Simon Fraser University
CMPT 276 : Introduction to Software Engineering

Phase 4 Project Report

Report and Presentation Phase

Group 19

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Game Description

In our game Spud Sprint, the player controls a potato who is trying to escape from a fast food restaurant to avoid being fried. Using the WASD keys, players control the potato as they navigate through the restaurant, collecting door keys to unlock the exit doors. However, escape is fraught with danger as fry cooks are on the lookout for any escapees, and deep fryers are on throughout the restaurant.

Players must use both their skill and strategic thinking to evade both obstacles in their path and fry cooks actively chasing them. Accidentally colliding into a deep fryer causes the player to lose points and become stunned, unable to move for a few seconds. If the player is caught by a fry cook, or their score reaches zero, the game will come to an end. However, players can rescue their potato friends to earn bonus points to increase their chances of survival.

Spud Sprint offers three difficulty levels (easy, medium, and hard), each with three level rooms that the player must escape from to win the game. Each difficulty represents a different set of rooms, each with different amounts of fry cooks, deep fryers and other obstacles.

Original Design and Deviations

Our team was mostly faithful to the original design and only made changes necessary to achieve our initial goals and requirements specification. Initially we left out classes and functionality regarding the UI/GUI as we didn't know how to implement it yet. Therefore, it wasn't truly deviating from the original design but a decision to have that portion of design done at the keyboard, instead of the whiteboard. Most deviations from the original design were of technical aspects or feature enhancements as opposed to scrapping large features.

We did add functionality in being able to dynamically read in maps, depending on the user's choice of difficulty. This allowed for more replayability in our game, with maps differing across difficulties and stages. Another system we added was a simple music capability to have a loop of music to play whilst the player is playing the game, such that there isn't a total absence of sound. Additionally, we removed classes for handling keys that would trigger menus, instead opting for pressable buttons on the side panel of the game. This improved the user friendliness of the game.

Our team did not over promise, nor overextend ourselves to implement unnecessary features. Thus, changes that were made were not revamp of the games design and capabilities but means to achieve those goals, and add in some flavour to the game.

Lessons Learned

The most important lessons we learned while working on this project are using Git, working in a group, and project management skills. Firstly, this project was a great introduction to using Git and version control. Throughout the project we were able to practice effective version control in a team setting. It was also a great opportunity to practice Git commands and gain familiarity with command features. Additionally we learned how to handle merge conflicts, which are common in group projects, and to resolve them quickly to maintain workflow efficiency. This all enabled a seamless workflow in a group setting and contributed to the success of the project.

Working on a project in a group setting like this was a new experience for most of us, since we have primarily worked by ourselves in the past. We learned how to communicate effectively with each other, work together on a medium-sized code base, read and understand each group member's code, and divide the work so that everyone was contributing and learning.

In addition, we learned the importance of starting work early, continuous communication, and setting goals. We didn't always apply these principles while working on the project, but after experiencing burnout and stress, we understand why they're so important.

Tutorial Demo

Our group made a demo video for our game, which can be found here: https://www.youtube.com/watch?v=w_iGEttZCK4

Final Modifications

While creating the demo video of our game, we realized that the back button on the difficulty menu didn't work, so we fixed that. We pushed the JAR file and the Javadocs to our repository. They can be found in the Artifacts directory. We also updated our README file with instructions on how to build, run, and test the game and how to use the artifacts.