Project Description:
The name of my project is: racing Platformer
I will create a game where the player races against another player in a side-scrolling platformer. The game will have procedurally generated obstacles and terrain, and new levels will be created based on much the players struggle with the previous level.

Competitive Analysis:
https://store.steampowered.com/app/1118700/Super_Demon_Boy/
I plan to emulate the side-scrolling effect and movement of Super Demon Boy. This game has very fluid movement animations, and the background graphics are very pleasing to look at. I will also incorporate obstacles in the terrain, such as the saws in Super Demon Boy.
https://store.steampowered.com/app/320040/Moon_Hunters/
The game Moon Hunters on Steam uses procedural generation algorithms to create its open world terrain. The benefits of using procedurally generated terrain is that each play through the game will be a different experience. I will not use the same level of complexity as Moon Hunters, but I plan to have at least some level of replayability.
https://terraria.org/
Terraria is another example of a side-scroller. While the graphics aren't amazing, the pixel art has a very pleasant simplicity that I want to emulate.

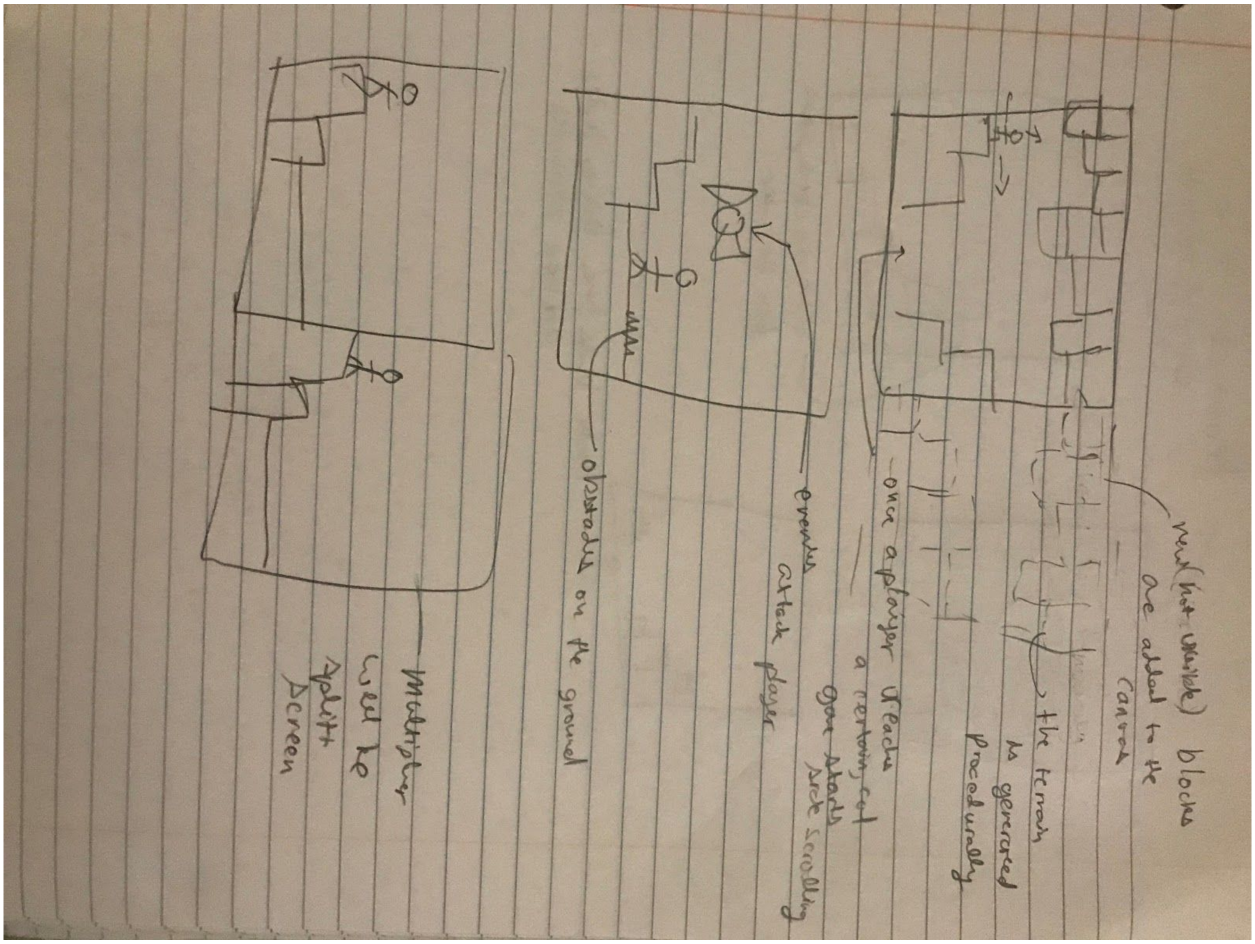
Structural Plan:
I will have a file to store my procedural generation code, a file to store the init, keyPressed, mousePressed, redrawAll, a file to store my classes,

Algorithmic Plan
The most difficult part of my project will be procedurally generating new terrain. I will split the canvas into a grid (2d array of booleans). I will then create a legal grid, checking that the jumps are possible and the holes are legal. Once the player reaches a certain col, he will stop moving, and the grid will start scrolling. I will add new legal grids to my canvas as the game scrolls

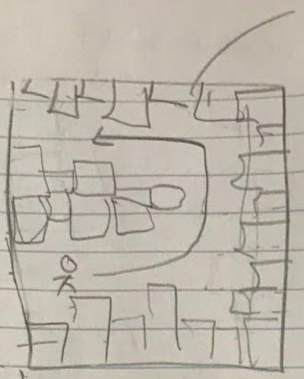
Timeline Plan:
I plan to finish the procedural generation,side scrolling, playerMovement, and collision detection this weekend. By tp2, I will have finished enemy classes, objects, and difficulty scaling. By tp3, I will have multiplayer, and multiple levels completed

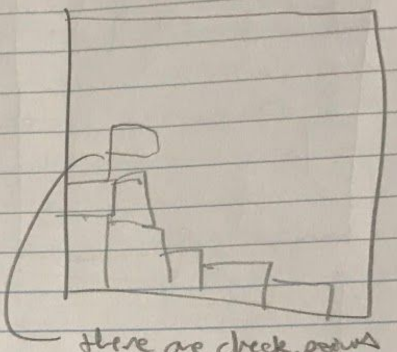
Version Control Plan:
I will use github to backup my files

StoryBoard:

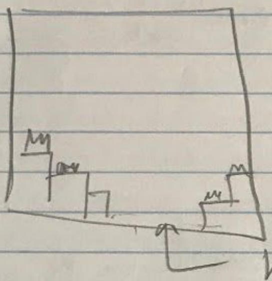

new (not visible) blocks are added to the canvas
the terrain is generated procedurally
once a player reaches a certain col game starts side scrolling
enemies attack player
obstacles on the ground
Multiplayer will be split screen

terrain can also be generated upwards

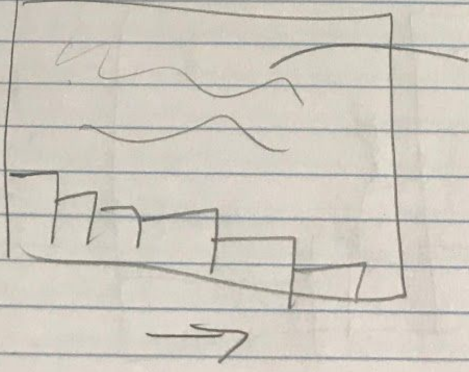




there are check points for the user



harder levels have bigger holes and more obstacles



possible parallax background

Tp2 Update: no updates
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