

ALGORITHM FINAL PROJECT REPORT



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CHAPTER I OVERVIEW

1.1 Project description

For my final project, I decided to port a game called Touhou Hisoutensoku, a spinoff game from the mainline bullet hell Touhou series that is a fighting game instead. For the basic code I decided to use a tutorial by Coding with Ross, however I only managed to implement the basic mechanics from the tutorial and for the entire plan to alter the code so it resembles the Touhou game, it was scrapped due to time constraints on my end.

The final result was a bare bones fighting game, with no sprites due to me not understanding how pygame sprites work, in its place are rectangular sprites that I created as a placeholder for the characters.

1.2 Project link

The project can be accessed through this github link below:

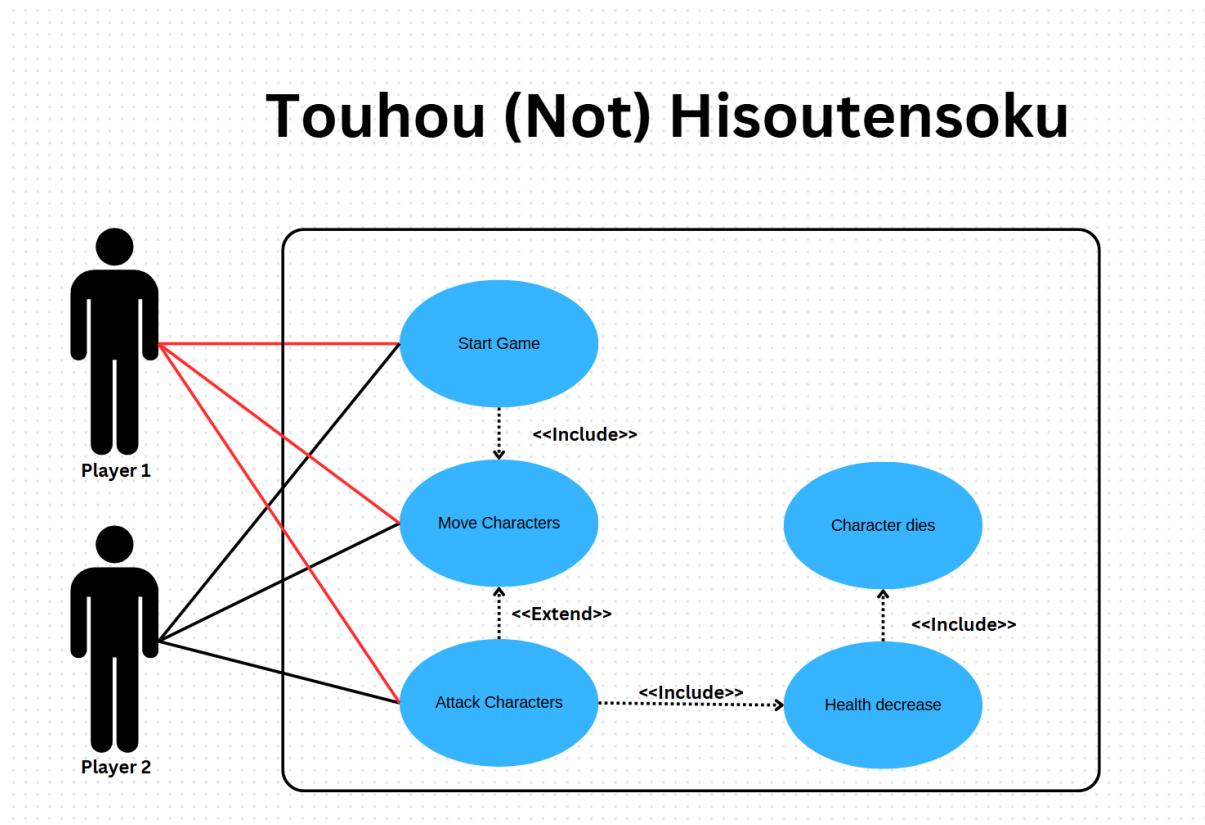
<https://github.com/Simayawan/AlgoproFP.git>

1.3 Modules

For this project, the only module I imported was Pygame, as without Pygame, there would be no game as everything from the mechanics, to the sprites, and GUI requires Pygame to work.

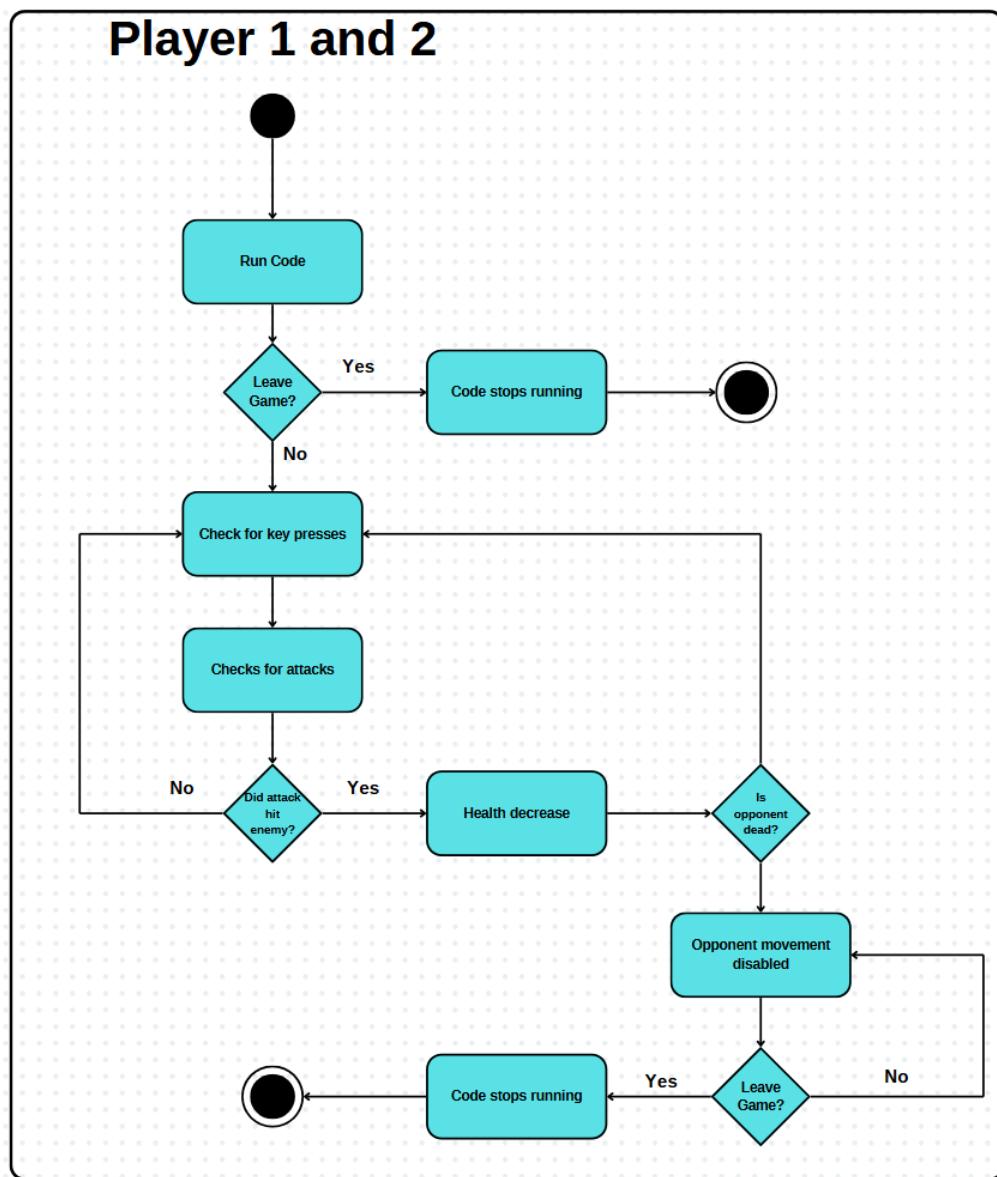
CHAPTER II SOLUTION DESIGN

2.1 Use case diagram

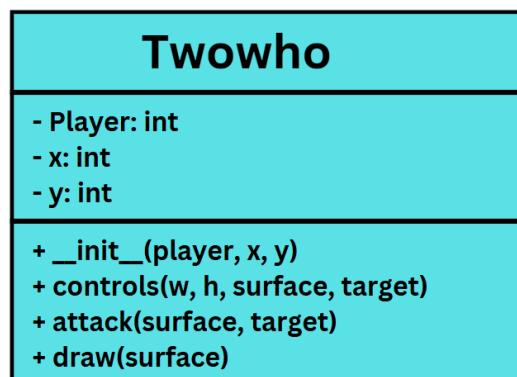


2.2 Activity Diagram

Activity Diagram Playing the Game

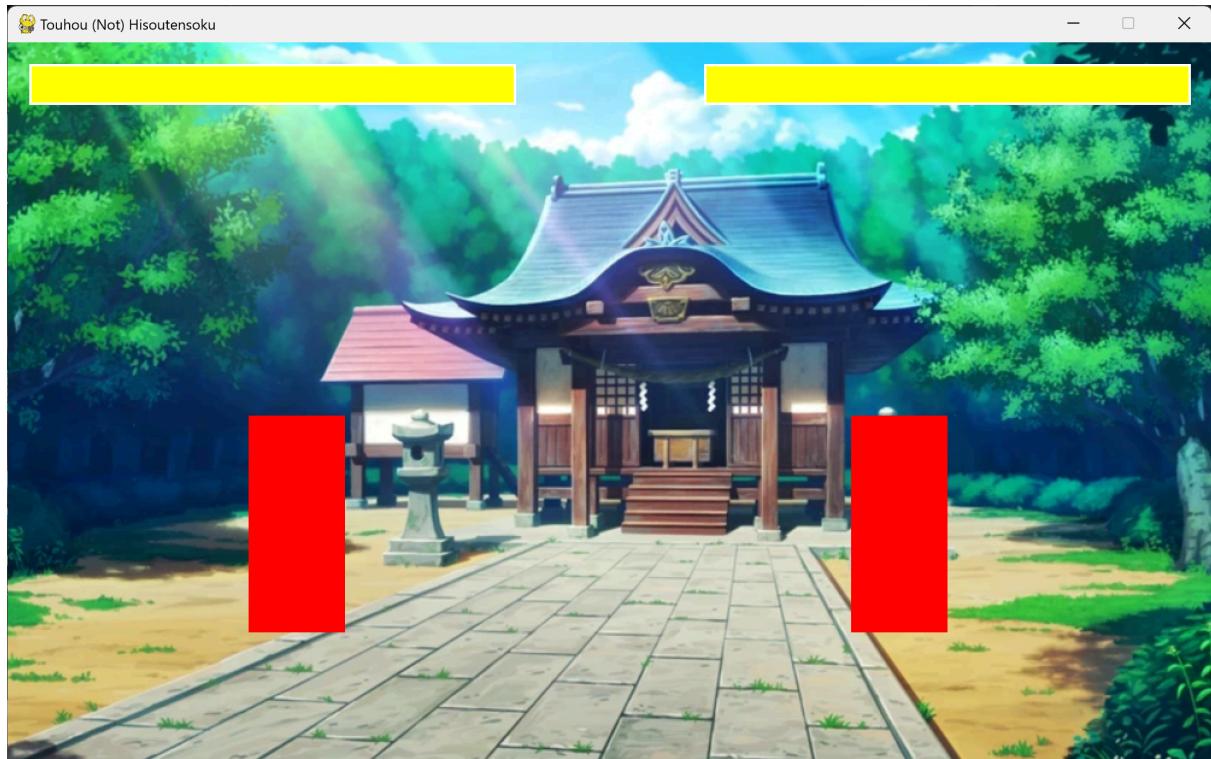


2.3 Class Diagram



CHAPTER III DOCUMENTATION

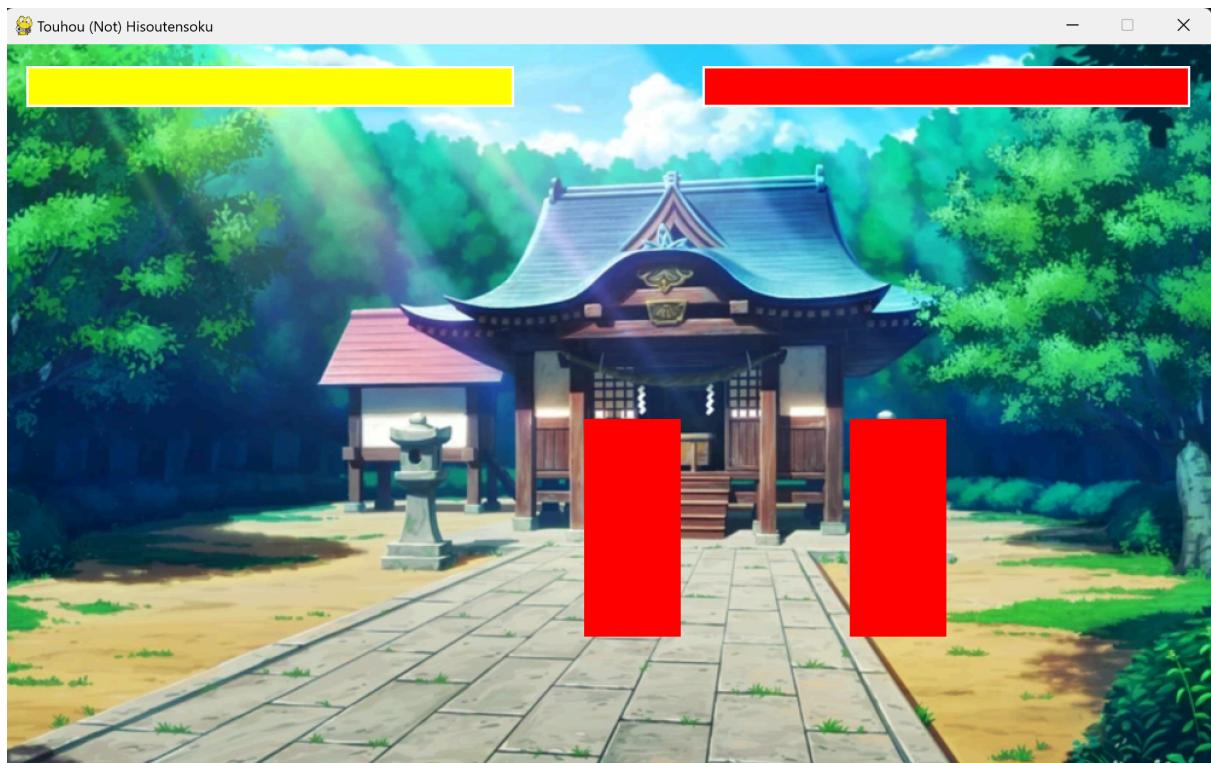
5.1 Main game



5.2 Player Attack (green block represents an Attack)



5.3 Enemy down



5.4 Video Link

https://drive.google.com/file/d/10wB6OkX0Q3YRDsYaGg1isCQkqv8_Fq3N/view?usp=sharing

CHAPTER IV EVALUATION AND REFLECTION

4.1 Lessons learnt

While working on this project, I realized how important it is to be mindful of the time you were given to work on the project. Due to me not realizing this, it cost me my chance to finish the project based on my vision. I also learnt that with time constraints you should lower your expectations and to not underestimate how long doing something would take, that happened when I was trying to implement sprites into the game, I didn't realize how long it would take due to me thinking it was easy to do, so I took it easy which wasted more time than I hoped.

4.2 Future Improvements

This project might as well be classified as unfinished, there were a ton of things I wished I had the skills or even time to add to the project, for example, I wished I put enough time to at least add sprites to the game, in its current form it only utilizes the premade draw Rect function which draws rectangles in place of sprites, it was only supposed to be temporary, but had become permanent as my time before the deadline was becoming thin. A game title screen was also something I wished I did because without it, the game looks barebones and will start the moment you open it.

I also wished I implemented the “Spell card” system, which was present in the original Touhou game, which works like an ultimate or a special attack, you are given a set of 5 cards that you can shift around, while I don't know how it really works yet in the game, if you shift them around you can sometimes get a combo which will deal heavy damage. Apart from that, I really wished I made a cooldown for the attack as in its current state when you attack, the enemy's health will keep decreasing at a constant rate, which is not something we want as it makes it too easy to kill your opponent.

All in all, this project didn't yield a good result, it was a rush job due to my own mistakes in managing time, so in the future, I hope that I will not make the same mistakes and do a better job at creating a more finished application than this sad attempt of making a game.