CS 176 | Advanced Scripting
Programming Assignment 6

This is the last assignment and it is focusing on using all the components we have in the engine and adding some new ones.

The program given to you is the engine that you made so far. You will be given all the needed classes (.as files) including all the various levels that we've done in previous assignments and what you need to do is add a camera system, a sound manager and finally build a simple platformer.

Details

Code Details:

- Sound Manager (40%)
    - All sounds loaded, no embedded sound in the .fla
    - Ability to:
        - load a sound file
        - Play sound with option to loop
        - Stop sound(s)
        - Pause sound(s)
        - Resume sound(s)

- Camera System (10%)
    - smooth translational camera that has the ability to follow the character
    - HUD objects that don't follow the camera (Score, Lives, etc...)
    - Bonus: (5%)
        - Zoom in and out

- Pause System (10%)
    - The ability to pause the game and have a small menu pop up with some options
        - pause all objects (static, dynamic, physics, etc...)
        - pause all sounds
        - add new unpaused objects.

- GamePlay (40%)
    - details in the section below

Platformer Details:

The game will have minimum a main menu, one playable level (platformer of course), a win screen and a lose screen.

The playable level should contain the following:

- Tile based background and platforms
- Dynamic objects loaded from tilemap

- Main character
    - Physics based (jump, moving left and right …)
    - Collision with the platforms
    - Collision with enemies, health goes down
    - Shooting bullets in the direction of the mouse
    - Hit animation (Color change, Blinking animation, etc...)

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- Enemies
    - 2 types of enemies (different AI behavior)
    - Collide with platforms
    - Collide with bullets and get destroyed by playing a destroy animation
    - Collide with Main Character

- Bullets
    - Collide with platforms
    - Collide with Enemies
    - Get destroyed at any collision

- Particle System
    - 3 different particle systems
    - At least one dynamically created as a collision reaction (example: when bullet hits a tile or platform, etc...)

- Playable Level
    - Pressing "P" will pause the game and show a menu
        - game is paused including all sounds
        - A new background music should play
        - the in game menu is operated with the "Up" , "Down" and "Space" keys
        - The in-game menu contains 3 options (resume, restart, exit to main menu)
    - Camera smoothly follows the main character
    - Win/Lose condition

NOTE: Most important thing!!!! I don't want to get any warnings or runtime errors at any point in the program

Bonus Points:

Bonus points will be given for extra components or nice features added to the engine. Basically if you are proud of it you should mention it… (Provide a README file with your project that will let me know about the nice code that you want me to check out).

Comments

- **Will not check commenting**

What to submit

You must submit the "ASEngine v6.0" folder in a single .zip file named correctly (go to the class page on moodle and you will find the assignment submit link). **Do not change the hierarchy of the files inside it. Do not submit any other files than the ones listed.**

If you've forgotten how to submit files, the details about how to submit are posted in the syllabus. Failure to follow the instructions will result in a poor score on the assignment (and possibly a zero).

Special note:

The due date/time posted is the positively latest you are allowed to submit your code. Since the assignments can easily be completed well before the deadline, you should strive to turn it in as early as possible. If you wait until the deadline, and you encounter unforeseen circumstances (like being sick, or your car breaking down, or something else), you may not have any way to submit the assignment on time. Moral: **Don't wait until the last day to do your homework.**