**Zombie Apocalypse**

In this game, the hero character is controlled by the player. The **main mission** of the hero is to **collect the five backpacks C:\Users\NereBM\Documents\GitHub\PythonThePythonMenace\img\items\backpack.png,** which are the supplies to survive, and then **go to the platform that will lead him to the next level** if he already has all backpacks.

Rest of the objects involved in the game:

* **The zombies:** will chase him, and if they touch him he loses a life. There are two different types of zombies:
  + C:\Users\NereBM\Documents\GitHub\PythonThePythonMenace\img\zombies\zombie.png*Zombies* – they only have a life, so with one shoot from the hero they die
  + *Super zombies* – they have 3 lives, so to kill them they need to be shot three times. The life bar over them shows the amount of lives left. They are also slower than the ordinary zombies.

The zombies are created in random places, and they have a probability of being created every time the game loop is executed. This probability is determined by the parameter “FREQUENCY\_ZOMBIE” (out of 100).

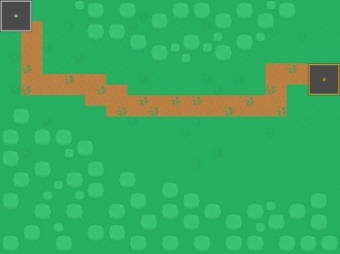
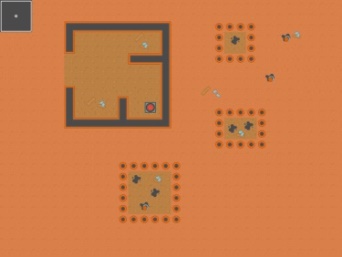
* **The shotgun: C:\Users\NereBM\Documents\GitHub\PythonThePythonMenace\img\items\shotgun.png** if the hero grabs a shotgun, he can shoot faster and every shoot creates ten bullets in different directions. Every time the hero grab a shotgun he has six shotguns shoots, afterwards he come back to the ordinary pistol. With the ordinary pistol the shooting rate is slower and each shoots is only one bullet.
* **The heart**  C:\Users\NereBM\Documents\GitHub\PythonThePythonMenace\img\items\hp.pngis the hero grabs a heart, his number of lives increases one live. The hero has initially 5 lives, and he only can grab hearts when his life is not full.
* **Walls** – they limit the movement of the zombies and the hero so they can’t go through them. Although the name of the class is walls they look like different objects.

Indicators:

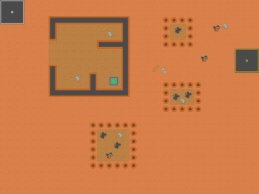
* Life bar: C:\Users\NereBM\Documents\GitHub\PythonThePythonMenace\img\effects\life_bar\player\life_bar_full.png it shows the hero’s lifes left
* Shotgun bullets C:\Users\NereBM\Documents\GitHub\PythonThePythonMenace\img\effects\shotgun_ammo\bullets_5.pngit shows the number of shotgun bullets left

Levels:

These images show the first, second and third level, respectively:

* Level 1: the hero starts at home. The only obstacles in this level are the walls of the house.
* Level two: the forest. The obstacles are the trees, so neither the hero nor the zombies can walk through them.
* Level 3: the industrial unit. The obstacles are the walls of the house and the square areas surrounded by orange circles: . In this level, all the backpacks have to be collected, and after that, the hero has to walk over the red button to deactivate the zombie virus. The button will turn red and this will enable the last platform to win the game:



Game structure:

From the start screen, the user presses any key and the introduction of the game starts. To skip the introduction the user can press any key. The next screen is the menu, where the user can use the up and down arrows to go through the options, and enter to select one of them.

Start Screen Animated intro Menu

The tutorial screen shows the control of the movement of the hero. The ranking screen displays the 3 best scores obtained in the game from higher to lower (if there are less than 3, it displays all of them). If the user choses “Play”, some brief instructions about how to play are given in three screens. Each of them is display for 10s, but the user can skip them pressing any key.

Then, the game starts from Level 1.

Difficulty settings:

To test the game, you might want to modify the difficulty in order to see all the levels quickly. These are the parameters related to the difficulty of the game that can be easily modified in the file “setting.py”:

* GOD\_MODE: this parameter can be set to True to never die.
* The zombies, the shotguns and the hearts are created in random places, and they have an assigned probability of being created every time the game loop is executed. This probability is determined by the parameter “*FREQUENCY\_ZOMBIE”* (out of 100), “*FREQUENCY\_GUN”* (out of 1000) and “*FREQUENCY\_LIVES”* (out of 1000), respectively. These parameters can be modified in the file *setting.py*.