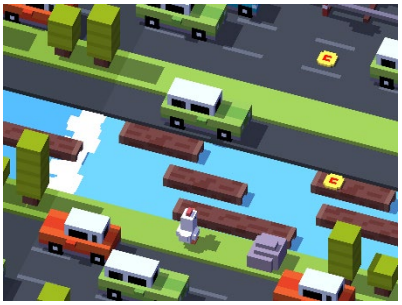
Ideation

Crossy Road



The player plays as a little character (could be a PImage of a creature dependent on what theme I choose) who traverses platforms (with the use of the arrow keys) trying to get a high score. If they fall or misstep, their "run" is over and a game over screen is overlayed prompting the player to continue.

In Crossy Road, the game uses a chicken crossing a road, and they use vehicles as obstacles moving back and forth forcing the player to try and avoid them. The whole world moves at a steady pace, forcing the player to act fast or else the camera will pan the player out of play. The speed of the camera increases as the game progresses creating a harder environment for the player. I can play around with different themes or ideas such as a volcano escape game or a dungeon escape.

- Can use an array to call an assortment of obstacles for the player to avoid, using constructor arguments to change the color, shape, and size of the obstacle, maybe even possibly the speed?
- Can use vectors to simulate the movement of obstacles and the world itself. I want the game to slowly pan down the screen (the player is moving upwards)
- Use a Boolean to check whether or not the player character goes beyond the screen borders and initiates the game over sequence
- I can possibly use PImages for the obstacles or the player character themselves
- I can reuse the score tracker I used for my previous two assignments. It's text based, but I am only limited to so much text. I could use shapes as the score and save my use of text for the game over screen
- As the game progresses, I can increase the acceleration of the obstacles and the camera pan to force the player to act faster, increasing the difficulty of the game

Platformer

A simple platformer that the player can traverse with monsters that can trigger a game over and coins to collect, reminiscent of Super Mario, or maybe the original Donkey Kong.

There are many ways I could go with this idea of a platformer. I can go down the Geometry Dash route where the player character is in constant motion at a fixed X position and the world moves towards the character and the player must jump to avoid the obstacles. However, this feels too close to my second assignment where I did flappy bird.

- I will need to set collision to all of the platforms and the ground itself, so the character and monsters don't fall down. Need to implement gravity
- I can use PImage for the coins and monsters, like what we did in week 9, and I can animate their movements, so the game feels more dynamic and "alive"
- Need to incorporate a Boolean to check when the player character touches a monster or collects a star. I will also need to keep track of the number of stars the player collects. Again, I can reuse the score tracker from my previous assignments

RPG/Roguelike (Pokemon?)

Again, I want to possibly explore the idea of doing an RPG. The idea is that the player can traverse a dungeon of sorts collecting loot or Pokemon to fight random encounters. I could create a small maze-like dungeon for the player to traverse and I can possibly randomize where everything can be, such as chests, enemy encounters, etc.

- I will need to create a map, kind of like that maze exercise we did before reading week when first learning about vectors. This may be a lot of work to do and I'm not sure about how much time I must dedicate to this project. I could simply go down more of a "Roguelike" style game where the game just continuously throws enemies at you, and you can progressively increase your stats and attacks
- I will need to make a few different enemy types so that the game doesn't feel too repetitive for the player. I can use constructor arguments to change the shape and color of some monsters to give a bit of a distinction between enemies. Maybe I can make an ogre type monster, but one can be blue to simulate ice and the other can be red to simulate fire
- I will need to create different game states; battle state where the player is in active combat with an enemy, shop state for the in between battle states to improve the character's stats and attacks, and of course the game over state for when the player loses all their health
- I will need to do lots of randomization for the enemies and loot that the player can receive, again trying not to make the game feel repetitive. I will also need to scale the enemies and the player's stats and attacks based on the level they are on so the game feels like it is progressing with the player.
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Conclusion

Overall, I like a lot of these ideas. The roguelike/RPG might be too out of scope for me personally and the platformer feels too easy, and I don't think I'll be able to fully showcase my understanding and skills as a programmer as it may seem too similar to previous assignments and in class exercises. Instead, I think Crossy Road might be the best idea for me to execute on and will give me a decent challenge trying to make the game.