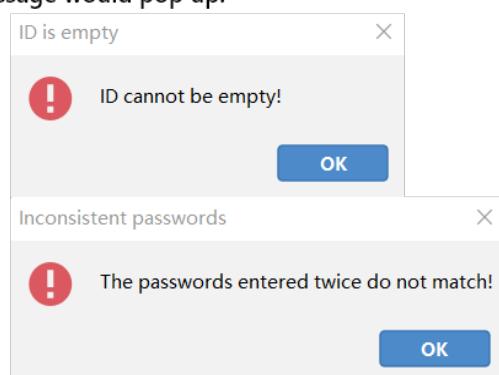
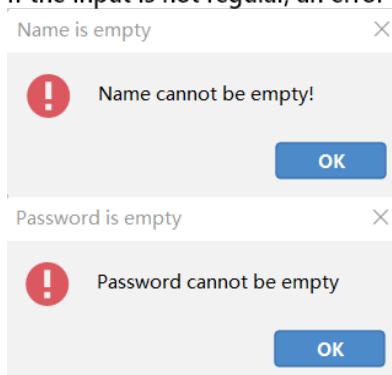
If the account or password is wrong, an error message would pop up.

Wrong account or password

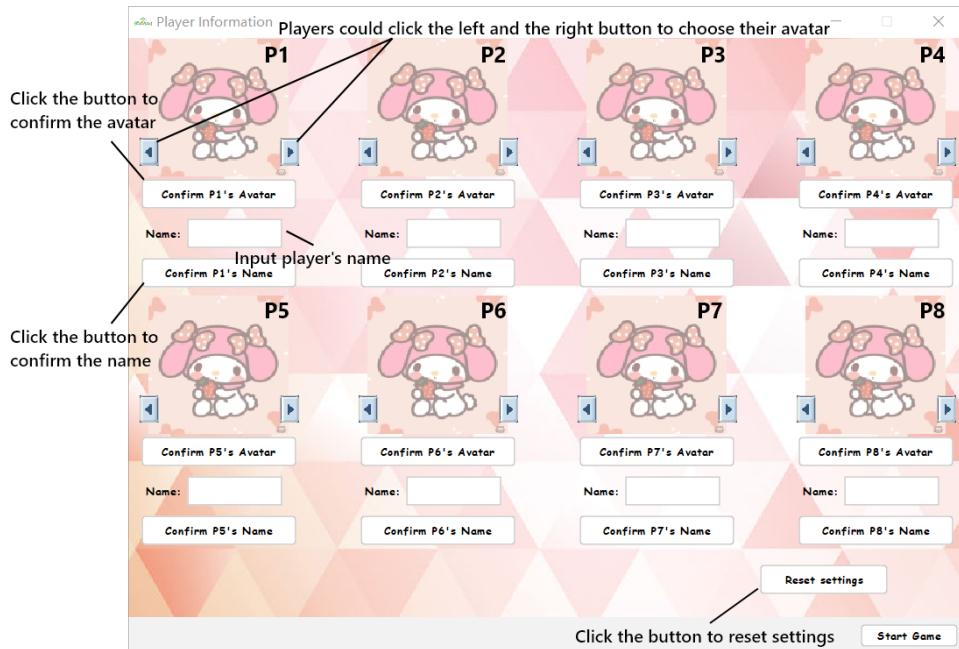
Wrong account or password

We selected a number of images and finally chose this one, which is a combination of geometric shapes (echoing the regular grid of the game) and a fresh, lovely pink colour, as the background.

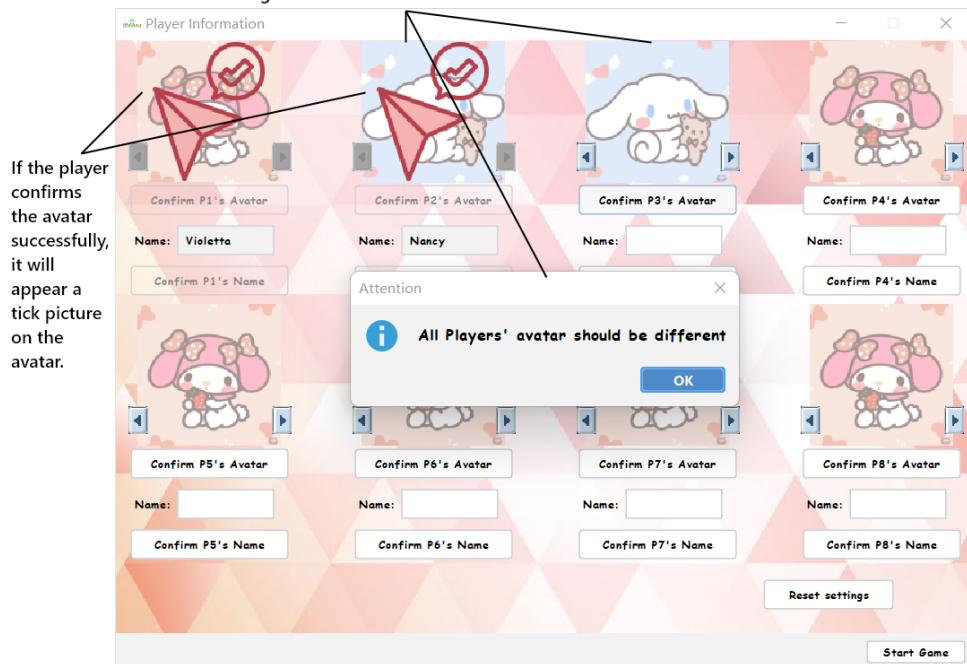
If the input is not regular, an error message would pop up.



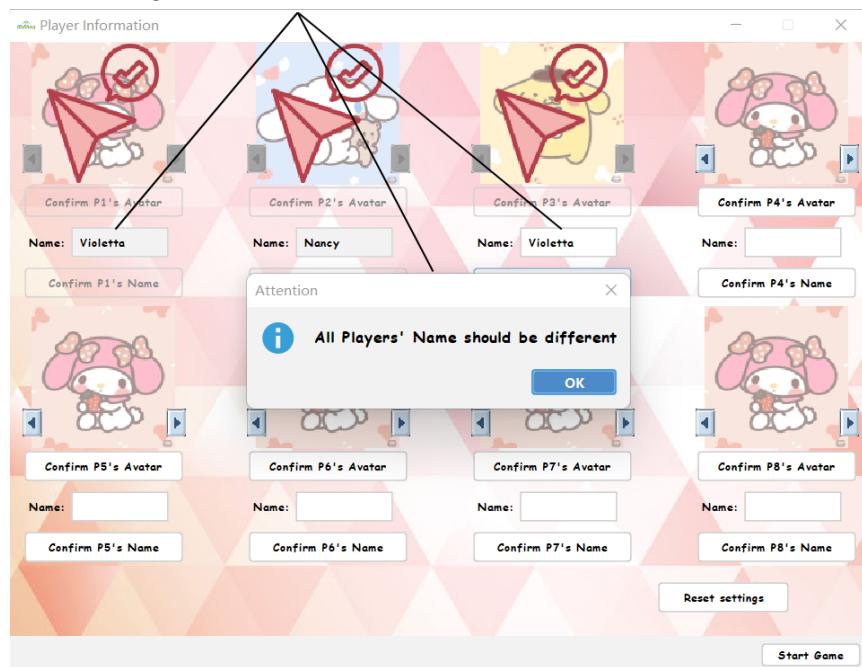
After login, it will show a player information frame

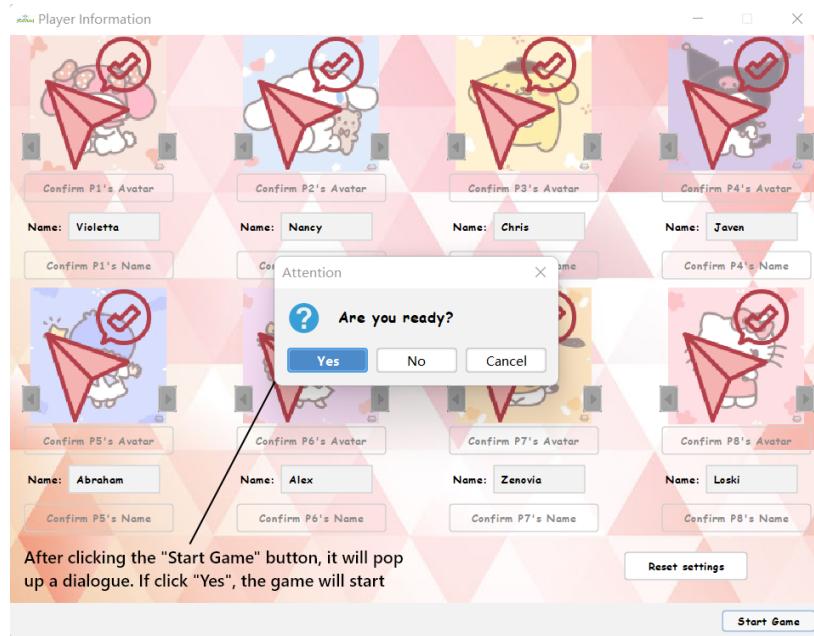


If players choose the same avatar, it will pop up a information dialogue and the avatar couldn't be confirmed



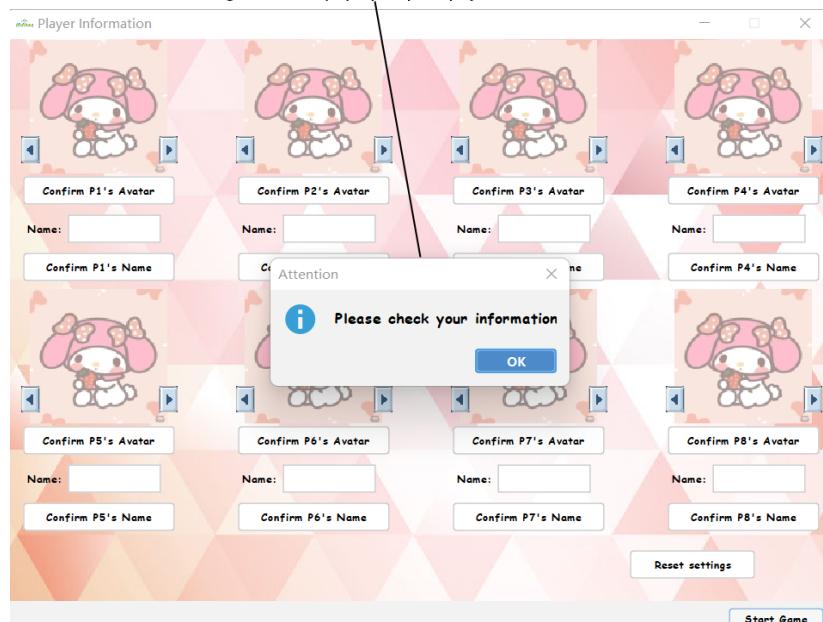
If players input the same name, it will pop up a information dialogue and the name couldn't be confirmed



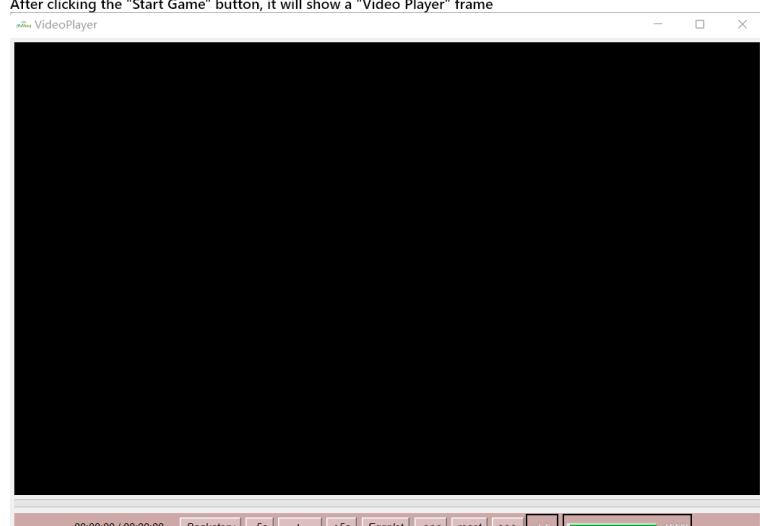


After all players confirm their avatars and names, click the "Start Game" button to start the game.

If click on Start Game before all information from all players has been confirmed, a dialogue box will pop up to prompt you.



After clicking the "Start Game" button, it will show a "Video Player" frame



Click the "Backstory" button and then click the "play" button, the Video Player will play the Backstory animation.

Click the "-5s" button or the "+5s" button, it can make the video jump to five seconds before or five seconds after

Click the "<<<" button or the ">>>" button, it can adjust the rate of playing the video

Click on a position within the range of the green volume bar to adjust the volume.

Click the "reset" button, it can make the rate of playing the video return to 1.0 (the original rate)



Click the player's avatar, and it shows the player's information, including its characters' points and the area it takes charge of. (The number of these points would change after players trigger some events, and the "Take Charge Of:" would show the name of areas the player takes charge of. e.g. Take Charge Of: House 4)



After watching the Backstory animation and closing the Video Player frame, it will turn to the Game Frame

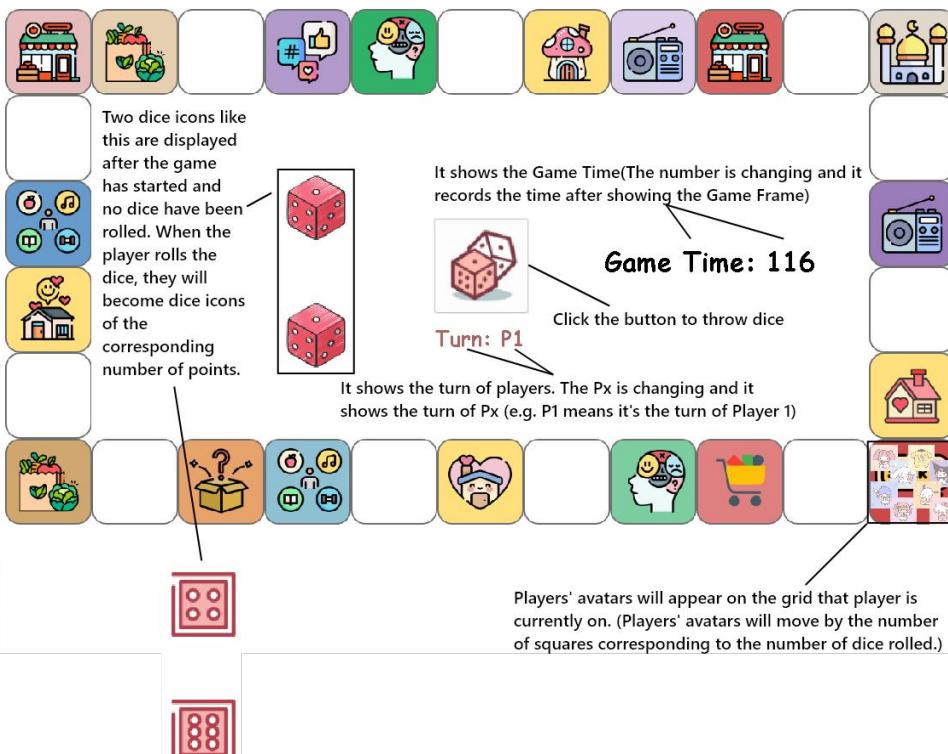
Sustainopoly  
File Setting Help

The pictures around the corner are the players' avatars, and the string are their name, and they are arranged in the order P1 - P8

Violetta Nancy

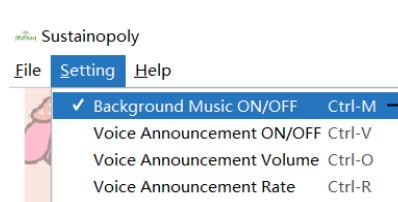
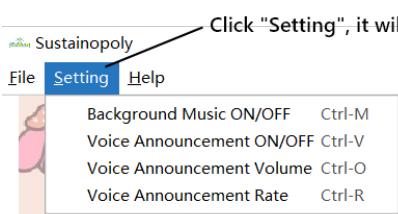
P3 P4  
Chris Javen

Squares with the same icon indicate the same function/area (except for the yellow squares, where the icons are different but all represent areas that can be taken over by the player). In addition, development areas with the same icons have slightly different background colors, indicating that their tasks are different (two tasks in one area).

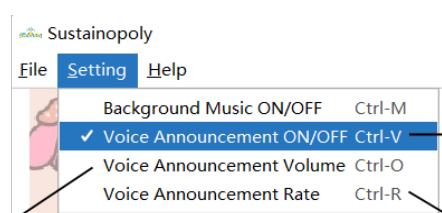


Abraham Alex  
P5 P6

Zenovia Loski  
P7 P8



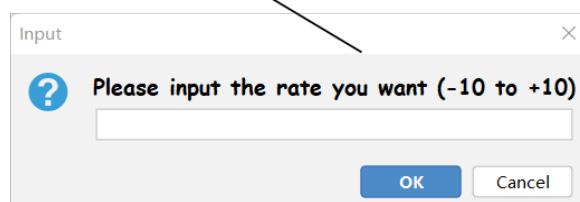
Click it to control the BGM ON/OFF



Click it to control the Voice Announcement ON/OFF



Input a number in the range of 0 - 100 to adjust the volume of the Voice Announcement



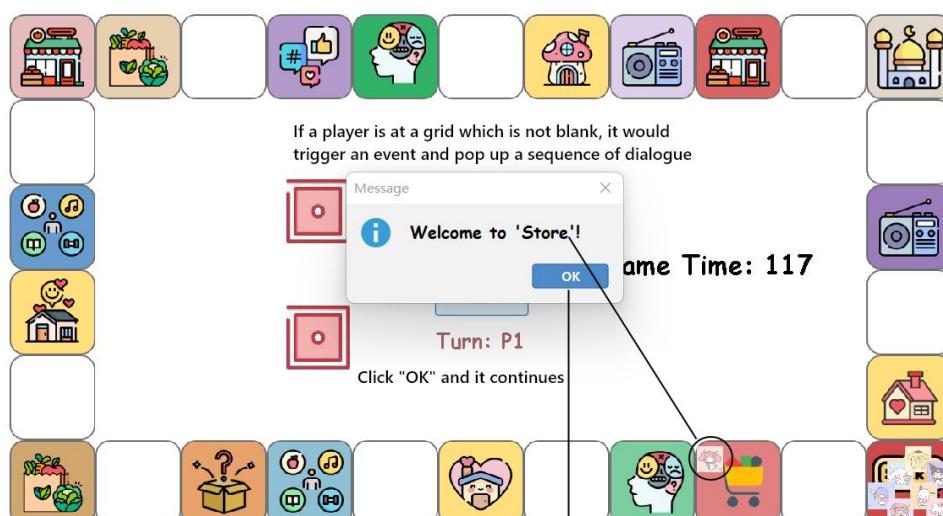
Input a number in the range of -10 to +10 to adjust the rate of the Voice Announcement



Violetta Nancy



Chris Javen



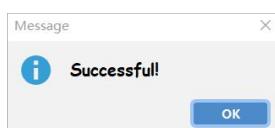
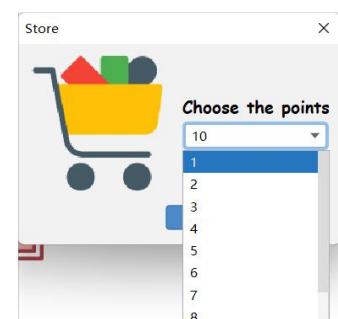
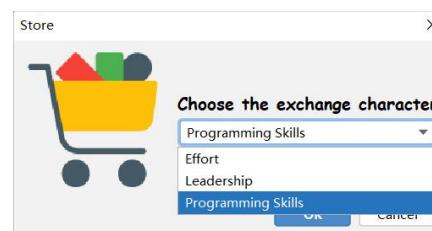
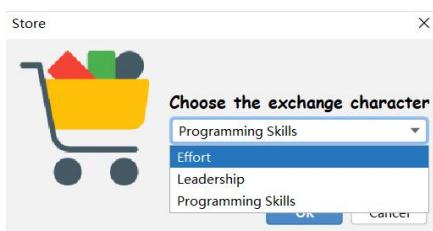
Abraham Alex



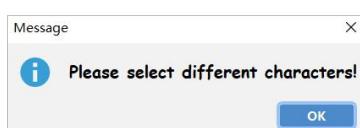
Zenovia Loski



If the grid is "Store", it would let the player make a choice of exchanging characters and points

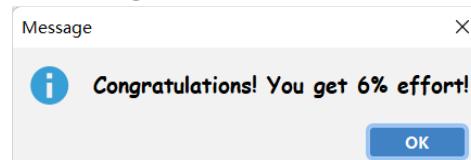
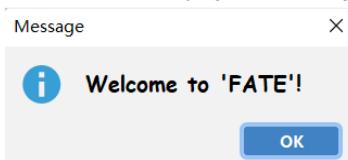


If the player chooses two different characters, it would pop up the "Successful" message, tells the player the exchange is successful, and the player's characters' points would change.

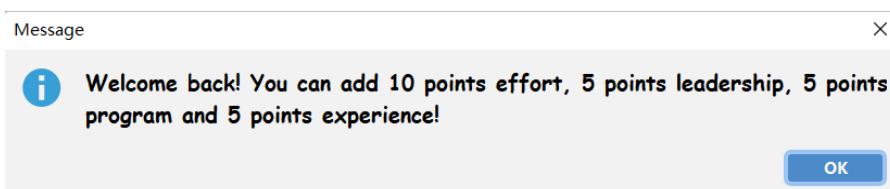


If the player chooses the same characters, it would pop up the message tells the player the exchange is unsuccessful.

If the grid is 'Fate', it will pop up a dialogue telling the player how many points were lost or gained.



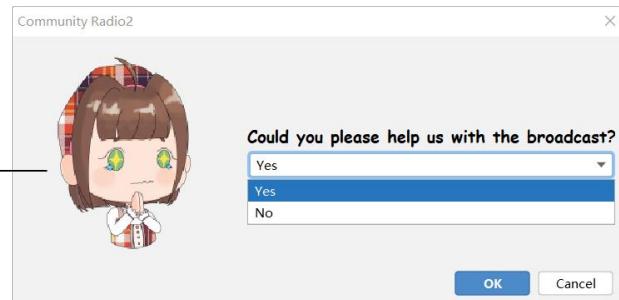
If the grid is 'Start', it will pop up a dialogue telling the player to add 10 points for effort, 5 points for leadership, 5 points for program skills and 5 points for experience



If the grid is a development area, it will pop up a sequence dialogue. (Here is an example of "Mental Health Centre1")



Player could choose to accept the task or not.



We design an NPC called "Coco", and she is a resident of Govan. And Coco's expressions would change depending on the content of the dialog box

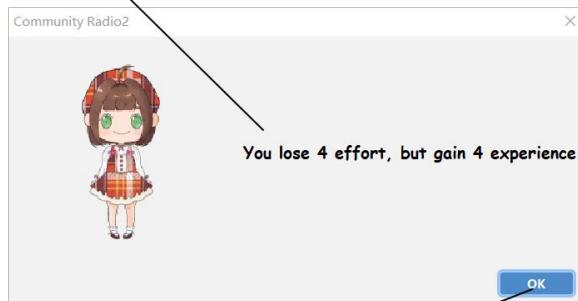
If the player accept the task

Coco would tell the player the content of the task

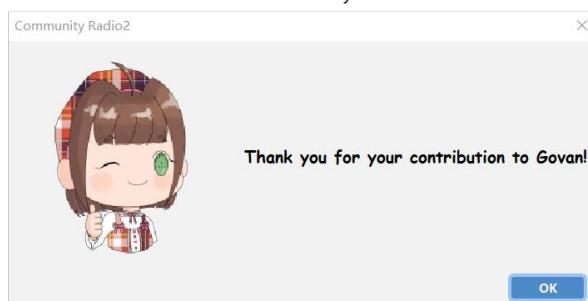


Each task has a different content, lost and gained points

Coco would tell the player the lost character points for doing the task and the gain character points as reward.



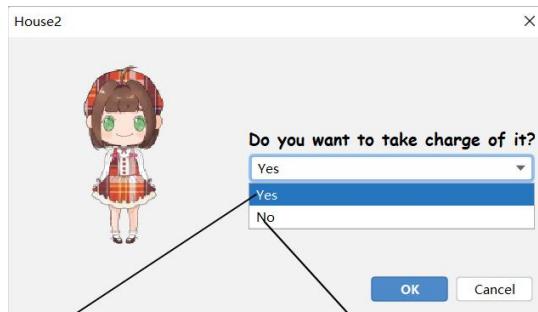
And Coco would thank for your contribution



If the player refuse the task (Here is a example of "Activity Centre1").

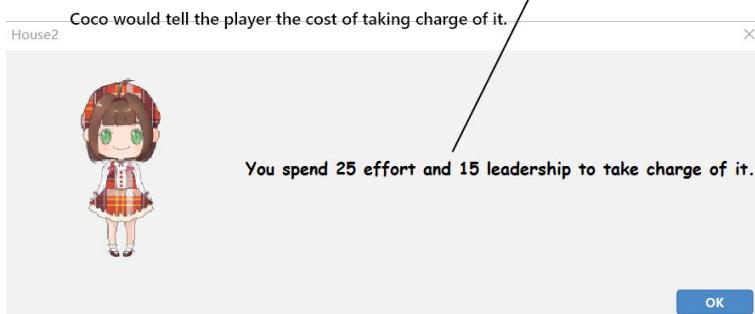
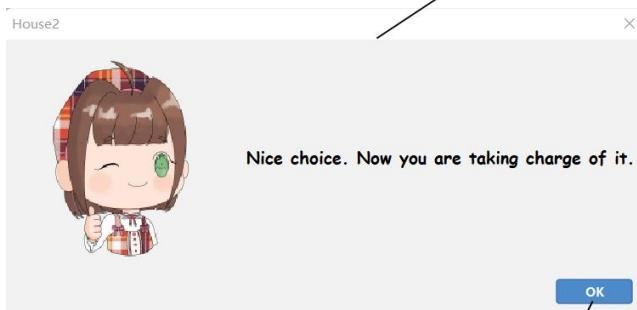


If the grid is a house(it's an area which players can take charge of it), it would let the player make a choice of taking charge of it or not.

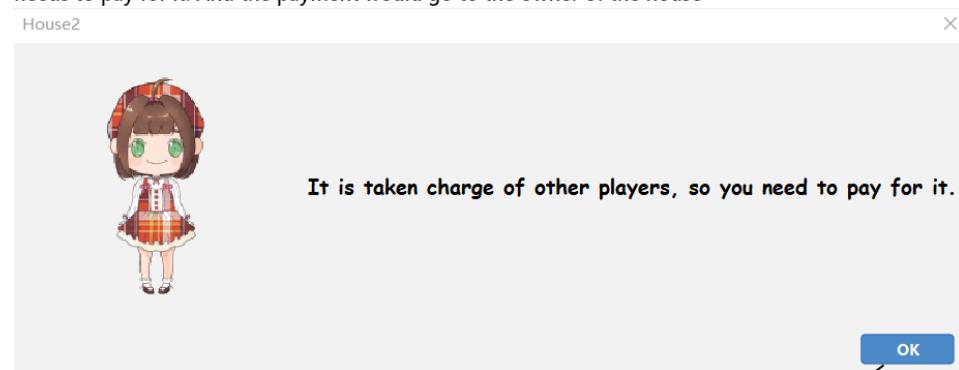


If the player choose "Yes"

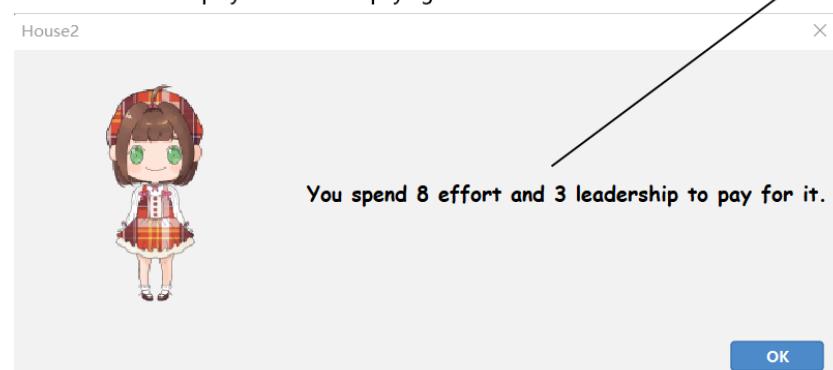
If the player choose "No"



If a player is at a house which is taking charged by another player, the player needs to pay for it. And the payment would go to the owner of the house



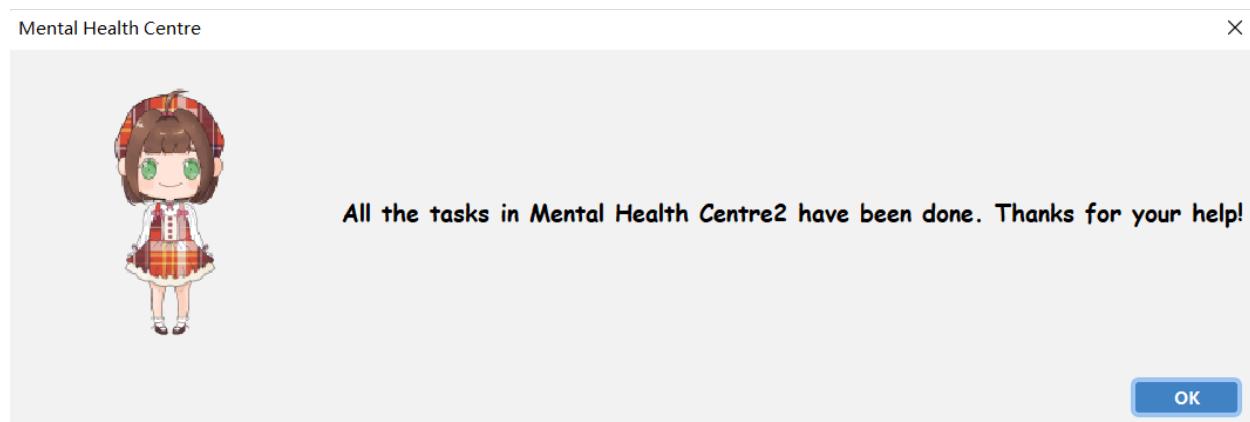
Coco would tell the player the cost of paying for it.





If the last task in "Mental Health Centre1" or "Food Bank1" has been done, it would pop up a dialogue and turn to the Mental Health web page or Food Bank web page(Here is an example of Mental Health Centre1).

If all tasks in a development area have been done, it would pop up the dialogue to tell the player the message (Here is an example of "Mental Health Centre2")



After all tasks in all development areas have been done or the time is up to the limit, the game would over and pop up a "Rank of Players" frame.

Players are ranked in descending order by the sum of points for leadership, program skills and experience (when these three attributes are the same then compare the size of the effort and also rank them in descending order), and each player's avatar, id and points for each characters are displayed.

GAME OVER

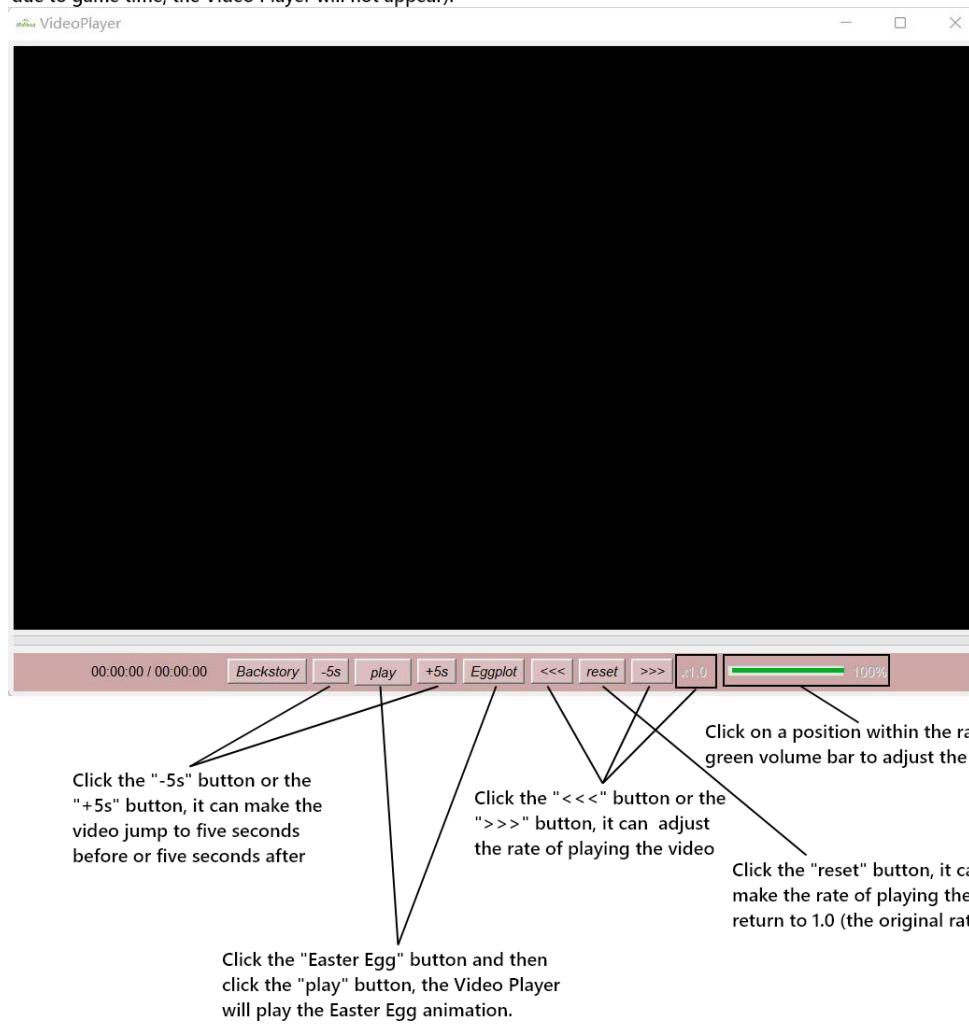


Rank of Players

1		Effort: 100 Leadership: 100 Programming Skills: 100 Experience: 100
2		Effort: 100 Leadership: 100 Programming Skills: 100 Experience: 100
3		Effort: 100 Leadership: 100 Programming Skills: 100 Experience: 100
4		Effort: 100 Leadership: 100 Programming Skills: 100 Experience: 100
5		Effort: 100 Leadership: 100 Programming Skills: 100 Experience: 100
6		Effort: 100 Leadership: 100 Programming Skills: 100 Experience: 100
7		Effort: 100 Leadership: 100 Programming Skills: 100 Experience: 100
8		Effort: 100 Leadership: 100 Programming Skills: 100 Experience: 100

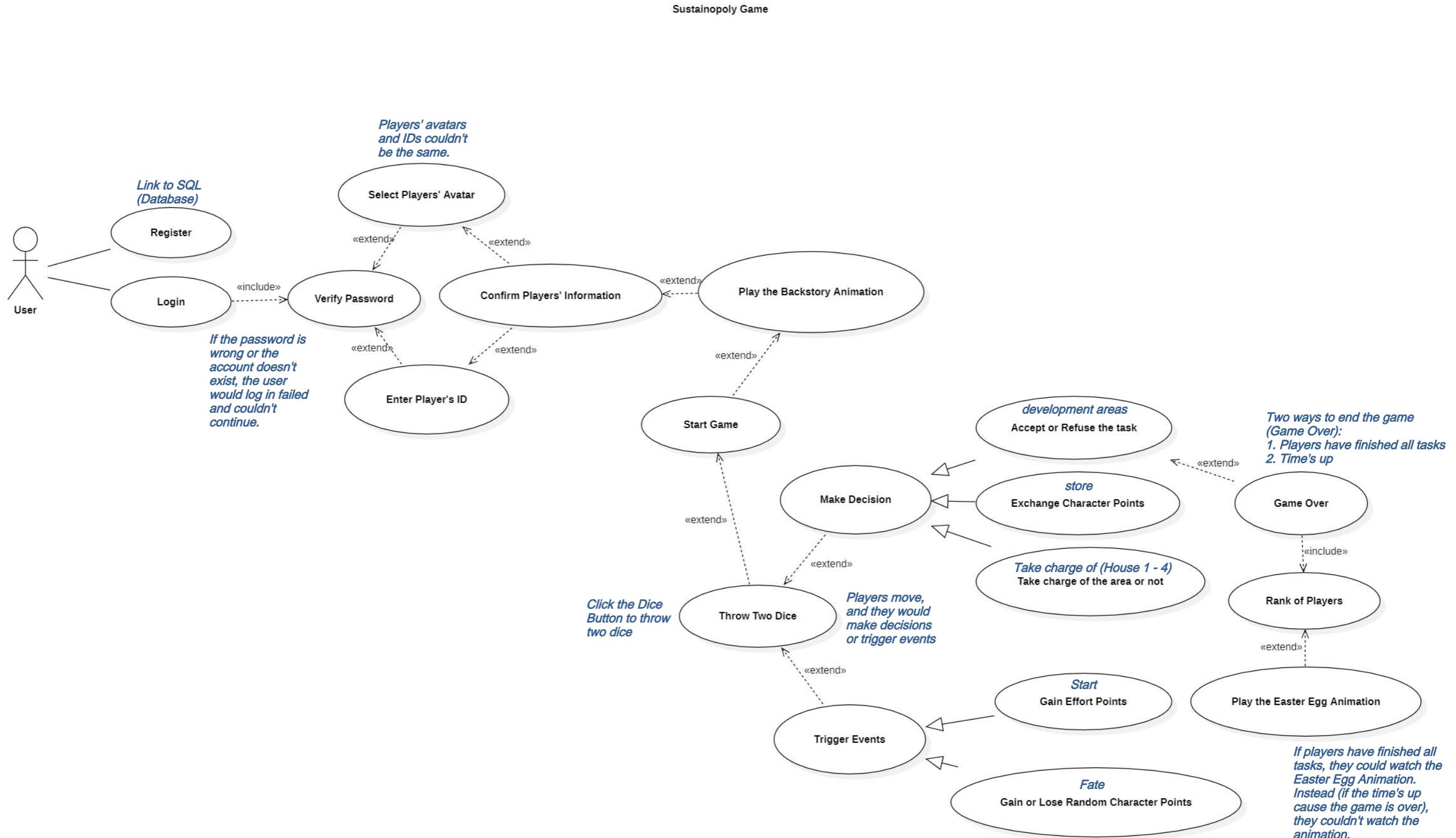
Initially, we design it in this form (the top picture), but we found it difficult to show players' information clearly on screen. Hence, we changed it to that form (the left picture).

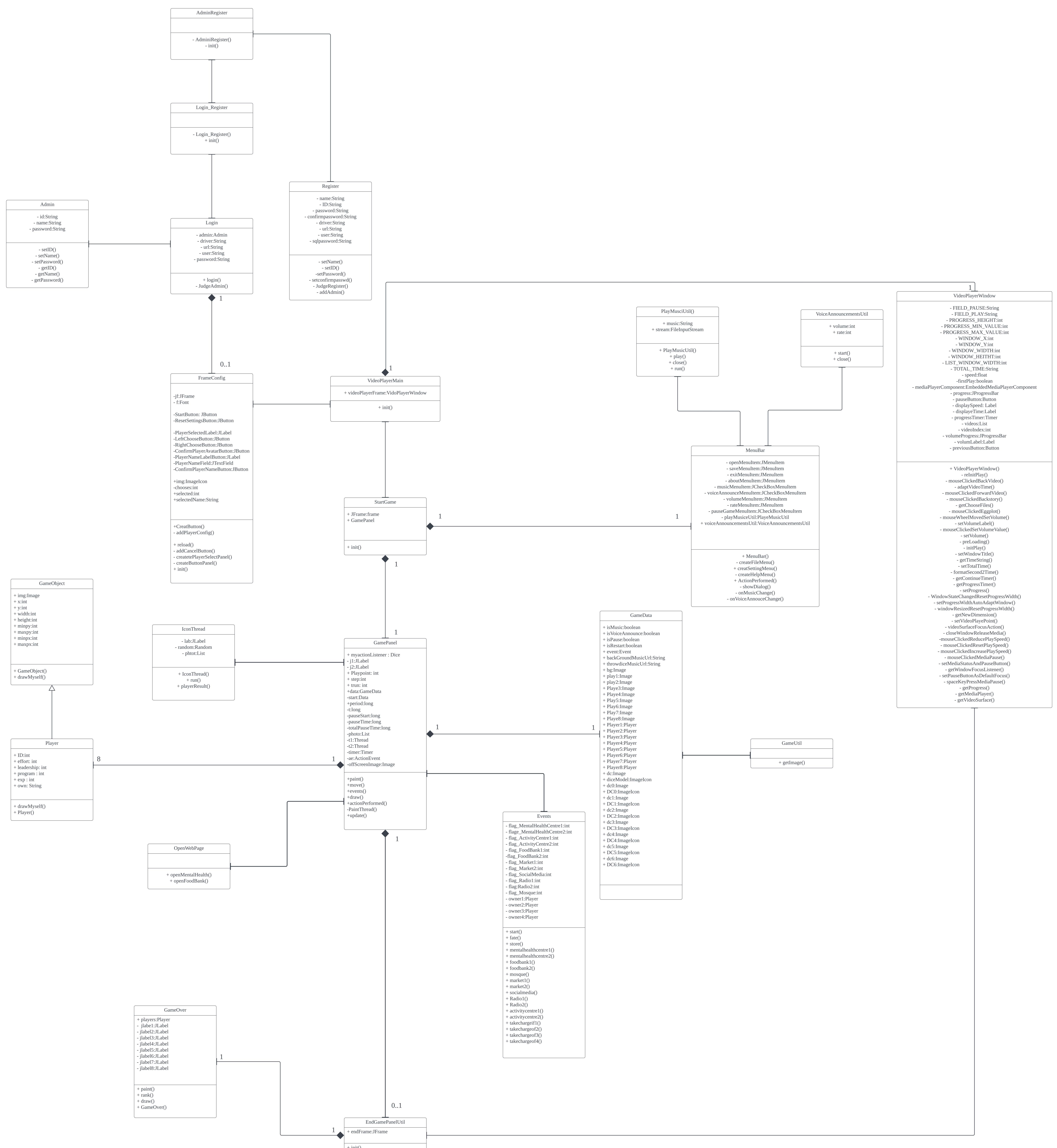
If all tasks in all development areas have been done, after closing the frame of "Rank of Players", it would show a Video Player frame to award players to watch the Easter Egg animation (In the case of a game ending due to game time, the Video Player will not appear).



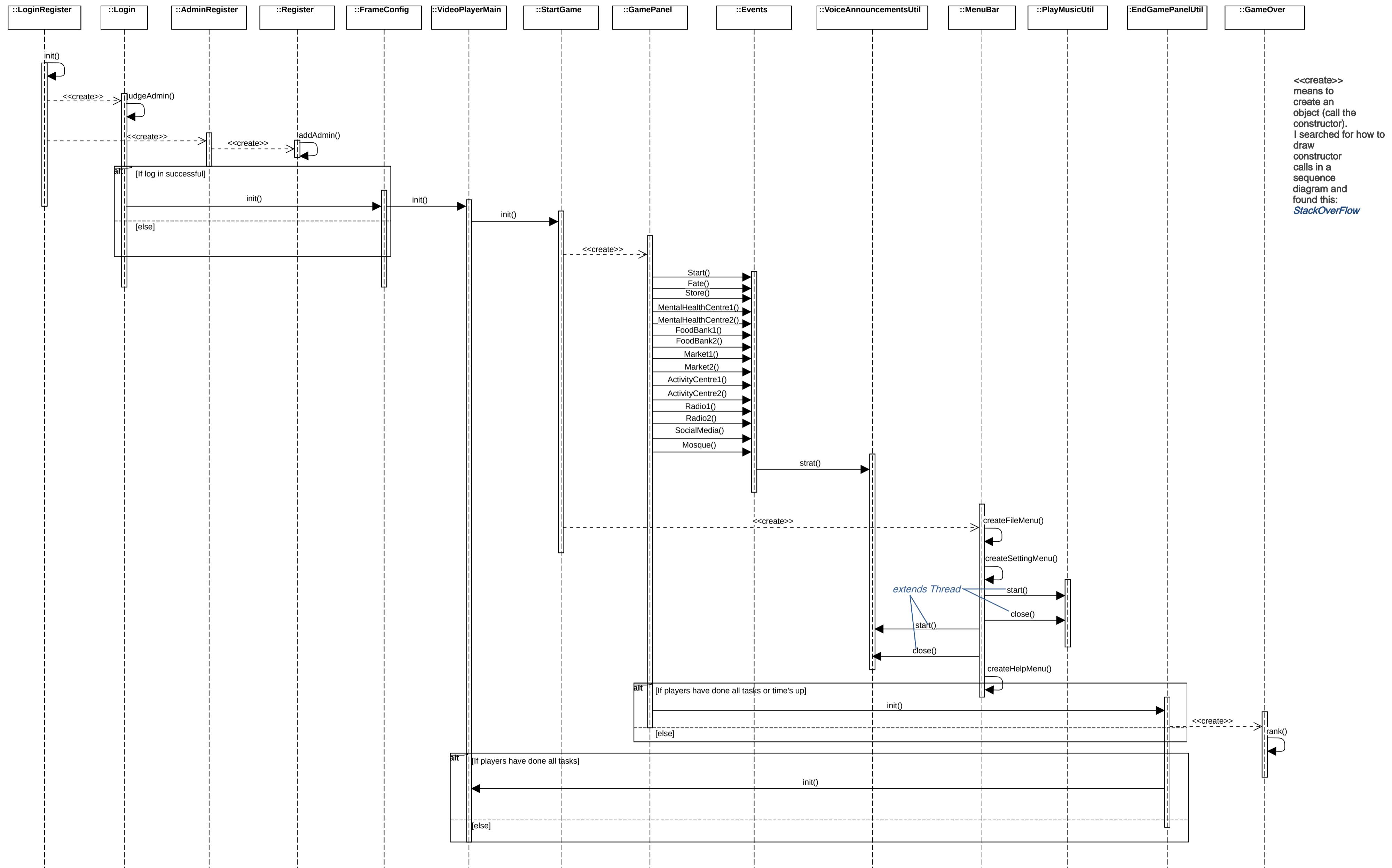
## UML Diagram

## Use Case Diagram

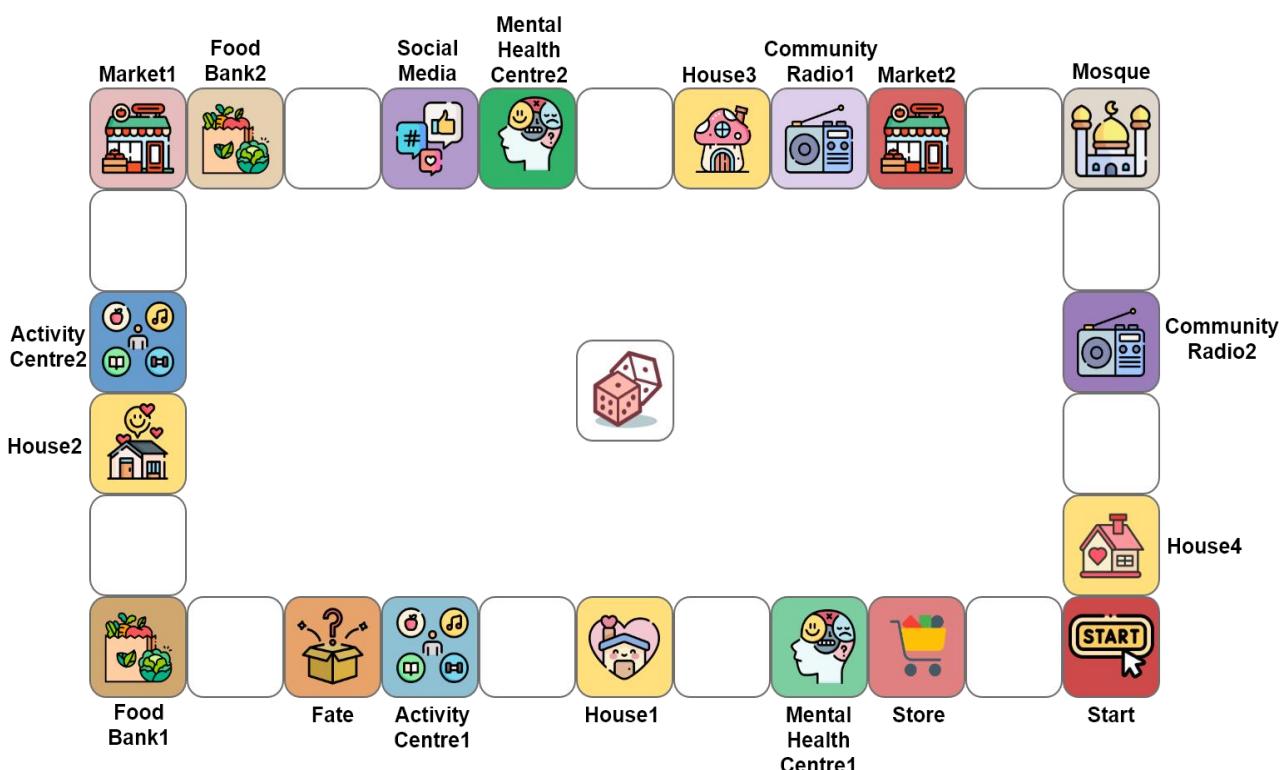




## Sequence Diagram



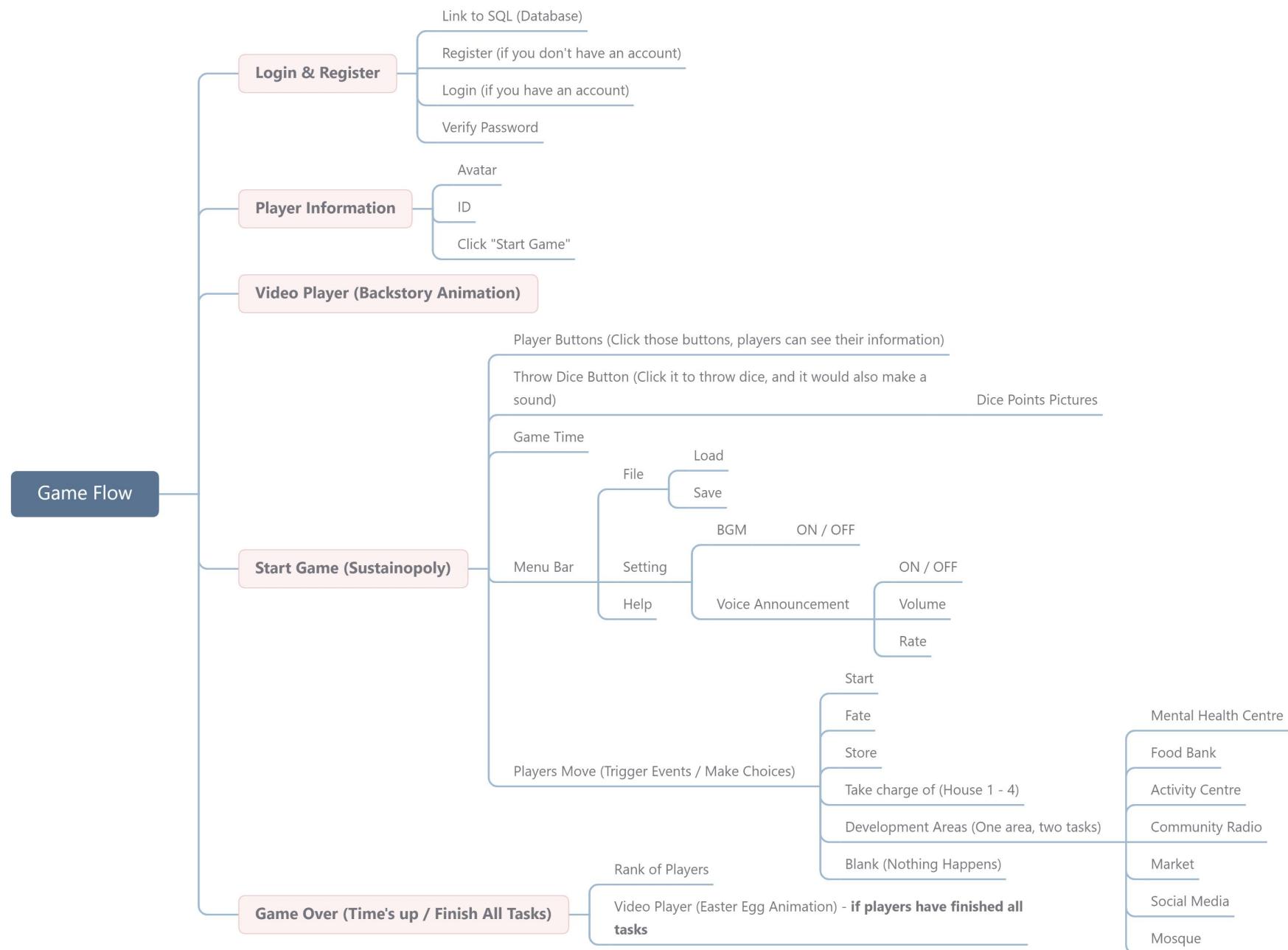
## Game Layout



Square Name	Content / Function	Points Changes
Start	Add points	+10 effort +5 leadership +5 program skills +5 experience
Store	Exchange points	Exchange/Get characters: effort/leadership/program skills Exchange points: 1-10 points
Fate	Lost/Gain points	Random(1-10% points of effort)
House1	Take charge of / Pay for it(if it is taken charge by another player)	-25 effort, -10 leadership / -8 effort, -3 leadership
House2	Take charge of / Pay for it(if it is taken charge by another player)	-25 effort, -10 leadership / -8 effort, -3 leadership
House3	Take charge of / Pay for it(if it is taken charge by another player)	-25 effort, -10 leadership / -8 effort, -3 leadership
House4	Take charge of / Pay for it(if it is taken charge by another player)	-25 effort, -10 leadership / -8 effort, -3 leadership
Mental Health Centre1	1. We need to set up the Mental Health website to present the content of the Antidepressant Skills Guide in a multimedia format. 2. We need to create a calendar reminder on the website to remind residents to complete the guide every day. 3. We need to provide a supportive community forum function on the website where users can share experiences and support each other. 4. We need to introduce scales to periodically provide users with a depression-based mental health assessment to help them understand their mental health status.	1. -20 effort, +5 leadership, +10 program skills, +5 experience 2. -10 effort, +2 leadership, +5 program skills, +2 experience 3. -10 effort, +2 leadership, +5 program skills, +2 experience 4. -7 effort, +2 leadership, +3 program skills, +2 experience
Mental Health Centre2	1. In order to accommodate residents who do not have easy access to the internet, we need to distribute paper copies of the guide, the scales and psychology-related books. 2. In order to provide better protection for the mental health of our residents, we need to work with a nearby mental health agency to provide regular counselling services for our residents.	1. -4 effort, +3 experience 2. -5 effort, +2 leadership, +3 experience

	<p>3. We need to create a Food Information website where we can display the types and quantities of food available at the Food Bank.</p> <p>4. We need to connect the website to the Food Bank to enable real-time updates of Food Information.</p>	<p><b>3.</b> -20 effort, +5 leadership, +10 program skills, +5 experience</p> <p><b>4.</b> -10 effort, +3 leadership, +5 program skills, +3 experience</p>
Food Bank2	<p>1. In order to make the Food Bank work better, we need to recruit volunteers for the Food Bank.</p> <p>2. In order to better care for the disabled and elderly who have difficulty with their legs, volunteers are required to deliver food to their homes.</p>	<p><b>1.</b> -8 effort, +4 leadership, +4 experience</p> <p><b>2.</b> -6 effort, +3 leadership, +3 experience</p>
Market1	<p>1. We need to know the information on the Market's daily food surplus.</p> <p>2. We need to communicate with the Market management to get the Market to provide excess food to the Food Bank and build closer cooperation with the Food Bank.</p> <p>3. We need to get the food from the Market and transport it to the Food Bank so that the inhabitants can have enough food in the Food Bank.</p>	<p><b>1.</b> -5 effort, +2 leadership, +3 experience</p> <p><b>2.</b> -10 effort, +5 leadership, +5 experience</p> <p><b>3.</b> -5 effort, +2 leadership, +3 experience</p>
Market2	<p>1. We need to know the latest information on the market for near-expired household goods at reduced prices.</p> <p>2. We need to collect and sort the information on the near-expired household items and make the list available to residents in real-time so that they can shop for them if they are struggling to make ends meet.</p>	<p><b>1.</b> -5 effort, +2 leadership, +3 experience</p> <p><b>2.</b> -10 effort, +5 leadership, +5 experience</p>
Social Media	<p>1. We need to use Social Media to promote Food issues and Mental Health issues.</p> <p>2. We need to attract more volunteers and donors, as well as raise public awareness of Food issues and Mental Health issues.</p>	<p><b>1.</b> -10 effort, +5 leadership, +5 experience</p> <p><b>2.</b> -10 effort, +5 leadership, +5 experience</p>
Community Radio1	<p>1. We need to broadcast the Food Bank's real-time Food Information, helping residents who do not have easy access to the internet to get real-time Food Information.</p> <p>2. We need to broadcast Mental Health knowledge to help residents improve their Mental Health.</p>	<p><b>1.</b> -3 effort, +3 experience</p> <p><b>2.</b> -3 effort, +3 experience</p>
Community Radio2	<p>1. We need to broadcast news so that those who do not have easy access to the internet can also get the latest information from around the world.</p> <p>2. We need to broadcast job vacancies in nearby companies so that people who need to find a job can easily access this information.</p>	<p><b>1.</b> -4 effort, +4 experience</p> <p><b>2.</b> -3 effort, +3 experience</p>
Mosque	<p>1. We need to visit Mosque to understand the food needs of the Muslim population.</p> <p>2. We need to communicate with both Food Bank and Mosque to establish cooperation between them.</p> <p>3. We need to get halal food to meet the basic food needs of the Muslim residents.</p>	<p><b>1.</b> -8 effort, +4 leadership, +4 experience</p> <p><b>2.</b> -10 effort, +5 leadership, +5 experience</p> <p><b>3.</b> -5 effort, +2 leadership, +3 experience</p>

## Game Flow



# Test Plan

## Initial Tests

ID	Description of Test	Test Initialisation	Test Inputs	Test Procedure	ExpectedResults	Passed?
1	Test registration function	Ensure that there are no records in the database that conflict with the values you want to enter	Name:root ID:01 Password:123456 Confirm Password:123456	After entering the values, click the Registration button	Register successful	Yes, successfully stored corresponding data in MySQL
2	Test login function	Ensure that there are records in the database that you want to log in to	ID:01 Password:123456	After inputting data, click the login button	Login successful	Yes, entered a new interface
3	Test verification password	Ensure that there are records in the database that you want to log in to	ID:01 Password:123	After inputting data, click the login button	Login unsuccessful	Yes, when entering an incorrect password, you will not be able to log in
4	Test Selection Avatar	unwanted	unwanted	Click the left and right buttons	Switch successful	Yes, clicking the button will switch between different avatars
5	Test input player name	unwanted	Name:root	unwanted	Input successful	Yes, name successfully displayed
6	Test and confirm player information	Select Avatar and enter a name	unwanted	Click the Confirm button	Confirm successful	Yes, button cannot be selected again and a tick appears on the avatar
7	Test play the Backstory Animation	confirm player information	unwanted	Click the start button	Play successful	No, Backstory animation cannot be played
8	Test throw two dice	after watching the animation	unwanted	Click the dice button	Throw successful	Yes, digital success change
9	Test make decision	start game	unwanted	Click the dice button	Make successful	Yes, when you go to different regions, you need to make different choices. If you are the first to arrive at a region, you can choose to buy the land. If it is a task, you can choose to do it or not. You can also choose to exchange character points

ID	Description of Test	Test Initialisation	Test Inputs	Test Procedure	ExpectedResults	Passed?
10	Test trigger events	start game	unwanted	Click the dice button	Trigger successful	Yes, when reaching someone else's territory, you need to pay for it, and when someone else reaches your territory, you will reap the money. You may also lose or gain random character points
11	Test display rank	game over	unwanted	unwanted	Display successful	Yes, players will be ranked based on the game results
12	Test play the Easter Egg animation	game over	unwanted	Close rank	Play successful	No, Easter Egg animation cannot be played

## Subsequent Tests

ID	Description of Test	Test Initialisation	Test Inputs	Test Procedure	ExpectedResults	Passed?
1	Test play the Backstory Animation	confirm player information	unwanted	Click the start button	Play successful	Yes, Backstory animation can be played
2	Test play the Easter Egg animation	game over	unwanted	Close rank	Play successful	Yes, Easter Egg animation can be played

**Minutes for CSC2058**

**Group \_36\_ Date of this minute \_20/\_01/\_2023\_ Location (Room No. and/or Teams):  
\_\_CSB/01/020\_\_**

The following team members were present (in the same meeting room or on Teams) when these minutes were discussed:

Name (printed/typed)	In room (R); On teams (T).	Signature (agreed bitmap or initials)
Hailin Weng	CSB/01/020	Hailin Weng
Yueying Xie	CSB/01/020	Yueying Xie
Peilin Zou	CSB/01/020	Peilin Zou
Ziwen Xu	CSB/01/020	Ziwen Xu
Yikai Wu	CSB/01/020	Yikai Wu
Yong Yang	CSB/01/020	Yong Yang

**Task Reporting (Briefly list what each team member did in the last week/since the last meeting if < 1 week.\*)**

Name (1):Hailin Weng

1. Discuss Possible Solutions to the Shortcomings in "Sustainopoly"
  - Brainstorm ideas for improving "Sustainopoly" based on feedback from semester 1
  - Discuss the feasibility and practicality of each idea
  - Assign tasks to group members to work on different aspects of the project
2. Progress Update on Semester 2 Requirements
  - Review the requirements for semester 2 and discussed any questions or concerns
  - Update the group on the progress of the project so far
  - Discuss any obstacles or challenges that need to be addressed
  - Assign tasks to group members to ensure the project stays on track
3. Test the Voice Announcement Function
  - Demonstrate the voice announcement function to the group
  - Test the function to identify any bugs or issues that need to be fixed
  - Discuss possible improvements or enhancements to the function
  - Assign tasks to group members to make any necessary changes or additions
4. Brainstorm Ideas for Future Projects
  - Discuss potential ideas for future projects or enhancements to "Sustainopoly"
  - Evaluate the feasibility and potential impact of each idea
  - Narrow down the options and decided on a few ideas to pursue further
  - Assign tasks to group members to research and develop each idea further

Name (2):Yueying Xie

- 

Name (3):Peilin Zou

- 

Name (4):Ziwen Xu

- 

Name (5):Yikai Wu

- 

Name (6):Yong yang

- 

\*Printouts giving an overview of interim deliverables may be added as a supplement to these minutes.

## **Actions Planned** (Briefly list what each team member will do this week/until the next meeting if < 1week.)

### **Name (1):Hailin Weng**

1. Learn JavaSE
  - Identify areas where further improvement is needed
  - Assign tasks to group members to focus on specific areas of improvement
2. Review UI Design and Identifying Areas for Improvement
  - Review the UI design created using Java awt & swing
  - Evaluate the design's aesthetics and usability
  - Identify areas where improvements can be made and discussed possible solutions
3. Implementing Multithreading to Improve Code Efficiency
  - Identify areas of the code that could benefit from multithreading
  - Assign tasks to group members to implement multithreading in specific areas of the code
4. Conduct Requirements Analysis for Sustainable Solutions in Govan
  - Research Sustainable goals and Govan community websites to gather information
  - Identify potential areas where Sustainable solutions can be implemented and evaluated their feasibility
  - Assign tasks to group members to research and develop solutions for specific areas identified during the requirements analysis.

### **Name (2):Yueying Xie**

1. Learning JavaWeb and Improving Web Design Skills
  - Review the design and functionality of existing web pages created by the group
  - Identify areas where improvements can be made in terms of design, user experience, and functionality
  - Do practices for creating clean and beautiful web pages and brainstormed ideas for improving the overall design and user experience.

### **Name (3): Peilin Zou**

1. Learn Java AWT & Swing for Better UI Design
  - Discuss progress made in learning Java AWT & Swing and their applications in UI design
  - Review the existing UI design created by the group
  - Identify areas where improvements can be made in terms of functionality and aesthetics
  - Discuss best practices for creating a multifunctional UI using Java AWT & Swing and brainstormed ideas for improving the overall design and user experience

### **Name (4): Ziwen Xu**

1. Learn HTML and CSS for Web Design
  - Review the progress made in learning HTML and CSS
  - Know about the principles of web design and best practices for creating visually appealing and user-friendly web pages
2. Find Copyright-Free BGM for Game Development
  - Conduct research on sources of copyright-free BGM and evaluated their suitability for the game
  - Select and integrate BGM into the game and brainstorm ideas for future improvements.

### **Name (5): Yikai Wu**

1. Refactor Our Code and Applying Best Practices
  - Analyse the importance of code refactoring in software development and reviewed some common code smells
  - Learn common best practices for code quality, such as proper naming conventions, removing dead code, and reducing code complexity
  - Review progress made in refactoring our code and identified any areas where further improvements can be made
  - Concern any challenges or issues faced during the refactoring process and brainstormed solutions to overcome them.

### **Name (6): Yong yang**

1. Test and Debug Our Code
  - Know about the importance of testing and debugging in software development and reviewed common testing frameworks and debugging tools
  - Learn the importance of test coverage and the process of writing effective test cases
  - Review progress made in testing and debugging our codebase and identified any areas where further improvements can be made

**Obstacles** (List briefly anything that may be blocking your progress and the possible solutions you need to investigate. Indicate 'O.K.' if there are no obstacles you are aware of.)

Name (1):Hailin Weng

- What are some of the major local specialties in Govan?
- What are some initiatives or projects aimed at improving the community in Govan?
- Are there any cultural or social challenges facing Govan, such as issues related to community cohesion or identity?
- How to make good solutions? What kinds of solutions are good? It isn't easy to make solutions that are not only based on computer, but also suited to Govan's conditions.
- How to make the structure of our project code clearer? Our current project code is functional, but a bit cluttered.
- How to implement the player login function? It needs to record players' IDs and passwords.

Name (2):Yueying Xie

- What are the different types of initiatives or projects aimed at improving the community in Govan?

Name (3):Peilin Zou

- How to ensure that our program is thread-safe?

Name (4):Ziwen Xu

- What are some potential future initiatives or projects that could further improve the community in Govan?

Name (5):Yikai Wu

- How effective have these initiatives or projects been in addressing the community's needs and improving the overall quality of life in Govan?

Name (6):Yong yang

- What are some of the challenges facing Govan today?

**Date of next minutes meeting: 27 / 01 / 2023**

**Location of next minutes meeting: (Room No. and/or Teams): CSB/01/020**

## Minutes for CSC2058

**Group \_36\_ Date of this minute \_27/\_01/\_2023\_ Location (Room No. and/or Teams):  
\_\_CSB/01/020\_\_**

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Ziwen Xu	CSB/01/020	Ziwen Xu
Yikai Wu	CSB/01/020	Yikai Wu
Yong Yang	CSB/01/020	Yong Yang

**Task Reporting (Briefly list what each team member did in the last week/since the last meeting if < 1 week.\*)**

Name (1):Hailin Weng

1. Analyze Feedback and Improving Functionality
  - Review feedback from lecturer regarding the voice announcement function and identify areas for improvement
  - Assign tasks to group members to implement improvements and test the updated functionality
  - Review progress made in implementing improvements and identify any areas where further improvements can be made
2. Conduct Research and Analysis on Govan
  - Assign tasks to group members to research the history and current situation of Govan, including demographics, economy, and infrastructure
  - Discuss potential implications of this research on our project and brainstorm ideas for improving our solutions based on our findings
  - Analyze the feasibility of our solutions based on our research and identify any potential challenges or limitations
  - Review progress made in conducting research and analysis on Govan and identify any areas where further research is needed

Name (2):Yueying Xie

- Participate in the discussion on Govan's real world solutions and gave advice on the website

Name (3):Peilin Zou

- Give suggestions for improvements in the game's functionality

Name (4):Ziwen Xu

- Provide some bgm options

Name (5):Yikai Wu

- Use software testing knowledge to suggest improvements to the game code

Name (6):Yong yang

- Demonstrate learning about white box testing

\*Printouts giving an overview of interim deliverables may be added as a supplement to these minutes.

## Actions Planned (Briefly list what each team member will do this week/until the next meeting if < 1week.)

### Name (1):Hailin Weng

1. Learning JavaSE IO Stream and Streamlining Code
  - Discuss potential benefits of learning IO Stream and streamlining the code, including increased efficiency and improved readability
  - Review progress made in learning IO Stream and streamlining the code and identified any areas where further improvements can be made
2. Design a More User-Friendly UI
  - Assign tasks to group members to redesign the UI to be more user-friendly and aesthetically pleasing
  - Discuss potential design concepts and ideas for improving the UI based on user feedback and brainstormed new ideas for functionality
  - Review progress made in redesigning the UI and identified any areas where further improvements can be made
3. In-Depth Learning of Sustainable Development Goals
  - Assign tasks to group members to conduct in-depth research and analysis on the Sustainable Development Goals (SDGs)
  - Discuss potential implications of the SDGs on our project and brainstormed ideas for improving our solutions based on our findings
  - Analyzed the feasibility of our solutions based on our research and identified any potential challenges or limitations
  - Review progress made in conducting research on the SDGs and identified any areas where further research is needed

### Name (2):Yueying Xie

1. Keep learning JavaWeb, especially CSS
  - Review progress made in learning CSS and identified any areas where further improvements can be made
2. Redesign Web Pages
  - Think about potential design concepts and ideas for improving the layout, styling, and functionality of our web pages
  - Review progress made in redesigning the web pages and identified any areas where further improvements can be made

### Name (3): Peilin Zou

1. ImproveThrow Dice Functionality
  - Brainstorm ideas to make the functionality more user-friendly and engaging.
  - Identify potential issues with the current implementation and suggesting ways to address them.
  - Review progress made and identifying areas for further improvements.
2. Enhance UI Design
  - Brainstorming potential design concepts and ideas to improve the layout and aesthetics of the application.
  - Evaluate the current UI design and identifying areas for improvement.
  - Identify any usability issues and proposing solutions to overcome them.

### Name (4): Ziwen Xu

- Focus on gaining in-depth knowledge of web programming.
- Research and studying various web programming languages, such as HTML, CSS, and JavaScript
- Practice programming exercises and building small web applications to reinforce learning
- Share resources and tips with group members to improve understanding of web programming concepts

### Name (5): Yikai Wu

- Research and studied the concept of white box testing
- Learn about code coverage
- Practice writing JUnit tests that test individual methods and classes using white-box techniques

### Name (6): Yong yang

- Research and delve into the concept of white-box testing
- Execute writing of JUnit tests which examine individual methods and classes through white box techniques
- Start studying black box testing techniques

**Obstacles** (List briefly anything that may be blocking your progress and the possible solutions you need to investigate. Indicate 'O.K.' if there are no obstacles you are aware of.)

Name (1):Hailin Weng

1. Community Building:

- What are some strategies and ideas for building a strong and engaged community?
- How can we identify the key factors that contribute to creating a successful community?
- What resources and experiences can we share to help the group members understand community building?
- What activities can we plan and organize to encourage community engagement and participation?

2. Define Functions for a Community Website:

- What functions should a community website have?
- What challenges may arise in implementing these functions and how can we address them?
- What successful community websites can we research and analyze to identify additional features to include?

Name (2):Yueying Xie

- O.K.

Name (3):Peilin Zou

- O.K.

Name (4):Ziwen Xu

- O.K.

Name (5):Yikai Wu

- What is white box testing and how is it different from black box testing?
- How can you measure code coverage in white box testing, and what tools can you use?
- What are some common white box testing techniques, such as statement coverage and path coverage?
- What are the benefits and drawbacks of using white box testing over black box testing?
- What challenges might you face when implementing white box testing in your software development process?

Name (6):Yong yang

- How to ensure that white box testing is thorough and effective in finding bugs and issues in your code?
- What are some best practices for writing effective white box test cases and ensuring good code coverage?

**Date of next minutes meeting: 03 / 02 / 2023**

**Location of next minutes meeting: (Room No. and/or Teams): CSB/01/020**

## Minutes for CSC2058

**Group \_36\_ Date of this minute \_03/\_02/\_2023\_ Location (Room No. and/or Teams):  
\_\_CSB/01/020\_\_**

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Ziwen Xu	CSB/01/020	Ziwen Xu
Yikai Wu	CSB/01/020	Yikai Wu
Yong Yang	CSB/01/020	Yong Yang

**Task Reporting (Briefly list what each team member did in the last week/since the last meeting if < 1 week.\*)**

Name (1):Hailin Weng

- Analyze residents' requirements and design sustainable solutions for Govan
- Ask questions on the EWB Forum of Govan
- Conduct research on the needs and requirements of the residents of Govan
- Analyze the gathered data to identify common problems and challenges faced by the community
- Develop sustainable solutions that address the identified problems and challenges
- Create a presentation outlining the proposed solutions and their potential impact on the community
- Use the feedback to refine and improve the proposed solutions to better meet the needs of the community
- Learn about processes and threads in order to better understand the technical aspects of implementing the proposed solutions

Name (2):Yueying Xie

- More comments on the shortcomings of govan's existing community website

Name (3):Peilin Zou

- Suggest new ideas by looking at the questions asked by others in the EWB forum and the good examples from the past

Name (4):Ziwen Xu

- Make the UI design for the new community website and make a presentation for it

Name (5):Yikai Wu

- Analysis of the feasibility of existing solutions

Name (6):Yong yang

- Analysis and summary of ewb's past excellence

\*Printouts giving an overview of interim deliverables may be added as a supplement to these minutes.

## **Actions Planned** (Briefly list what each team member will do this week/until the next meeting if < 1week.)

Name (1):Hailin Weng

- Keep learning JavaSE, specifically processes and threads & Swing
- Program the user information entry function
- Search more informations about Govan to improve sustainable solutions
- Learn and practice the principles of software design patterns to improve code quality and maintainability.
- Explore the basics of database design and management using SQL.
- Study and practice software project management techniques such as Agile and Scrum to better manage software development projects.

Name (2):Yueying Xie

- Practice creating interactive web pages using JavaScript and HTML/CSS
- Explore different JavaScript libraries and frameworks to see which ones work best for our projects
- Research and implement techniques for optimizing the performance of your JavaScript code

Name (3): Peilin Zou

- Learn how to program the Player Information interface

Name (4): Ziwen Xu

- Learn more about SQL and database management systems to improve our web page
- Experiment with different ways to integrate SQL and JavaScript to create dynamic web page

Name (5): Yikai Wu

- Practice writing black box test cases based on requirements documents and user stories
- Analyze the importance of black box testing in identifying user-facing issues and improving user experience

Name (6): Yong yang

- Learn how to design and execute effective test scenarios and test cases
- Practice writing test cases for different scenarios, such as negative testing and edge cases

**Obstacles** (List briefly anything that may be blocking your progress and the possible solutions you need to investigate. Indicate 'O.K.' if there are no obstacles you are aware of.)

Name (1):Hailin Weng

- How to add more useful details to the solutions?
- What types of questions should be asked on the EWB Forum of Govan to get the most useful information?
- What are the key factors to consider when designing and implementing a multithreaded application?
- What are the best practices for implementing processes and threads in Java programming?

Name (2):Yueying Xie

- What are the key steps to analyze residents' requirements and design sustainable solutions for Govan?
- How to make the GUI more user-friendly and beautiful?

Name (3):Peilin Zou

- What are the best practices for implementing processes and threads in Java programming?
- How do processes and threads differ in terms of their execution and resource allocation?
- How can multithreading be used to improve the performance and responsiveness of a software application?

Name (4):Ziwen Xu

- How can we make the solutions for Govan more specific and targeted to the needs of the community?

Name (5):Yikai Wu

- How to write effective test cases and ensure adequate test coverage?
- What are the common mistakes made in software testing and how to avoid them?

Name (6):Yong yang

- What is the role of automation in software testing and how to implement it effectively?
- What is the best way to prioritize and manage testing tasks in a project?

**Date of next minutes meeting: 10/\_02/\_2023**

**Location of next minutes meeting: (Room No. and/or Teams): CSB/01/020**

## Minutes for CSC2058

**Group \_36\_ Date of this minute \_10/\_02/\_2023\_ Location (Room No. and/or Teams):  
\_\_CSB/01/020\_\_**

The following team members were present (in the same meeting room or on Teams) when these minutes were discussed:

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Ziwen Xu	CSB/01/020	Ziwen Xu
Yikai Wu	CSB/01/020	Yikai Wu
Yong Yang	CSB/01/020	Yong Yang

**Task Reporting (Briefly list what each team member did in the last week/since the last meeting if < 1 week.\*)**

Name (1):Hailin Weng

- Design solutions for Govan, about improving the community website (create more functions to make residents' life more convenient)
- Research successful community websites and analyze what functions they have that can be adapted for Govan
- Brainstorm and design potential functions for the community website
- Make a presentation about solutions
- Adjust the details of the development process

Name (2):Yueying Xie

- Suggest ideas for website UI design

Name (3):Peilin Zou

- Comment on the Govan refugee issue

Name (4):Ziwen Xu

- Provide new ideas for linking web pages and databases

Name (5):Yikai Wu

- Provide ideas for the cost of solutions

Name (6):Yong yang

- Suggest concepts for enhancing the website's interactive features

\*Printouts giving an overview of interim deliverables may be added as a supplement to these minutes.

## **Actions Planned** (Briefly list what each team member will do this week/until the next meeting if < 1week.)

### Name (1):Hailin Weng

- Keep learning JavaSE, specifically awt & swing(in order to make great GUI)
- Think about what Govan's residents need and add more details to solutions
- Implement a login and registration system using SQL to store user credentials and validate user login, and encrypt the password stored in the SQL
- Write a rough draft of the game's story
- Write the game's backstory(about the NPC Coco) and game's easter egg(bonus scene story)

### Name (2):Yueying Xie

- Implement Java code to connect to the database and perform SQL operations
- Document the database schema, SQL queries, and code for future reference and maintenance

### Name (3): Peilin Zou

- Program the Player Information interface, where players' avatar can be chosen and players' name can be input

### Name (4): Ziwen Xu

- Brainstorm ideas for the game plot
- Draw the UI sketches for our community website

### Name (5): Yikai Wu

- Conduct research on the current food situation in Govan
- Identify the key factors contributing to the food problem
- Brainstorm potential solutions for addressing the food problem
- Create a computer-based platform for implementing the solution

### Name (6): Yong yang

- Evaluate the feasibility and effectiveness of each solution
- Develop a detailed plan for the chosen solution

**Obstacles** (List briefly anything that may be blocking your progress and the possible solutions you need to investigate. Indicate 'O.K.' if there are no obstacles you are aware of.)

Name (1):Hailin Weng

- How can community involvement be increased in improving Govan?
- What are some innovative ways to address Govan's transportation issues?
- What measures can be taken to address the issue of food insecurity in Govan?
- What can be done to improve healthcare access and services in Govan?
- How can Govan better support and promote local businesses?

Name (2):Yueying Xie

- What are the gaps in the current healthcare services in Govan?
- What are the major health concerns faced by the residents of Govan? How can these problems be improved by computers?

Name (3):Peilin Zou

- How to program to handle when players select the same avatar/enter the same id?
- How to program to handle when a player enters an illegal id?

Name (4):Ziwen Xu

- O.K.

Name (5):Yikai Wu

- O.K.

Name (6):Yong yang

- O.K.

**Date of next minutes meeting: 24 / 02 / 2023**

**Location of next minutes meeting: (Room No. and/or Teams): CSB/01/020**

## Minutes for CSC2058

**Group \_36\_ Date of this minute \_24/\_02/\_2023\_ Location (Room No. and/or Teams):  
\_\_CSB/01/020\_\_**

The following team members were present (in the same meeting room or on Teams) when these minutes were discussed:

Name (printed/typed)	In room (R); On teams (T).	Signature (agreed bitmap or initials)
Hailin Weng	CSB/01/020	Hailin Weng
Yueying Xie	CSB/01/020	Yueying Xie
Peilin Zou	CSB/01/020	Peilin Zou
Ziwen Xu	CSB/01/020	Ziwen Xu
Yikai Wu	CSB/01/020	Yikai Wu
Yong Yang	CSB/01/020	Yong Yang

**Task Reporting (Briefly list what each team member did in the last week/since the last meeting if < 1 week.\*)**

Name (1):Hailin Weng

- Design solutions for Govan, about solving the Food and Mental Health issues(Build a connection between Food Banks and the community website, showing real-time food information. Build a Mental Health function, helping residents to improve their Mental Health)
- Demonstrate the login and registration function for game users
- Show the existing features of the game and the game's backstory(about the NPC Coco) and game's easter egg(bonus scene story)

Name (2):Yueying Xie

- Add details of mental health features such as online questionnaires and community support

Name (3):Peilin Zou

- Demonstrate the Player Information function

Name (4):Ziwen Xu

- Introduce the UI sketches for the website

Name (5):Yikai Wu

- Make a presentation about solutions

Name (6):Yong yang

- Record the experts' feedbacks and make specific suggestions for improvement based on the feedbacks

\*Printouts giving an overview of interim deliverables may be added as a supplement to these minutes.

## **Actions Planned** (Briefly list what each team member will do this week/until the next meeting if < 1week.)

Name (1):Hailin Weng

- Redraw the game's map and improve the game's UI
- Write tasks in development areas and program "Events" class
- Add a BGM and a dice roll sound effect to the game
- Program for players to trigger events

Name (2):Yueying Xie

- Responsible for the Mental Health website and design the UI of the Mental Health website
- Draw Coco's picture and her expressions picture

Name (3): Peilin Zou

- Program to move players around the map

Name (4): Ziwen Xu

- Responsible for the Food Bank website, designing the UI of the Food Bank website
- Design the logo of the game
- Make the Backstory animation and the Easter Egg animation

Name (5): Yikai Wu

- Optimise the game code to make it more structured and add comments to the code

Name (6): Yong yang

- Test existing game code and fix bugs

**Obstacles** (List briefly anything that may be blocking your progress and the possible solutions you need to investigate. Indicate 'O.K.' if there are no obstacles you are aware of.)

Name (1):Hailin Weng

- How can the cost of solutions be reduced and feasibility improved?

Name (2):Yueying Xie

- O.K.

Name (3):Peilin Zou

- O.K.

Name (4):Ziwen Xu

- O.K.

Name (5):Yikai Wu

- O.K.

Name (6):Yong yang

- O.K.

**Date of next minutes meeting: 03/\_03/\_2023**

**Location of next minutes meeting: (Room No. and/or Teams): CSB/01/020**

## Minutes for CSC2058

**Group \_36\_ Date of this minute \_03/\_03/\_2023\_ Location (Room No. and/or Teams):  
\_\_CSB/01/020\_\_**

The following team members were present (in the same meeting room or on Teams) when these minutes were discussed:

Name (printed/typed)	In room (R); On teams (T).	Signature (agreed bitmap or initials)
Hailin Weng	CSB/01/020	Hailin Weng
Yueying Xie	CSB/01/020	Yueying Xie
Peilin Zou	CSB/01/020	Peilin Zou
Ziwen Xu	CSB/01/020	Ziwen Xu
Yikai Wu	CSB/01/020	Yikai Wu
Yong Yang	CSB/01/020	Yong Yang

**Task Reporting (Briefly list what each team member did in the last week/since the last meeting if < 1 week.\*)**

Name (1):Hailin Weng

- A new map has been designed which is more cartoonish and better looking than the previous one
- Run the game and show what happens when players trigger events

Name (2):Yueying Xie

- Show the currently created Mental Health web page
- Show the pictures of Coco and explain the details of the painting (why it was painted that way)

Name (3):Peilin Zou

- Show the function for players to view their information at any time in the game

Name (4):Ziwen Xu

- Show the currently created Food Bank web page
- Show the game LOGO with a description of the design concept

Name (5):Yikai Wu

- Optimise the code of the game and make it thread safe

Name (6):Yong yang

- Demonstrate that the game pops up a warning window when players make illegal inputs/actions in the game

\*Printouts giving an overview of interim deliverables may be added as a supplement to these minutes.

## **Actions Planned** (Briefly list what each team member will do this week/until the next meeting if < 1week.)

Name (1):Hailin Weng

- Program BGM and Voice Announcement switch(ON/OFF) functions
- Program of the function to adjust the volume and the rate of Voice Announcement
- Optimisation of development areas (one area, two tasks) based on lecturer feedback
- Program the Video Player function to play game animations

Name (2):Yueying Xie

- Continue writing additional pages for the Mental Health function and optimise the UI

Name (3): Peilin Zou

- Program the “GameOver” class and the Rank of Players function

Name (4): Ziwen Xu

- Continue writing additional pages for the Food Information function and connect the web page to the database
- Continue making the Backstory animation and the Easter Egg animation

Name (5): Yikai Wu

- Write the Junit tests for the main part of the game

Name (6): Yong yang

- Write Junit tests for login and registration functions

**Obstacles** (List briefly anything that may be blocking your progress and the possible solutions you need to investigate. Indicate 'O.K.' if there are no obstacles you are aware of.)

Name (1):Hailin Weng

- O.K.

Name (2):Yueying Xie

- O.K.

Name (3):Peilin Zou

- O.K.

Name (4):Ziwen Xu

- O.K.

Name (5):Yikai Wu

- O.K.

Name (6):Yong yang

- O.K.

**Date of next minutes meeting:** 10 / 03 / 2023

**Location of next minutes meeting: (Room No. and/or Teams):** CSB/01/020

## Minutes for CSC2058

**Group \_36\_ Date of this minute \_10/\_03/\_2023\_ Location (Room No. and/or Teams):  
\_\_CSB/01/020\_\_**

The following team members were present (in the same meeting room or on Teams) when these minutes were discussed:

Name (printed/typed)	In room (R); On teams (T).	Signature (agreed bitmap or initials)
Hailin Weng	CSB/01/020	Hailin Weng
Yueying Xie	CSB/01/020	Yueying Xie
Peilin Zou	CSB/01/020	Peilin Zou
Ziwen Xu	CSB/01/020	Ziwen Xu
Yikai Wu	CSB/01/020	Yikai Wu
Yong Yang	CSB/01/020	Yong Yang

**Task Reporting (Briefly list what each team member did in the last week/since the last meeting if < 1 week.\*)**

Name (1):Hailin Weng

- Show BGM and Voice Announcement switch(ON/OFF) functions
- Show the function to adjust the volume and the rate of Voice Announcement
- Show development areas (one area, two tasks) improvement
- Show the Video Player function to play game animations

Name (2):Yueying Xie

- Show the online Mental Health questionnaire function (It has a countdown timer and can give feedback based on the respondent's score)

Name (3):Peilin Zou

- Shows the two ways in which the game can end (players complete all the tasks in development areas, or the game time is up), and shows the player ranking page after the game has ended

Name (4):Ziwen Xu

- Show the progress of the animation

Name (5):Yikai Wu

- Show the coverage of Junit tests for the main part of the game's code (which the lecturer says the coverage is high enough)

Name (6):Yong yang

- Show the coverage of Junit tests for the login and register code (which the lecturer says the coverage is high enough)

\*Printouts giving an overview of interim deliverables may be added as a supplement to these minutes.

## **Actions Planned** (Briefly list what each team member will do this week/until the next meeting if < 1week.)

Name (1):Hailin Weng

- Draw Use Case Diagram
- Write the Summative Statement concerning the Real-World Problem
- Write the documented User Interface Design for Sustainopoly comprising sample prompts, messages, status summaries

Name (2):Yueying Xie

- Continue programming the Mental Health web page

Name (3): Peilin Zou

- Draw UML Class Diagram

Name (4): Ziwen Xu

- Draw UML Sequence Diagram
- Continue making animations

Name (5): Yikai Wu

- Black box testing of the main part of the game

Name (6): Yong yang

- Black box testing of Login and Register, Video Player and other functions

**Obstacles** (List briefly anything that may be blocking your progress and the possible solutions you need to investigate. Indicate 'O.K.' if there are no obstacles you are aware of.)

Name (1):Hailin Weng

- How to implement the load/save function of the game?

Name (2):Yueying Xie

- O.K.

Name (3):Peilin Zou

- O.K.

Name (4):Ziwen Xu

- O.K.

Name (5):Yikai Wu

- O.K.

Name (6):Yong yang

- O.K.

**Date of next minutes meeting:** 15/\_03/\_2023\_

**Location of next minutes meeting: (Room No. and/or Teams):** CSB/Ground Floor Lab

## Minutes for CSC2058

**Group \_36\_ Date of this minute \_15/\_03/\_2023\_ Location (Room No. and/or Teams):  
\_\_CSB/01/020\_\_**

The following team members were present (in the same meeting room or on Teams) when these minutes were discussed:

Name (printed/typed)	In room (R); On teams (T).	Signature (agreed bitmap or initials)
Hailin Weng	CSB/Ground Floor Lab	Hailin Weng
Yueying Xie	CSB/Ground Floor Lab	Yueying Xie
Peilin Zou	CSB/Ground Floor Lab	Peilin Zou
Ziwen Xu	CSB/Ground Floor Lab	Ziwen Xu
Yikai Wu	CSB/Ground Floor Lab	Yikai Wu
Yong Yang	CSB/Ground Floor Lab	Yong Yang

**Task Reporting (Briefly list what each team member did in the last week/since the last meeting if < 1 week.\*)**

Name (1):Hailin Weng

- Show the Use Case Diagram (which the lecturer says that there are only three relationships in the use case diagram and that it would be better to modify the relationships between the use cases in the diagram)
- Show the Summative Statement concerning the Real-World Problem (which the lecturer says it would be better if changes some texts to diagram)
- Show the documented User Interface Design for Sustainopoly comprising sample prompts, messages, status summaries (which the lecturer says really good)

Name (2):Yueying Xie

- Demonstrate the Guide and Community support features of the Mental Health web page

Name (3):Peilin Zou

- Show the UML Class Diagram (which the lecturer says needn't draw all classes. Just draw the key classes and make sure they correspond perfectly to the sequence diagram)

Name (4):Ziwen Xu

- Show the UML Sequence Diagram (which the lecturer says the method in the line should really exist in the class)
- Show the Backstory animation

Name (5):Yikai Wu

- Show the test plan and the code of Black box testing of the main part of the game

Name (6):Yong yang

- Show the test plan and the code of Black box testing of Login and Register, Video Player and other functions

\*Printouts giving an overview of interim deliverables may be added as a supplement to these minutes.

## **Actions Planned** (Briefly list what each team member will do this week/until the next meeting if < 1week.)

Name (1):Hailin Weng

- Revise the Use Case Diagram and summaries based on lecturer feedbacks
- Continue to complete the remainder of the report

Name (2):Yueying Xie

- Continue to program the Mental Health website, and improve Coco's pictures

Name (3): Peilin Zou

- Revise the UML Class Diagram based on lecturer feedbacks

Name (4): Ziwen Xu

- Revise the UML Sequence Diagram based on lecturer feedbacks
- Continue to make the Easter Egg animation

Name (5): Yikai Wu

- Continue to make the test plan and the code of Black box testing of the main part of the game

Name (6): Yong yang

- Continue to make the test plan and the code of Black box testing of Login and Register, Video Player and other functions

**Obstacles** (List briefly anything that may be blocking your progress and the possible solutions you need to investigate. Indicate 'O.K.' if there are no obstacles you are aware of.)

Name (1):Hailin Weng

- O.K.

Name (2):Yueying Xie

- O.K.

Name (3):Peilin Zou

- O.K.

Name (4):Ziwen Xu

- O.K.

Name (5):Yikai Wu

- O.K.

Name (6):Yong yang

- O.K.

## Screen dumps from Gitlab's Activity Record

21 Mar, 2023 1 commit	06 Mar, 2023 1 commit
 <b>Test</b> 40319629 authored just now	 <b>New functions</b> 40381894 authored 2 weeks ago
20 Mar, 2023 1 commit	05 Mar, 2023 1 commit
 <b>Register Update - ID Unique</b> 40381868 authored 19 hours ago	 <b>UI improvement</b> 40381868 authored 2 weeks ago
16 Mar, 2023 1 commit	04 Mar, 2023 1 commit
 <b>Optimization</b> 40381877 authored 5 days ago	 <b>New Map</b> 40381868 authored 2 weeks ago
09 Mar, 2023 1 commit	02 Mar, 2023 1 commit
 <b>Setting - Switch</b> 40381868 authored 1 week ago	 <b>Login and Register</b> 40381868 authored 2 weeks ago
08 Mar, 2023 1 commit	20 Jan, 2023 1 commit
 <b>Rank of Players</b> 40381868 authored 1 week ago	 <b>Voice Announcements</b> 40381868 authored 1 month ago
07 Mar, 2023 1 commit	16 Jan, 2023 1 commit
 <b>Move Players</b> 40381894 authored 1 week ago	 <b>Sustainopoly</b> 40381868 authored 2 months ago

Since Yueying Xie (40381880) and Ziwen Xu (40381883) are responsible for websites, pictures and animations part, they didn't have a history in GitLab, but they really make contributions to our group.

## Code Coverage of JUnit Test

- ✓ **login\_register** 100% classes, 77% lines covered
  - > **libs**
    - ⌚ **Admin** 100% methods, 100% lines covered
    - ⌚ **AdminRegister** 75% methods, 75% lines covered
    - ⌚ **Login** 100% methods, 86% lines covered
    - ⌚ **Login\_Register** 57% methods, 66% lines covered
    - ⌚ **Register** 100% methods, 89% lines covered
  - > **Mental Health**
  - > **music**
- ✓ **playersInformation** 97% classes, 62% lines covered
  - ⌚ **FrameConfig** 58% methods, 61% lines covered
  - ⌚ **Photo** 100% methods, 100% lines covered
- ✓ **sustainopoly** 92% classes, 50% lines covered
  - ⌚ **EndGamePanelUtil** 100% methods, 100% lines covered
  - ⌚ **Events** 100% methods, 40% lines covered
  - ⌚ **GameData** 100% methods, 100% lines covered
  - ⌚ **GameObject** 100% methods, 100% lines covered
  - ⌚ **GameOver** 100% methods, 86% lines covered
  - ⌚ **GamePanel** 47% methods, 51% lines covered
  - ⌚ **GameUtil** 100% methods, 100% lines covered
  - ⌚ **IconThread** 100% methods, 91% lines covered
  - ⌚ **IoUtil** 50% methods, 25% lines covered
  - ⌚ **Menu** 100% methods, 100% lines covered
  - ⌚ **MenuBar** 87% methods, 50% lines covered
  - ⌚ **Player** 100% methods, 100% lines covered
  - ⌚ **PlayMusicUtil** 33% methods, 5% lines covered
  - ⌚ **StartGame** 100% methods, 88% lines covered
  - ⌚ **VoiceAnnouncementsUtil** 66% methods, 23% lines covered
- video**
- ✓ **videoplayer** 23% classes, 13% lines covered
  - ✓ **dll** 0% classes, 0% lines covered
    - ⌚ **DLL** 0% methods, 0% lines covered
  - ✓ **utils** 66% classes, 80% lines covered
    - ⌚ **Constants**
    - ⌚ **FileUtils** 100% methods, 78% lines covered
    - ⌚ **NumberUtil** 100% methods, 100% lines covered
    - ⌚ **VideoPlayerMain** 100% methods, 37% lines covered
    - ⌚ **VideoPlayerWindow** 4% methods, 6% lines covered
- ✓ **web** 100% classes, 75% lines covered
  - ⌚ **OpenWebPage** 100% methods, 75% lines covered

## Comments about development processes

We select to use the iterative development process, here are some reasons :

*Advantages of iterative development processes:*

- Flexibility: Iterative processes allow for greater flexibility and the ability to adapt to changing requirements or circumstances during the development process.
- Feedback loop: Because iterations involve testing and feedback, issues and problems can be identified and addressed earlier in the development process.
- Incremental delivery: Iterative processes involve incremental delivery of functionality, which can allow for quicker deployment of smaller portions of the final product.
- Collaboration: Iterative processes are often collaborative, with developers, stakeholders, and end-users all providing input and feedback throughout the development process.

We reject to use the waterfall development process, here are some reasons:

*Reasons for rejecting the waterfall development process:*

- Rigidity: The waterfall process is known for being rigid and inflexible, with a set linear sequence of steps that must be completed before moving on to the next stage. This can make it difficult to adjust to changes or feedback during the development process.
- Lack of collaboration: The waterfall process is often less collaborative than other approaches, with little input or feedback from stakeholders or end-users until later in the process.
- Late identification of issues: Because testing and feedback occur later in the development process, issues or problems may not be identified until it is too late to make significant changes without incurring significant costs or delays.

## Summary

During the process of programming our sustainopoly game, we encountered several issues that needed addressing to improve the overall gaming experience. For example, we needed to refine the game's mechanics, eliminate any bugs or glitches that arose during testing, and improve the user interface to make it more user-friendly.

Thankfully, we adopted the iterative development process that enabled us to continuously develop, test, and improve our game project over time. This methodology allowed us to break the development process down into smaller, more manageable chunks, making it easier to identify and address any issues that arose.

By working on the project in this way, we were able to develop a more comprehensive understanding of what our game needed to deliver a satisfying experience to players. We were able to test our ideas in small iterations and receive valuable feedback from the lecturer and tutor. This process helped us to refine and improve the game's mechanics, eliminate bugs, and improve the overall user experience.

Overall, the iterative development process proved to be an effective way to help us develop our game project. By continuously developing, testing, and improving our work, we were able to create a game that was both polished and enjoyable for players.

### Game Logo

*The tower represents the lighthouse in Backstory*



### Coco's (NPC) Images

*We design Coco in this image (wearing tartan) because Govan is located in Scotland.*



Refugee Edition



Happy Life Edition

## Coco's (NPC) Expressions Images

Please



Version 1



Version 2

Thinking



Version 1



Version 2

Praise



Version 1



Version 2

Angry



Version 1



Version 2

## Story images

