**Software Implementation and Testing Document**

**For**

**Group 6**

Version 1.0

**Authors**:

Cooper Markowitz

Eric Witherspoon

Kj Purcell

Robert Mellinger

# Programming Languages

* Python
  + Python is used to code the games that are on the website as well as run the local server. We chose this language because it has a library called Pygame that is designed for making arcade style games.
* HTML
  + HTML is being used to create the website. This language will allow us to easily format the webpages as well as allow the user to navigate to the page that they desire.

# Platforms, APIs, Databases, and other technologies used

* Pygame
  + Pygame is a library that is crucial to the development of the games on the website. It gives us the proper tools, such as setting up the game window, to make sure the games work as intended.
* Sqlite3
  + Squlite3 is used to help with the storage of all the reviews on the website. It allows for a database to be created when the website is started. When a review is created, it is stored in the database. If a user wishes to see a review, Sqlite3 retrieves the information from the data base.
* Flask
  + Flask is used when running the website. It helps with rendering each of the webpages.
* Subprocess
  + Subprocess allows for the website and the games to be running at the same time. If the user clicks on the link to start a game a subprocess is created to run the selected game.

# Execution-based Functional Testing

* Eric Witherspoon
  + Testing was done in phases. As I completed a part of each functional requirement, I would run the program and see what was working and what was not and make correction from there.

*Describe how/if you performed functional testing for your project (i.e., tested for the* ***functional requirements*** *listed in your RD).*

# Execution-based Non-Functional Testing

* Eric Witherspoon
  + A lot of my non-functional testing revolved around the performance of my game. As I develop the game, I run test on how long it takes to start up, how responsive the controls are, and how quickly the game shuts down after the user exits.

*Describe how/if you performed non-functional testing for your project (i.e., tested for the* ***non-functional requirements*** *listed in your RD).*

# Non-Execution-based Testing

* Eric Witherspoon
  + Little to no non-execution-based testing was done in this stage as a lot of the development going on now is getting the basics working.

*Describe how/if you performed non-execution-based testing (such as code reviews/inspections/walkthroughs).*