Game testing

* Player movement
* When testing my player, I noticed that if I increase the fps in the fps limiter the player speeds up a crazy amount. I fixed this by setting a variable called dt (delta time) that connects directly with the fps limiter and divides that number by 1000 to get it in seconds, then when I detect the user pressing movement keys instead of just setting the sprites velocity in the direction I divide it by delta time forcing the player to go at a certain speed set by the vel variable no matter if the loop runs faster than normal (fps) [fixed by Jaden]

* Icons/sprite problems
* I had a problem when trying to set a logo for the window tile, when telling python where the image is it proceeded to say that It couldn’t find the file, but when I gave it the full directory it showed up, the solution was that I use the library called os to pull the users location of the file and then full in the rest of the empty data [fixed by jaden]

* Fps problems
* I found that every 8 or so seconds the fps would drop significantly and rise again a second later making a huge lag spike, I couldn’t find the problem so I just started optimizing code and cleaning stuff up hoping it would fix it, and in testing I found that it dramatically increased fps but that lag spike was still there, I finally decided to remove the fps counter I had for testing and seeing the fps, and surprisingly that worked [fixed by jaden]

* Tilemap problems
* I made a map using a tilemap inside of a program called tiled so I didn’t need to make it in code, and I had a problem trying to get the map from tiled into python, i fixed it by looking through all the layers inside the map.tmx file and checking if it’s a tile layer or just random data that the app uses, after finding all the data it needs it’ll grab its coordinates of each block and then finally draws the tile to the screen in those coordinates, if it sees a empty space it’ll just skip over it to save fps [fixed by jaden]

* Hitbox problems
* When making the tomb hitboxes so the player can react with it I found that it was very janky and didn't work most of the time as expected because i made it myself. But with a little googling i rembered that pygame has hitboxes built into the game so i used its instead and it worked first try [fixed by jaden]
* Also, when working on the enemy's I used the same trick to test for collision for fences and players [fixed by jaden]
* Sprite problems
* I added a image to the sprite and it got the same problem where it cant find the image, so I used the same solution as the icon [fixed by jaden]

* Custom library
* I had a problem with other people running the code as they don’t have the liberty’s, I now do a check the first time it runs to see if it has the library, it needs and then installs them if they don’t [fixed by jaden]  (removed now that it will be compiled into an executable file)
* items
* I had problems with the hitboxes as I was making my own hitbox system, but it was very Janky, I realised that I could just apply a rectangle to the tombs with a list holding there coordinates and use the default hitbox system [fixed by jaden]
* Enemies
* I had some difficulty making multiple enemies as i didn't want to make each one by hand, so i got some help from google as well as gpt to show me how to make it [ fixed by jaden]
* I finally got enemies to take damage and hit the player with the help of google and gpt and working with different modes [fixed by jaden]
* ui
* I had a problem with displaying different ui elements because instead of just displaying elements on top of each other i made every single possible element by hand. But Val explained to me a better way to make it [fixed by jaden with the help of Val]
* I added hearts to the ui, wasn't to hard but changed how it worked multiple times [worked on by jaden]
* music
* I had some difficulty making multiple sounds play at the same time but after trying multiple ways and looking at the wiki i found that i could just use a different channel for sound effects and another channel for music [fixed by jaden]
* difficulty's
* I found it hard trying to make the different difficulty's but with some help and advice from riley i got an idea to use a dictionary to store the diff values for each difficulty [fixed by jaden with help from riley]
* Fighting animations
* I had issues when trying to display the animation for a second, because each time i called for it, it would ither stay there forever, show itself for one tick, or limit the clicks per second to 1, i fixed it by setting a timer for a second every time it gets called and i weight for the timer to end before stop displaying the animation [fixed by jaden with help from google]
* I had another problem with it when displaying the fighting animation while i moved. I found that the problem was using the mouse button to make it play, so i set it to e or / [fixed by jaden]
* Hitbox's
* When changing the hitbox size for the player I found that it would give weird values, so I blitied it to the screen, and found that it was shifted to the side of my player weirdly. So, I fixed it by changing the values until it lined up again [fixed by jaden]
* When fixing the fence hitbox, i accidently made the hitbox only on the spoke, instead of the whole fence I fixed it by changing the size to the correct size [fixed by jaden]
* When making the wall hitbox and location, i found it hard to manually pick each location so i make the screen blit the players location to it so i can just set it to it, but i found that the players location is different to the world location so i also needed to blit that to the screen too and that worked [fixed by jaden]