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CS 5001
Final Project: Asteroid Clone
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1) Project description

Create a clone of the classic arcade game “Asteroids”. Using the arrow keys or WASD navigate around the game screen and avoid getting hit by the asteroids. Using (spacebar) shoot projectiles at the asteroids! As you hit asteroids, they become smaller (on a scale of 3 being that largest and 21 being the smallest) and split into two. Be careful, while the asteroids and ship wrap around the game surface, your bullets do not (makes things too easy!). This project leverages classes, class methods, lists, tuples, a dictionary, and plenty of loops.

2) Any changes to the project from Planning document #2

I did not manage to implement a health bar (IE you get 3 lives then its game over). However, I did manage to add a start menu screen, so it does not just throw you immediately into gameplay upon launch. I also made the decision to not implement the UFO class as what I had with just the basics was starting to feel a bit unwieldy.

3) Reflection - describe what you learned by implementing this project also what would you do differently if you could go back and start over knowing what you know now.

If I had been able to go back, I think I would have separated the classes into more individual files. I am not overly pleased with the game over/win/restart loop. What I learned was a fun library with a large breadth of different options of 2d games. As a fan of old school Gameboy games like Zelda and Dragon Warrior, it has gotten a fire going for creating some sort of Fantasy clone next. There was also a lot to learn about vectors and velocity. Flying in general is complicated in a 2D space, so thinking about 3D airplane simulators has me dumbfounded. For the life of me I could not figure out how to implement a keydown event with “enter” on the start screen to initialize the game play loop, so that was frustrating.

I think I would have also tried to do a better job with writing part of a class/its methods and then implementing the tests. I got a bit turned around for testing class methods but without the usage of self. Pygame also likes to store information into uniterable data types making it feel like you are flying blind part of the time.

4) Acknowledgements/Citations - who did you work with, what sources did you use.

Assets

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