Final Release Report

7 Friendly Programmers and 1 Devil
Audrey Wang, Grey Huffines, Alyssa Pacleb, Terry Woodard, Tyson Smiter, Garrett Willis, Daniel Sanchez, Nick Doelger

Introduction

This project uses the programming language python and an imported module, pygame, to create an immersive gaming experience and engage users who have attention span issues. The game itself will be a board game with mini games in which players are trying to score the most points within a limited amount of turns.

Problem

This software was designed to entertain and calm children in while waiting at a hospital. Children and adults alike often experience tachycardia when in stressful situations and this software hopes to alleviate stress and boredom before appointments and procedures.

Modules

Game Board: This module allows the user to visualize movement and access the trivia and platformer minigames.

User Stories

1. Design the game board
2. Create movable players
3. Create ability to scroll in the game window
4. Create a random number generator

Trivia Minigame: This module allows the user to test their knowledge and learn lesser known facts.

User Stories

1. Refactor code from project #2
2. Read from a file of questions
3. Create random number generator
4. Display questions and answers
5. Check user input for correct answers

Platformer Minigame: This module allows the user to play a fun and interactive platforming game.

User Stories

1. Refactor code from project #1
2. Create character movement
3. Design sprites
4. Design levels
5. Create random number generator
6. Save player score in a file

Features

This software allows the user to begin a game and select how many players they would like to play the game in the main menu. The user(s) are then taken to the game board where they are able to scroll forwards and backwards to view the entire board. The user can press different keys on the keyboard to interact with the game board screen. If the user rolls the die and lands on a space with a mini game, the user can use the keyboard to play and complete the mini game. The user can be taken to either a trivia mini game or a platform game.

The triva mini game allows the user to select a multiple choice answer and earn points depending on whether or not the question was answered correctly. The platformer game allows the user to jump, walk, and shoot at enemies to complete the level for points.

The user's score is actively saved in a text file after each mini game. After the user plays 5 rounds, the user with the highest score wins and the scores of each player is displayed.

Project Solution

This game is fast paced, full of vibrant colors and sounds, and challenging. With all of the features of this software listed above, this game provides an environment suited for children that want to keep themselves occupied.

Plan of Work

Detailed Plan of work updated to match final project (this can be in a list, a table, a chart, a diagram, whatever you feel makes sense including be combined with the user stories)

- Ensure each module works separately.
- Connect the main menu to the game board
    - Save number of players and make global
- Select which cells of the game board activate the mini games.
- Save each player's score to a text file

- Connect the game board to the end game screen.

Refactoring

- Refactored image display code from one file to another file by changing structure.
- Code in “scrollPractice.py” has been refactored by improving the structure of the code.
- The code for the main menu was refactored by decreasing the number of functions and simplifying the code.
- Refactored question_reader.py to load questions for this project.
- Refactored “scrollPractice.py” to “gameBoard.py” to link board looping to mainMenu.py.
- question_handling.py is a heavily refactored version of the code from Trivia.py with unnecessary classes/functions removed and remaining functions almost completely overhauled to work with gameBoard.py

Pair Programming Chart

Tasks Ordered by Priority	Names								Expected Time (hours)	Actual Time (hours)
	Audrey	Alyssa	Daniel	Garrett	Grey	Nick	Terry	Tyson		
Board Design	---		---						8	5
Character movement			---	---			---	---	6	4
Minigame 1: Platformer	---				---	---			3	3
Minigame 2: Trivia				---	---				3	8
Endgame screen		---						---	5	
Scoring		---			---		---		8	4
Space Design			---			---			6	3
Turn System						---	---	---	5	4
End Screen	---	---							1	2
Minigame cells				---					3	4

Write up a paragraph or two reflection on how the project went, problems, etc.

As the project progressed, the rate of accomplishment increased. After all of the modules were individually completed, connecting each part together was fairly simple. The game board was aesthetically improved and the game is now more user friendly as compared to previous releases. As a group, we are familiar with pygame and all of its built-in functions which made this project easier.

There were only minor problems in the development of this software. The ability to choose different paths on the game board was removed towards the end of the project because the current design made it difficult to add this functionality.