ELEC1005 REPORT

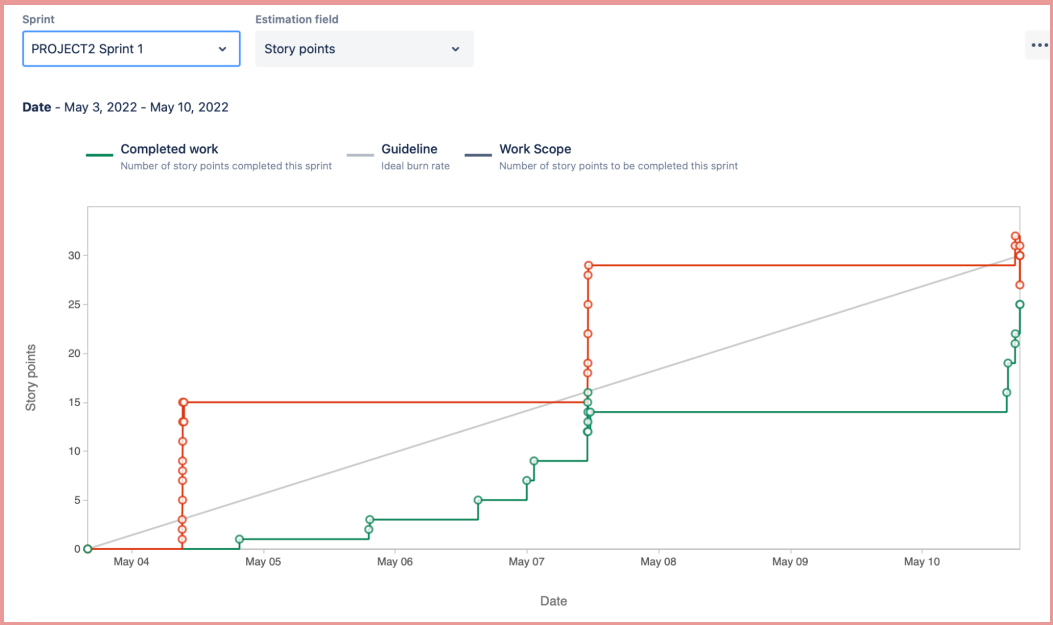
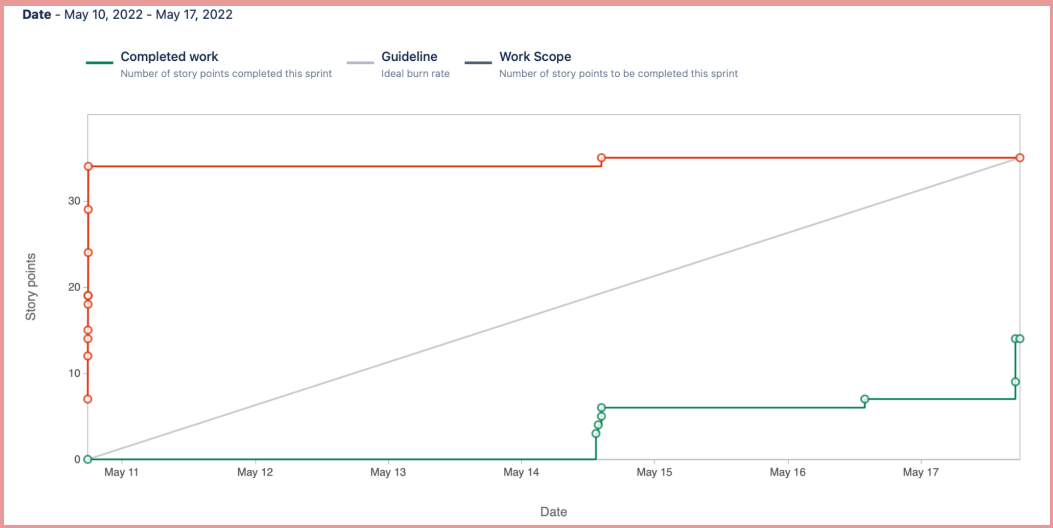
1. GROUP STRUCTURE

Student ID	First Name	Last Name	Workload				Contribution
			User stories	Meeting Minutes	Development	Testcase	
510573078	Lam Duy Nhat	Le	50%	50%	0%	0%	20%
510396927	Aditya	Bahl	10%	10%	80%	0%	20%
510574673	Samiksha	Aveg	10%	10%	80%	0%	20%
510565497	Kimberlie	Fu	0%	10%	0%	90%	20%
520163304	Xufeng	Jiang	0%	10%	0%	90%	20%

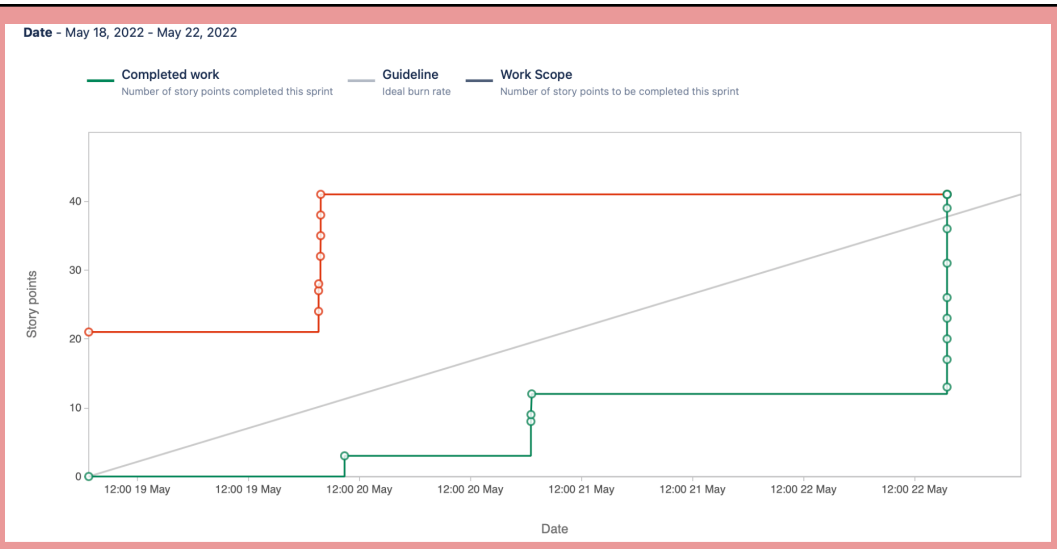
2. ROLES

Name	Role
Lam Duy Nhat Le	Project Owner, Scrum Master
Aditya Bahl	Developer
Samiksha Aveg	Developer
Kimberlie Fu	Tester
Xufeng Jiang	Tester

3. BURNUP AND BURNDOWN CHART

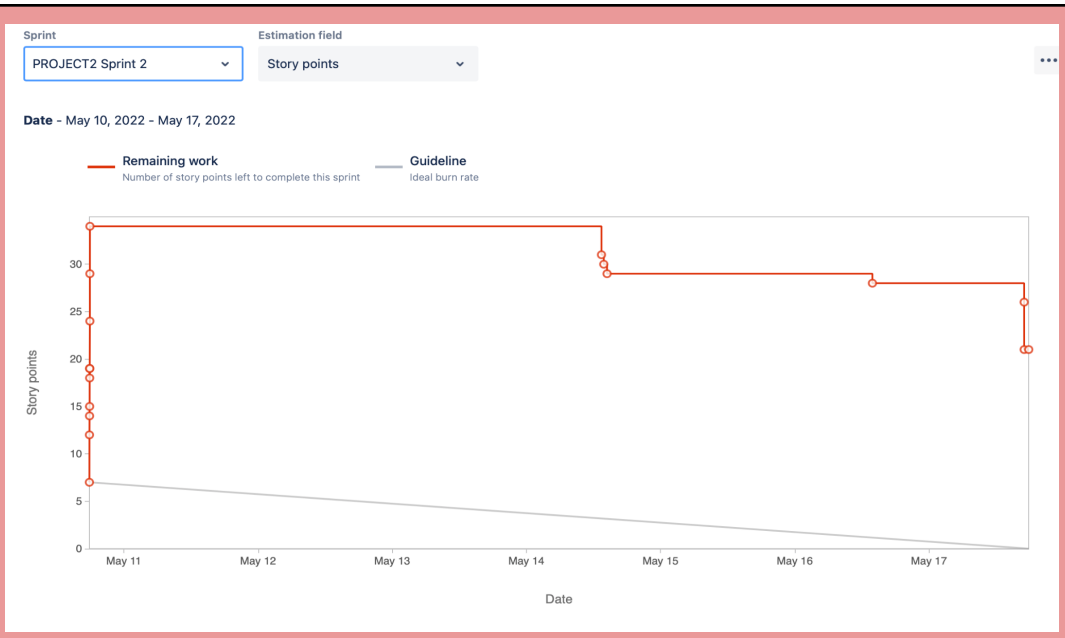
Name	Chart
Burnup 1	
Burnup 2	

Burnup 3

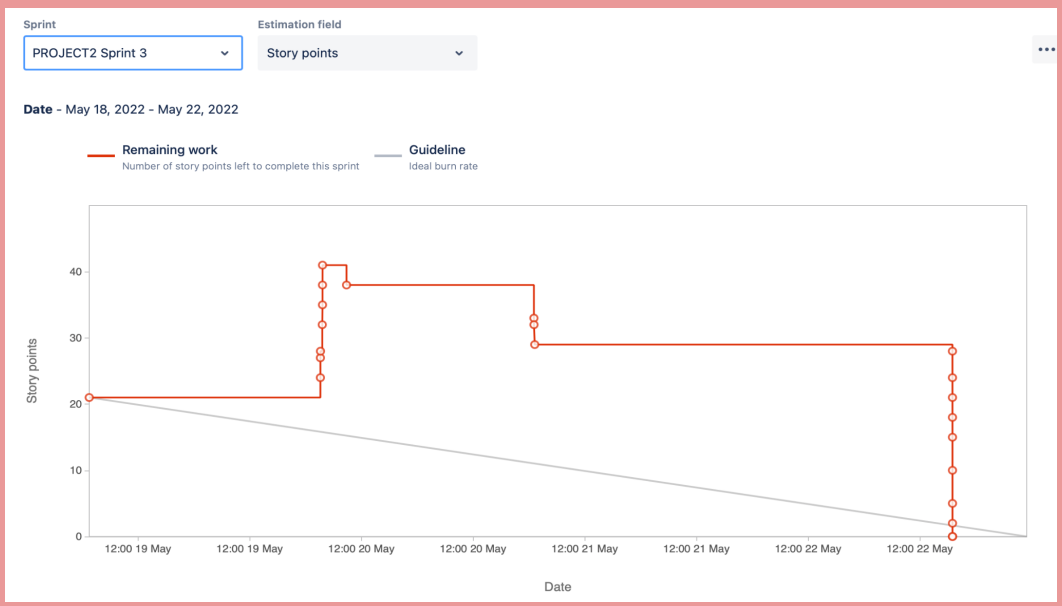


Burndown 1

Burndown 2



Burndown 3



4. USER STORY

Requirement ID	Area	Details	Priority
R - 01	Graphics	For a game to be enjoyable, graphics must look appealing and match the game content. The snake's skin, in-game/menu background, the fonts and food image are changed into more colorful images. So that players find joy when playing.	Must
	User story format: As the business owner, one can look for the graphics since the business owner is the most explicit about how the final product should look so that the developers can implement them.		
	Acceptance area: All in-game objects match the provided files. Not only that, these objects must work just like how they are supposed to be before changing.		

Requirement ID	Area	Details	Priority
R - 02	Sound	Sound effects are an integral part for any game to make the user experience more fun and worth the time. For the same, two new sound effects/music was added. Firstly, the background music for the front page was implemented. Secondly, sound effects were added when the snake eats the different food items. The already present sound of crashing was not changed.	Must
	User story format: As developers, they are the ones who implement the sound effects/music and develop the base code to look like the final product. Music is added to improve the user experience.		
	Acceptance area: Both the sound effects/music run without any error. The sound effects were successfully implemented with the final product matching the same initial idea of how it should look.		

Requirement ID	Area	Details	Priority
R - 03	Feature	A game user can now select between difficulty levels in the game that are easy, medium and hard, which are based on the increasing speed of the snake and subsequently makes the game tough to play.	Must
	User story format: As developers, they are the ones who implement all the changes and development to the project that is required. This feature is added for the user to enjoy different modes of difficulty.		
	Acceptance area: On clicking on one of the difficulty levels, the user is taken to a new screen where the game straight away begins with the score displayed in the top left corner. The snake's speed is already adjusted based on the difficulty level chosen by the user.		

Requirement ID	Area	Details	Priority
R - 04	Feature	When the game ends, the score is displayed to the user.	Could
	User story format: As developers, they are the ones who implement all the changes and development to the project that is required. This feature is added to make the game more presentable.		
	Acceptance area: When the snake crashes into one of the screen walls, a message showing ‘CRASHED!’ and ‘SCORE’ is displayed on the screen for 3 seconds.		

Requirement ID	Area	Details	Priority
R - 05	Feature	In all the levels, bombs have been added to make the game more fun for the user.	Must
	User story format: As developers, they are the ones who implement all the changes and development to the project that is required. This feature aims to make the game more fun and challenging for users.		
	Acceptance area: The bomb is moved to random positions when the snake eats a food item.		

5. MEETING MINUTES

Sprint : 01

Time: 3rd May 2022 (4:00 PM) - 10th May 2022 (5:00 PM)

Objective:

- Rearrange the workforce
- Explain the use of Jira and GitHub
- Decide on final product features
- Develop graphical features
- Create simple test cases

Meeting No. : 01	**Content:** In this meeting, rearrangement of the workforce is attempted, and the features for the final software are discussed. The team ran into some trouble with rearrangement as some members thought they were more comfortable in their current roles. The team finally decided to move Nhat from developer to work on both scrum master and business owner. Similarly, there were communication problems when the team discussed the game's final features. Specifically, some members did not contribute much to the discussion as they were unsure about the game. Though discussion took some time, a list of changes was formed, and everyone was clear about their task for the sprint.
Date : 3rd May 2022 - Lab section (No recording)	
Category: Sprint planning	
Recording : (None)	

Meeting No. : 02 **Date :** 7th May 2022 **Category :** Standup & Showcase **Recording :** https://tinyurl.com/3u7p3f5p	**Content:** In this meeting, rearrangement of the workforce is attempted, and the features for the final software are discussed. The team ran into some trouble with rearrangement as some members thought they were more comfortable in their current roles. The team finally decided to move Nhat from developer to work on both scrum master and business owner. Similarly, there were communication problems when the team discussed the game's final features. Specifically, some members did not contribute much to the discussion as they were unsure about the game. Though discussion took some time, a list of changes was formed, and everyone was clear about their task for the sprint.

Meeting No. : 03 **Date :** 10th May 2022 - Lab section **Category:** Showcase and retrospective **Recording :** (None)	**Content:** This meeting was dedicated to developers and testers showing their work in detail, including explaining the code and showing if the program runs and outputs the correct result. Everything given work was done and shown correctly through running the program for the developer team. Testers were able to do their work on time. However, both teams' work was done locally and not marked as done on Jira, which hindered the final report heavily as the timing was off. Both teams were not clear about the use of Github through watching the demo video, and some members had issues viewing Jira. As these issues were minor but had a tremendous effect, the scrum master solved these issues by guiding members through an easier way to use GitHub, which is GitHub desktop which has a friendlier user interface and went through the Jira interface in detail. At the end of this meeting, a summary of the progress was also given by the scrum master. Overall, progress was still on time, meaning that developers could proceed to add features, and testers were able to test simple things, indicating that more complex parts of the code could be started to test. Moreover, the scrum master also pointed out previous mistakes like miscommunication and the lack of usage in GitHub and Jira so that the team does not repeat them.

Developers meeting	**Content:** This was the first developers extra meeting on zoom apart from the other group members. Developers worked on building and improving the base code provided. The main aim was to first understand the code that was in Python and essentially the use of Pygame to make the game. After that, the developers started working on the first aspect which is improving the graphics of the game that included background images, color theme, font, sound effects/music. This was required as there were many tasks for the developers that had to be completed before the deadlines made by the team lead.
Date: 11th May (2:00PM - 5:00PM)	
Category: Group work	
Recording: (None)	

Sprint : 02

Time: 10th May 2022 (5:00 PM) - 17th May 2022 (5:00 PM)

Objective:

- Develop new in-game features
- Create more advanced test cases for the game

Notice: The workload was also planned to be slightly heavier as the last sprint is scheduled to be primarily working on the report.

Meeting No. : 01	**Content:** Sprint planning at this stage went through effectively since the features are already decided; the only work is to split them up so developers can have a clear goal for what to complete within the sprint. The work for testers was also simple to organize, as testers have the freedom to choose which part to test, which is all of the remaining code. As sprint planning did not take much time, the team decided to do a stand-up meeting, where each member clearly stated the work they would be working on and continued working for the rest of the lab section.
Date : 10th May 2022 - Lab section	
Category: Sprint planning and stand up	
Recording : (None)	

Meeting No. : 02	**Content:** At this meeting, developers delivered their completed work done in time and met initial standards. However, testers ran into several major issues. The first problem was that parts of the game were not able to be tested, specifically the snake movement, which hindered the testing of all other parts of the code as they are connected. Another problem was that a member of the test case team quit the subject; therefore, their work was not done, and they had to split amongst the group. In the end, the scrum master also gives the group a summary of the group's status; that is, everyone has to contribute to the missing member's work and that it is the utmost important work for the next sprint, instead of adding more features to the game.
Date : 17th May 2022 - Lab section	
Category: Showcase and retrospective	
Recording : (None)	

Sprint : 03

Time: 17th May 2022 (5:00 PM) - 22nd May 2022 (11:59 PM)

Objective:

- Finish off the last few game features and test cases
- Write report
- Prepare for presentation.

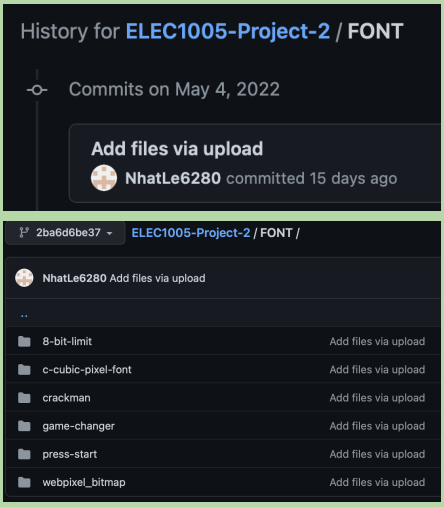
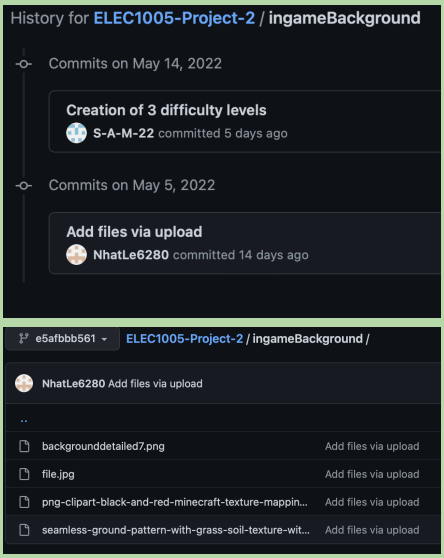
Meeting No. : 01	**Content:** Understanding the unexpected changes in the workforce, the business owner redivided the work in a sense that all members contribute to the missing work; therefore, work in other sectors is cut. Specifically, multiple intended features are discarded, like the pause button, in order to give more time for developers to help finish test cases. Moreover, the missing test cases are given for everyone to complete. Regarding the group situation, the scrum master also took administrative action to notify the unit coordinator of the situation, ask for advice on dealing with the situation, and constantly update every member on the situation so that everyone remains calm. After redistributing the work, everyone did a stand-up meeting to ensure everyone was evident of the enormous changes and their work.
Date : 17th May 2022 - Lab section	
Category: Showcase and retrospective	
Recording : (None)	

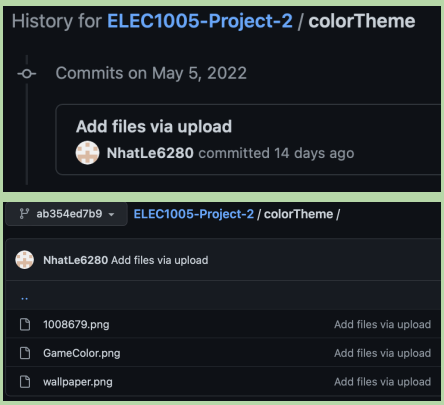
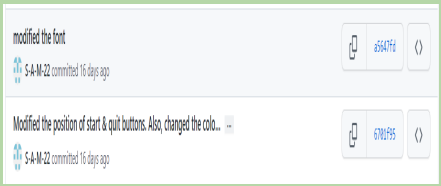
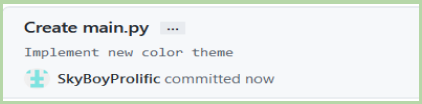
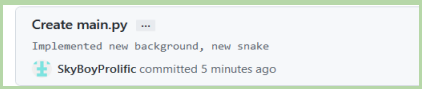
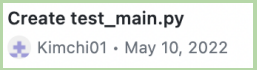
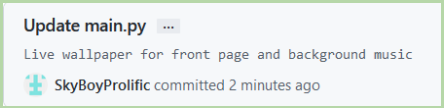
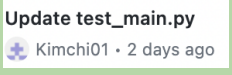
Developers meeting **Date:** 17th May (2:00PM - 5:00PM) **Category:** Group work **Recording:** (None)	**Content:** This was the second developers extra meeting on zoom apart from the group members. The main purpose of the meeting was to work together on implementing the features to develop the game. This included making buttons, creating 3 difficulty levels for the game, implementing bombs in each level and increasing the speed of the snake as per the level. This was a complex process code and required alot of

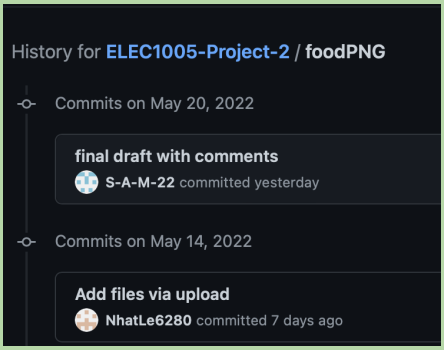
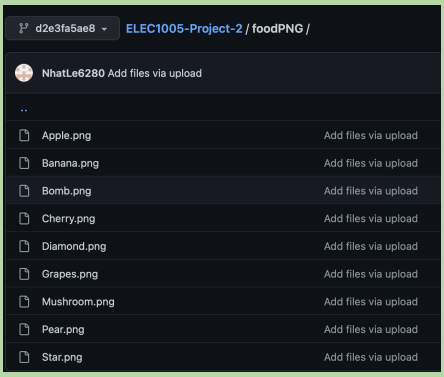
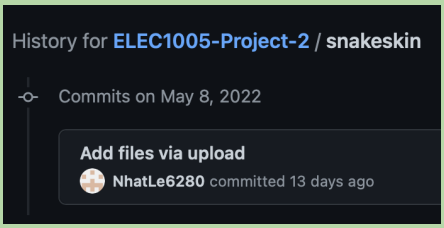
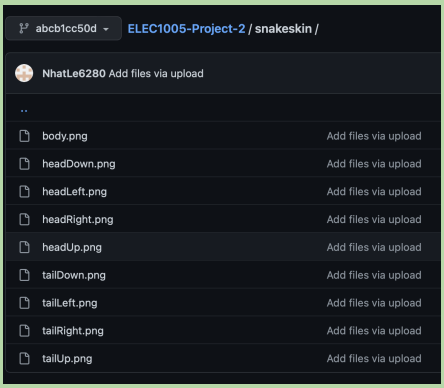
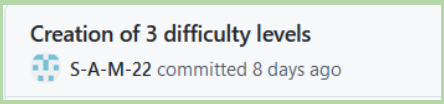
Meeting No. : 02 **Date :** 21st May 2022 **Category:** Showcase and stand up **Recording:** https://tinyurl.com/ycvvm7xm	**Content:** In this meeting, testers and developers showed their work after the work redistribution. Overall, both teams did exceptionally well with their assigned work, especially the tester team. Not only were testers on time with their work, but they also completed the majority of remaining work left by the member who left, including work for both the report and test cases. The developer team was also on time with their assignment, though some features had to be cut. Since the second sprint, these features have been in progress, but with how complicated they are, like the pause button or screen resolution, these were chosen not to be implemented. Furthermore, when the code was run for test cases and the game, members were happy with the game's state, and the part tested.

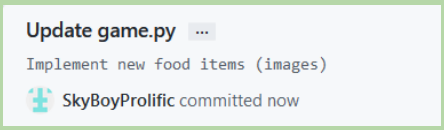
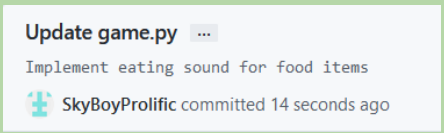
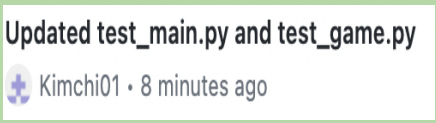
Meeting No. : 03 **Date :** 22nd May 2022 **Category:** Showcase **Recording:** https://tinyurl.com/3n5p9kt4 https://tinyurl.com/ahxyauch	**Content:** This meeting is dedicated for the group to go through everything, including the game, test cases and the report. The main aim of the final meeting was to complete editing of the report and also make the slides for the presentation.

6. DEVELOPMENT LOGS

Task	Description	Met deadline? Reason if schedule not met	Evidence
TASK - 01	Look for new Font	Yes	
TASK - 02	Look for background image	Yes	

TASK - 03	Look for new color theme	Yes	
TASK - 05	Implement the new font	Yes	
TASK - 06	Implement new color theme	Yes	
TASK - 07	Implement new background and new snake	Yes	
TASK - 08, 09	Each tester makes 4 test cases (original program)	Yes	
TASK - 10	Live Wallpaper for the front page/start screen and background music	Yes	
TASK - 12	Create spike	No - Not prioritized by the developers. Instead, other things are made for developers to implement.	
TASK - 13, 14, 15	Implement 4 test cases provided by each tester	Yes	

TASK - 16	2 food items - theme: normal food (burger…) ; bright	No - Easy to implement, developers ask to focus on other parts in order to start implementation. This task eventually turn into create all food items, including the bomb.	 
TASK - 17	Make snake skin	Yes	 
TASK - 18	Implement new levels	Yes	
TASK - 19	Implement instruction board	No - Idea was dropped since wasn't able to do it in time	Task is dropped

TASK - 20	Implement new food items	Yes	
TASK - 21	Implement pause button	No - Idea was dropped since wasn't able to do it in time	Task is dropped
TASK - 22	Implement eating sound	Yes	
TASK - 23	Resize all images	Yes - however, this change wasn't needed as the game resolution was kept the same	No evidence required
TASK - 24	Find new background music for game	Yes	
TASK - 26, 27, 28	Make and implement 10 test cases	No - Since a team member backed out	
TASK - 30, 31	Complete User Stories	Yes	**Notice:** Report are done on Google docs, therefore cannot prove through GitHub
TASK - 32	Complete burn up/down chart	Yes	Report

TASK - 33	Complete Development logs (everyone)	Yes	Report
TASK - 34, 35	Complete test cases report	Yes	Report
TASK - 36	Complete Meeting Minutes	Yes	Report

Notice: Group members and their username on GitHub

- Lam Duy Nhat Le: NhatLe6280
- Aditya Bahl: SkyBoyProlific
- Samiksha Aveg: S-A-M-22
- Kimberlie Fu: Kimchi01
- Xufeng Jiang: Celia-Great

7. TEST CASES

ID	Details	Outcome	Comments
T - 01.1	Screen size testing size	Positive - Screen size is under specified size	Screen size is working as intended
T - 01.2	Snake loading to the screen	Positive - Snake has loaded properly	Snake is working as intended
T - 01.3	Home screen	Positive - Home screen is loaded properly	Home screen is working as intended
T - 01.4	Buttons	Positive - Buttons are loaded properly	Buttons are working as intended
T - 01.5	Text objects	Positive - Test fonts are loaded properly	Text fonts are working as intended
T - 01.6	Background image	Positive - Background image is working	Background image is working as intended
T - 02.1	Background audio	Positive - Background audio is working	Background audio is working as intended
T - 02.2	Crash sound	Positive - Crash audio is working	Crash audio is working as intended
T - 02.3	Eating sound	Positive - Eating audio is working	Eating audio is working as intended
T - 03.1	Snake speed	Positive - Choosing different levels can set different snake's speed	Speed can be slower
T - 03.2	Buttons	Positive - Player can choose difficulty at main menu	Buttons can be more separate
T - 03.3	Game end	Positive - Game can end correctly at different levels	Show the score is better
T - 03.4	Bombs	Positive - Bombs can be created and its function is correct	Maybe more bombs can be created at one time
T - 04.1	Game over tips	Positive - "Crash" will be displayed at the end of the game	Word size could be smaller
T - 04.2	Score display	Positive - The ending display can display score correctly	Show the score rank as project1

T - 05.1	Bomb image display	Positive - Bomb image is loaded properly	Bomb image is working as intended
T - 05.2	Bomb random placement	Positive - Bomb random placement has no placement error	Bomb placement is working as intended
T - 05.3	Bomb random placement after the game stopped	Positive - Bomb placement is successfully terminated	Bomb placement termination is working as intended