Plan for Software Changes

1. Move sprite images into one .C which other methods call it
   1. Will this make the runtime slower?
2. Figure out a way to make sprites move at different speeds
   1. Implement a timer that updates the position at specified speed (ex 30fps)
   2. Let systick only deal with player input
   3. Move logic to determine enemy movement somewhere else
3. Use less memory for storing sound if possible
   1. A way to compress sound?
4. Make enemy movement based on FSM
   1. Trying to remove random movement. This is not a priority but will be very nice
5. Change all movement and collisions to be based on pixel position instead grid position
   1. Should make player move smoother and enemies more realistic
   2. This should also change item drops to be in center of enemy
6. Overall grouping and coupling of code to make it look nicer
   1. Want the infinite while loop to control game state and not functions to implement
7. Add a start screen and maybe name screen

Plan of Hardware Changes

1. Put microcontroller within casing and have LED displayed on the outside
   1. May have to design own if can’t find one online
2. A main breadboard that should hold the MC and DAC
   1. See if you can find a small speaker online
3. Controller that connects using cable to main bread board
   1. Can be extra and make the controller detachable