FPT Planning Documentation

I am making a turn-based game where the player is a wizard and they fight various monsters to win.

**Problems**

I want to include menus, but switching through different options might be a difficult task. I will create working menus by letting the user switch between options in the menu by clicking a key on their keyboard. I will create an integer variable equal to the amount of options there are in the menu. I will also create a variable for the max value (if there are 3 options, max value would be 2 - 0, 1, 2). I will create an if statement that reverts the value of the first variable back to 0 if the user goes over the max value, and vice versa (if the user goes under 0, the value will equal max value)

I will create classes for both the wizard and the enemy stats. This will include things like health, damage, and the different images used. This will look much less messy in the code than creating separate variables independent of each other. I was doing this before, and it looked like a big wall of unnecessary code.

I want to randomize some of the integer variables in my game. To solve this problem, I will use the “random” function. If you wanted to randomize an integer variable, you could do so easily by putting “import random” at the start of your code. When you want to make a random variable, you can do so by coding “variable name = random.randint(startvalue, endvalue)”. This will create a random value from the start value to the end (if you picked 0 and 50, the output would be a random number between 0 and 50).

Functions don’t seem to change variables outside of the function. When you change a variable inside of a function that appears somewhere else in the code, the variable on the outside of the function will not reflect the changes made inside. To fix this, you can create an additional line of code for each function that lists all variables used outside of the function starting with “global” (global variable1, variable2, variable3). This way, when the variable is changed in the function, it will change outside of it too.

I want to be able to switch between the different screens in the game easily. I will do this by using GameStates. I will create 4 game states (victory, game over, battle, menu). Each screen will also be a callable function outside of the main loop. When the conditions are met to change the function, the game state will be changed. The main loop will be very short compared to the rest of the code. It will simply state (if the game state is “x”, call “x function”). This way, it will be much easier to switch between screens and the code will be easier to read.

**Sources**

Video where I learned to use GameStates:

<https://www.youtube.com/watch?v=r0ixaTQxsUI>

How I learned to use global variables: <https://www.w3schools.com/python/python_variables_global.asp>

How I learned to use the random function:  
<https://www.w3schools.com/python/module_random.asp>