CGRA151 Project Report

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Name of game/artwork: Sushi Catcher

Vision

This is a simple game where the user must catch the sushi which appear on the screen (except in "HARD" game mode where the user must only catch the sushi as indicated at the top of the screen) and avoid catching COVID-19. Moreover, in "MEDIUM" game mode, the user can catch either fish or shrimp for bonus points. To catch either sushi, fish, or shrimp, the user will use the mouse to control the bowl and ensure that the sushi drops on the bowl. In this game, the player has three lives and will lose one live if he or she either catches COVID-19, catches sushi which is not as indicated at the top of the screen when playing "HARD" game mode, or fails to catch sushi which drops (especially in "HARD" game mode, not catching indicated sushi means the player loses one life). Losing all lives means game over. Moreover, this game has three game modes ("EASY", "MEDIUM", and "HARD" at ascending level of difficulty) where the higher the level of difficulty, the faster the objects (i.e. fish, shrimp, sushi, and COVID-19) fall. They are made to make the game more exciting than just designing it to meet everything mentioned in the project plan.

Achievement

I followed my plan very accordingly (with the exception of replacing the basket with a bowl) and managed to add features outside it (e.g. "EASY", "MEDIUM", and "HARD" game modes with different levels of difficulties and both fish and shrimp for "MEDIUM" and "HARD" game modes). This is because after I discussed with my tutor on Thursday, 10 September 2020, I learned that my game would not be really interesting if it is designed just as stated in the project plan due to lack of variety. Hence, features like game modes with different difficulty levels need to be added. Apart from addition of those features, I managed to make the "game over" feature working when the player runs out of lives, allow the player to restart the game whenever the game is over, managed to make high scores updated when the player breaks them, and make objects (i.e. sushi, fish, shrimp, and COVID-19) able to be removed once they fall or collide with the bowl.

Technical Challenges

I faced a lot of challenges with creating the game. First is with designing the Graphical User Interface (GUI). This assignment is the first time I have ever developed an application with GUI on my own. I had hard time designing it in my head (i.e. by imagination without drawing the template of the game). However, drawing a template of the design using paint and Adobe XD help me address that issue. Another challenge is in making sure that the game allows the player to switch from one frame to another (e.g. main menu to any of the game modes and the other way around). Doing so is important to avoid widgets (e.g. buttons), texts (e.g. countdown from 3 to 1 before starting any game mode), and sprites (e.g. sushi) from unnecessarily overlapping on each other. I managed to find out how to overcome this challenge by trying out the method "background()" on my own in a separate sketch and know that it creates a new frame from scratch and helps to avoid unnecessary overlaps.

Reflection

My experience for doing this project is interesting and challenging at the same time. I met all conditions in my project plan except for using bowl instead of basket. Also, I am pleased that I can achieve more than what is planned in a limited amount of time despite panicking in the beginning after seeing the amount of time given to do this project. There are ups and downs which I experienced when doing this project. Loading images and creating buttons are easier than I thought as at first I thought it requires complex Processing coding but drawing an image and using "loadImage()" can already accomplish that. Designing user friendly User Interface (UI) was harder than I thought as it requires trial and error (e.g. coding and then testing the game by trying to see the output).