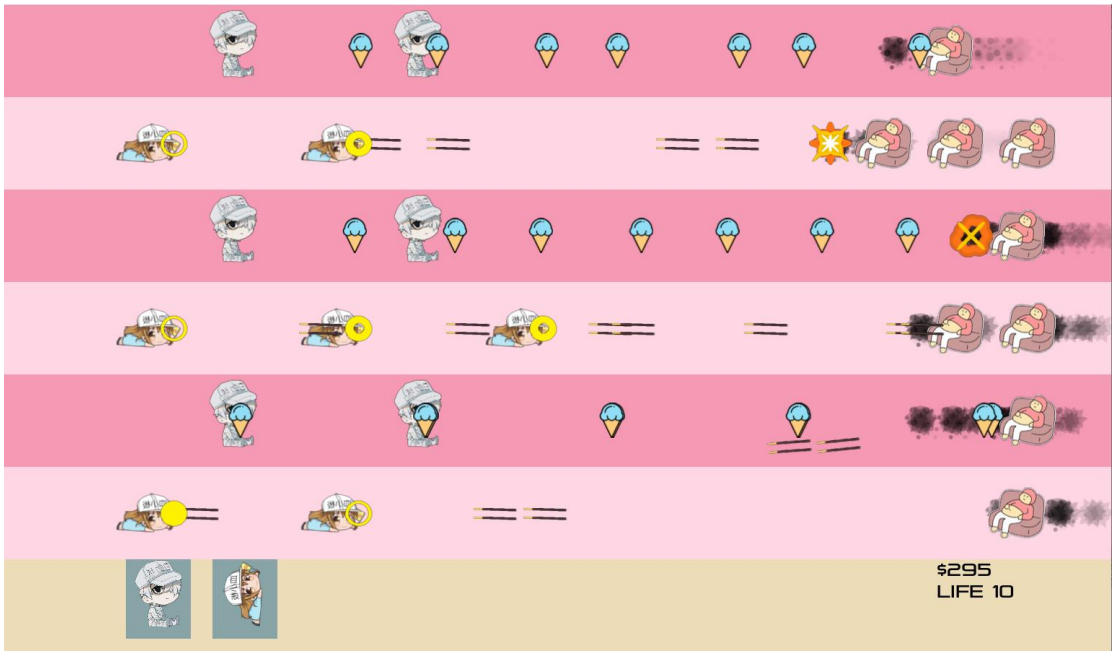
Hackathon

Tower Defense Game

Problem Description

Read the source code and finish the implementation of the partly Tower Defense game.



In the playing scene, press key 0-9 to change the speed multiplier; press Q, W to perform quick select on different turrets; click on the empty spaces in the map to place the selected turret; press TAB to swap to debug mode. But there are some problem, you can solve it by finishing the under requirement.

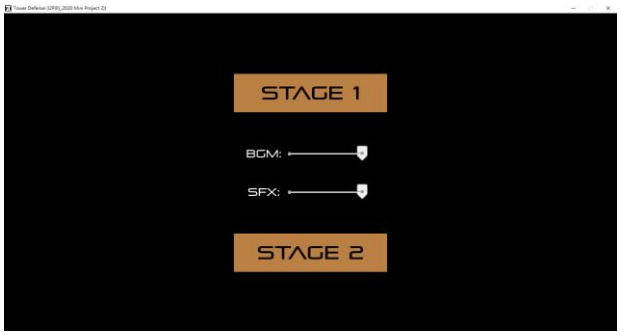
Coding Requirements (Finish the Game)

1. Add the Setting scene (0.6%)
    a. The button's image should change on mouse enter/leave.
    b. Move the volume control sliders to the Setting scene
    c. Create a back button that switches to stage-select scene in the Setting scene.

d. Create a setting button that switches to setting scene in the stage-select scene.

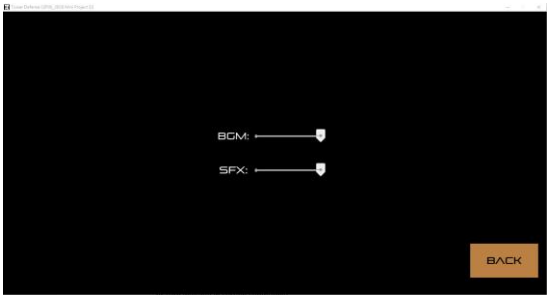
e. The background music plays when you enter the stage-select scene.

Original stage-select scene



New stage-select scene

Setting scene



2. Add 1 new turret, 1 new enemy. (0.6%)

a. Add a new turret that can be placed and will automatically attack enemies.

b. Add a new enemy that can follow the path and die.

c. The new turret and enemy cannot be the same as the ones in the template. You must use different images and implement different behaviors. (e.g. turrets that can freeze or slow down enemies, enemies that will speed up or turn invisible in certain conditions). You can't just adjust the parameters of the new turret and the new enemy. The enemy should have a correct hitbox/hit-circle for calculating the collision, so you can't adjust it too small.

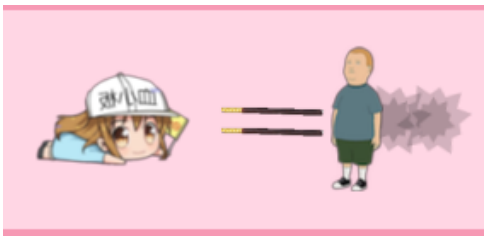
3. Add 1 new effect to PlateletTurret when it shoots bullets. (0.6%)

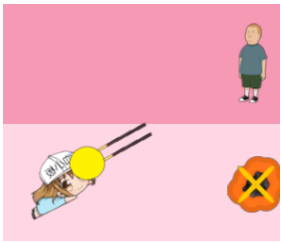
a. The effect should appear when turret shoot every bullets.

b. The effect should appear near the bullet.

c. There are 4 images(shoot-1.png ~shoot-4.png)that can be used in the play directory.

Original Effect

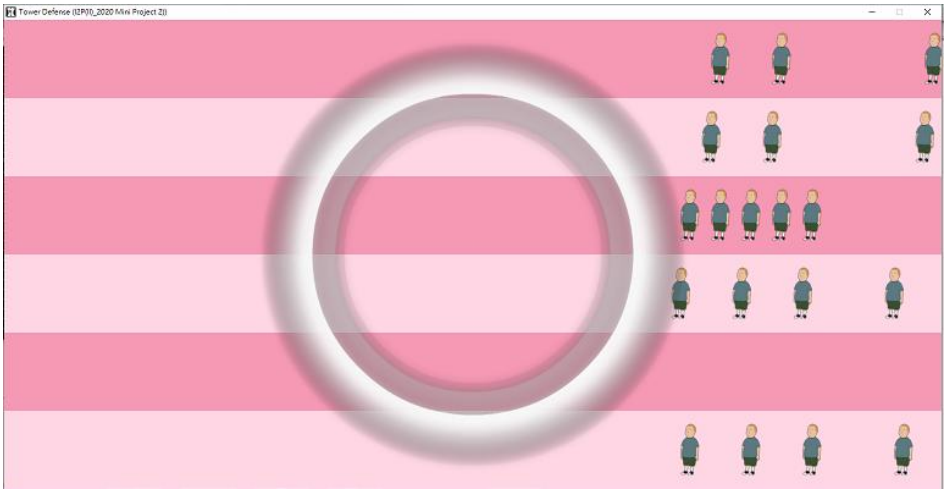




4. Set a cheat sequence to plus money(10000) and life(10) and set code for debug mode. (0.6%)

   a. Set Tab as a code to active or de-active debug mode

   b. Let sequence{arrow_up , arrow_up , arrow_down , arrow_down , arrow_left , arrow_right , enter} as a code to plus money and life. If the setting is correct , you will see a plane nuke the map after input the sequence.



5. Fix the bug when enemies reach our base. (0.6%)

   a. Normally , the game fails when the life goes to zero, but the game may crash when just 1 enemy reaches our base. Try to fix it.

   b. Correctly display the player's life when enemies reach our base.

   c. Try to employ what you learned to find out why the game might crash. If the game does not crash during executing does not mean the code is bugfree. Visual Studio's debugger is especially useful for detecting such bugs.

   d. Make use of the tools in your IDE such as Stack Trace, Log, Watch variable, Breakpoint (step in / step out), etc.