

## Game

The player must collect all mandatory rewards in order to unlock the exit door and complete the game but must do so while avoiding enemies (more details in “*Tutorial*” below). Over the course of the game’s implementation we have made several changes to what classes will be instantiated and their purpose(s).

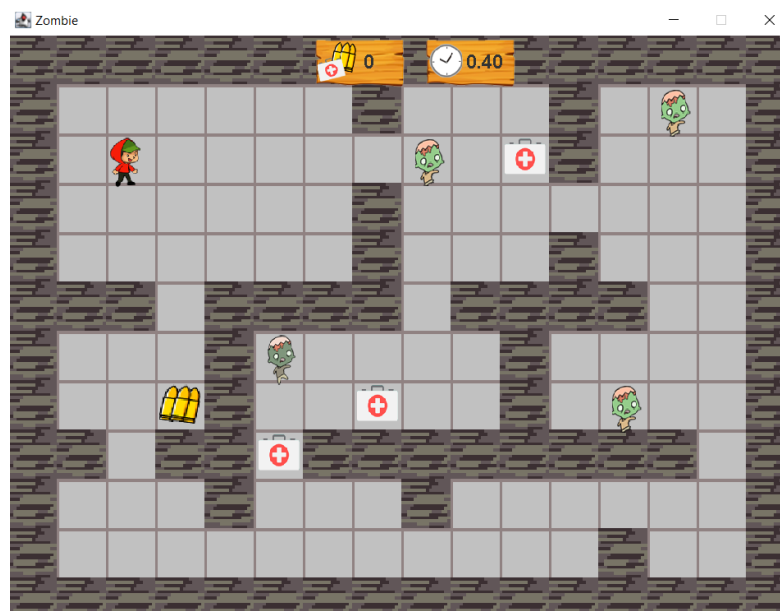
An aspect of the design that was kept from the original plan was to have a game panel or overall game class which would utilize objects of the other classes, such as for zombies or rewards. We also kept the plan to have a Zombie parent class for the enemy and have two other subclasses (Legless and Chaser) which would inherit from this Zombie parent class. The same applied for rewards, because two different types of rewards were required for the game, we used a similar parent-child inheritance design pattern to implement in-game rewards.

A design that strayed from the original plan was to have separate classes for displaying a timer and score, in the end these two classes were merged into one class. We chose to do so because they were both very short classes that included many of the same methods. It made more sense to have their graphical aspects be drawn at the same time and there is never an instance where the scoreboard would display without the timer or vice versa.

## Tutorial

Our game is a grid-based maze game, where the player must collect all the health packs displayed on the screen while avoiding enemies. When the player collects all the health pack rewards, a door will appear on the screen, at which point the player must reach in order to complete the game. In addition to health packs, there is also a bonus reward, handgun ammunition. Health pack rewards will increase the player’s score by 10 points and collecting ammo increases the score by 20 points. There are two types of enemies, legless zombies and moving zombies. When the player comes in contact with a legless zombie, it reduces the player’s overall score by 3 points. If the player’s score becomes negative at point in the game they lose, additionally if the player comes in contact with the moving zombie (who always moves towards the player), they will also lose and must restart the game. There is also a timer displayed next to the scoreboard so the player can keep track of their time during the gameplay.

When the player initially starts the game:



Score increases when player collects rewards:



Game over when player's score is negative or when encounters moving zombie:



Player winning after all the health pack rewards are collected:

