

Epic Games | Jonathan Wu (Loki), Jesse Xie (Polly), William Chen (Cheap), Josephine Lee (Kitty)

SoftDev Design Doc

P04 – SoftDev Project 2021-22

2022-05-18

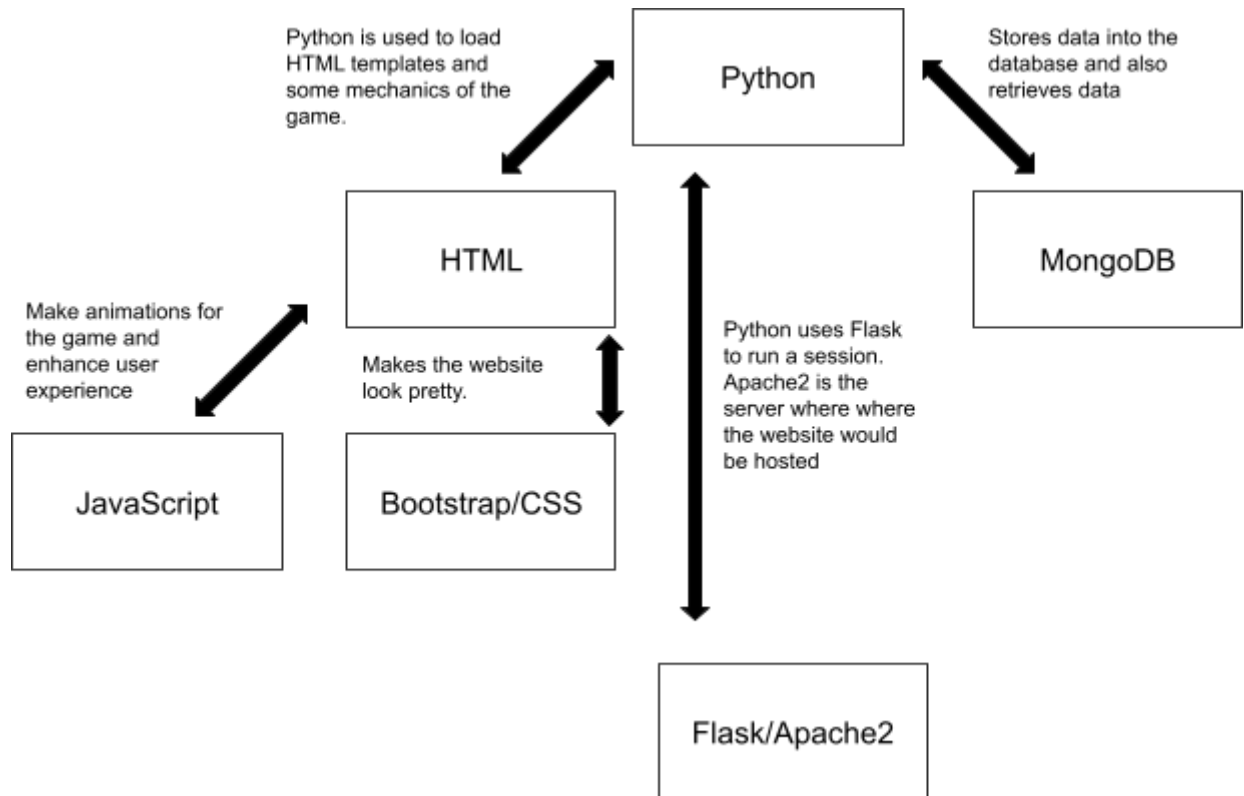


Project description:

Our project, PYTHNX, is our unique twist on the arcade auto-battler game, SNKRX. The player controls a snake-like character made of segments/heroes that can be purchased with currency acquired from the game. The segments automatically attack the enemies approaching the snake, so it is up to the player to keep the snake from harm. Unique builds can be created and bonuses can be activated from assembling different compositions of heroes, as the player combats endless waves of enemies.

- Player can move around in any direction with WASD
- Player can purchase segments of the snake for a currency
- The segments of the snake can have different classes that give them different attacks and abilities
- Having specific classes in a party may trigger class bonuses
- During wave rounds, pill-like enemies will approach the player's snake
- The different segments of the snake will automatically attack the enemies with an attack cooldown

Component Map:



Project Components:

MongoDB

- We will use MongoDB to store user and leaderboard information in collections, and interact with flask accordingly to generate the appropriate pages.

JavaScript

- We will use JavaScript to add animations to the website with canvas (showing the snake moving around) to enhance the user experience. It will also be used for the bulk of the functionality whenever the user makes keypresses.

Python

- This will be used to add functionality to the website by enabling flask/html to create our pages and also parse any files that we will need

HTML

- Provides the text/skeleton of the website, also used for audio.

Bootstrap/CSS

- We will use bootstrap as our framework to create a visually pleasing and user friendly website. Any buttons and elements outside of the canvas can be produced with bootstrap.

Flask/Apache2

- Flask will allow the use of templates and session variables, and apache will be the server that our website will be hosted on.

Database Organization:

- MongoDB
 - Users collection
 - { "username" : "<password>" }
 - Leaderboard collection
 - { "username" : "<name>", "furthestWave" : "<waveNumber>".
"teamComposition" : ["<heroClass>", "<heroClass>", "<heroClass>", ...] }

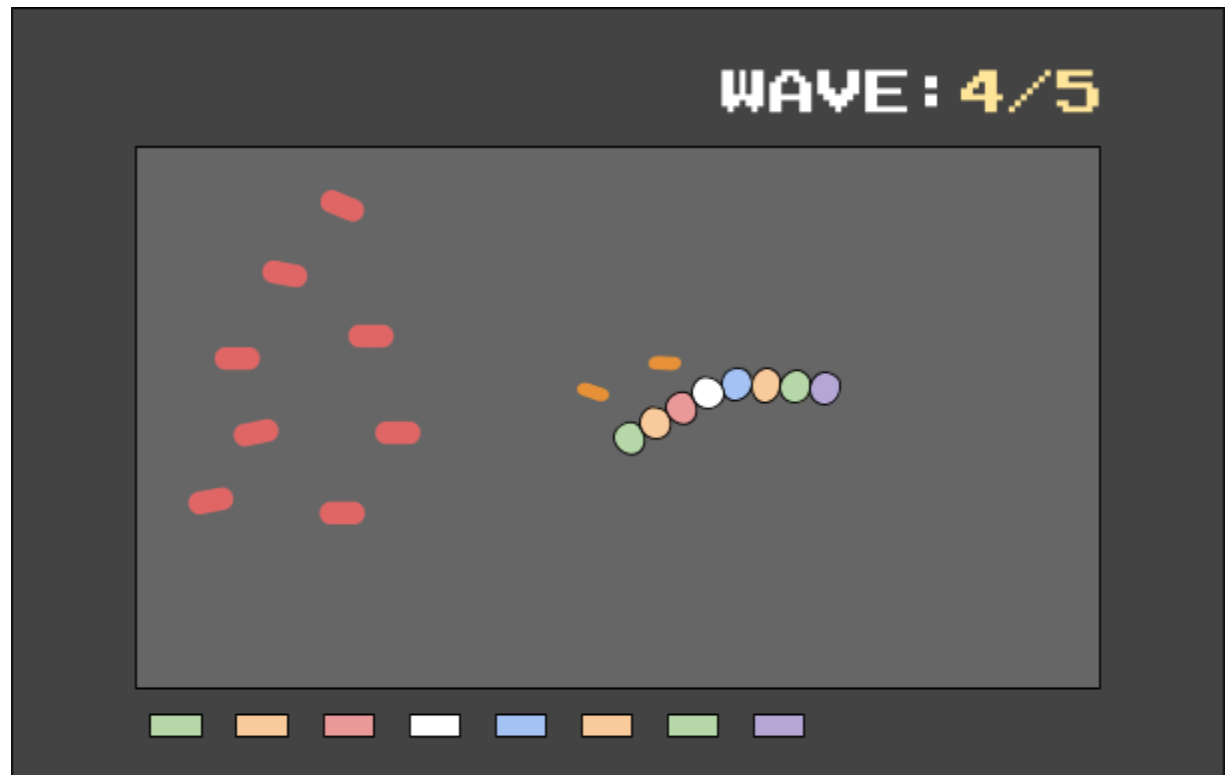
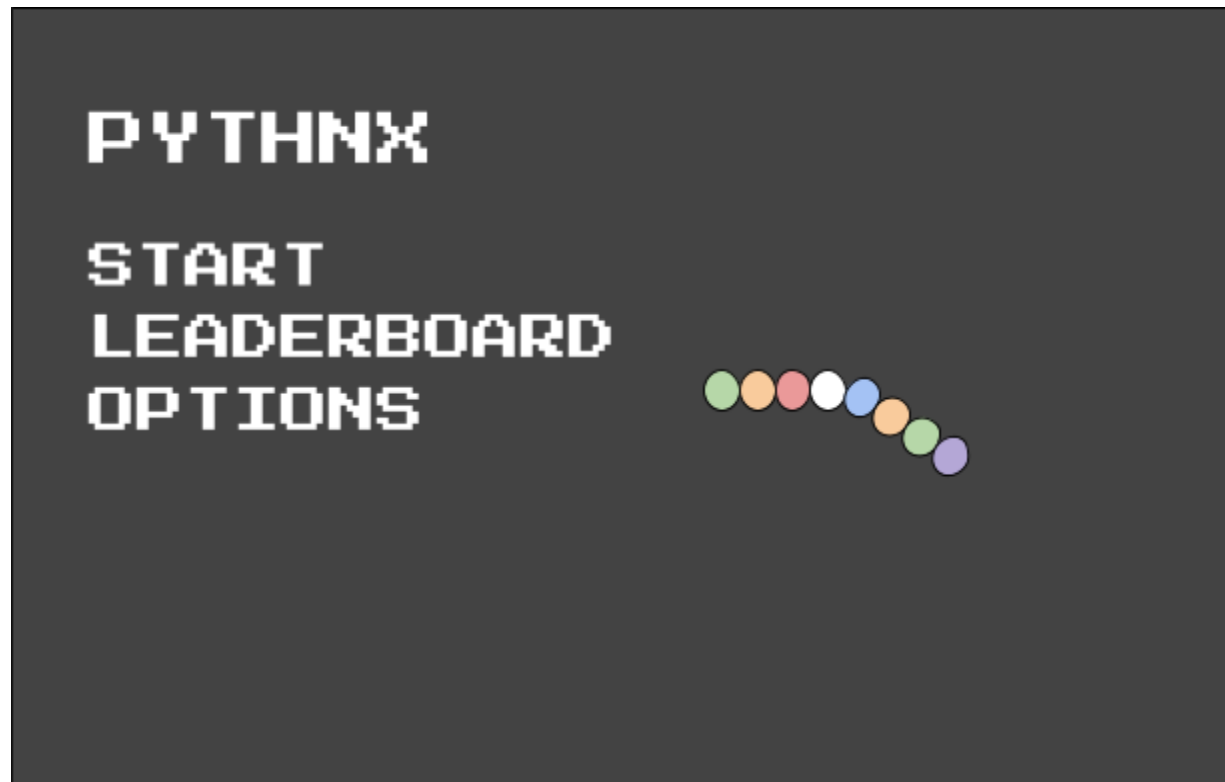
Site Map:

- One page
 - Game tab
 - Leaderboard tab

Frontend Framework Selection:

We'll be using Bootstrap for our front-end framework. We'll be taking advantage of Bootstrap's overall visually appealing styles of CSS/templates for the user to gaze at adoringly.

Site Templates:



SHOP - GOLD: 4/4 REROLL: 2 LOCK PARTY 4/4

2 WIZARD 2 OUTLAW 1 ARCHER

1 2
2
1 2
2

LV. 6 (EASY)

GO!

WAVE: 5/5

YOU DIED...

LEVEL REACHED: 15

restart run? (r)



LEADERBOARD

1. LEONARDO

LEVEL REACHED: 21

3 3 2 3 3 3 2 2

2. DONATELLO

LEVEL REACHED: 18

2 3 3 2 2 2 2 1

3. RAPHAEL

LEVEL REACHED: 13

1 2 1 2 1 1 2

4. MICHELANGELO

LEVEL REACHED: 7

2 1 1 1

Breakdown of Tasks:

- Jonathan (PM): html/css/js/mongo frontend stuff
- Jesse: html/css/js/mongo frontend stuff
- William: python/js/flask backend stuff
- Josephine: python/js/flask backend stuff

Target Ship Date: June 10, 2022