

The software architecture that we choose to use in this project is the 3-Tier architecture. For the presentation tier, we have the game as the user interface. The user will directly get into the game when opening the html file. The game will also directly start when html is opened in the prototype, but we plan to add more in the future project. This tier shows the user interface and user will decide what to do based on the game interface changes. The logic tier is where all our calculation functions are located. Functions in our game calculate how the player character interacts with different objects, such as the collision between player character with enemy characters, walls and floor. The event listener functions that get user input and controls the player character should also be placed in this tier. This tier interacts between the presentation tier and the data tier, processes commands to the program and makes decisions to what would be stored in the data tier. The data tier is where all the character status would be stored. We have several things that we have to store as the game goes on, which are the player's life, the velocity and position of the character. The velocity and position of the character determines where the character is, and the character would be hurt, die, or stopped after going through the function in the previous tier. The player's lives is also in this tier, as it keeps track of the ending condition of the game.