Pyromaniac

COMP710 Individual Game Project
Created by Matthew Warn

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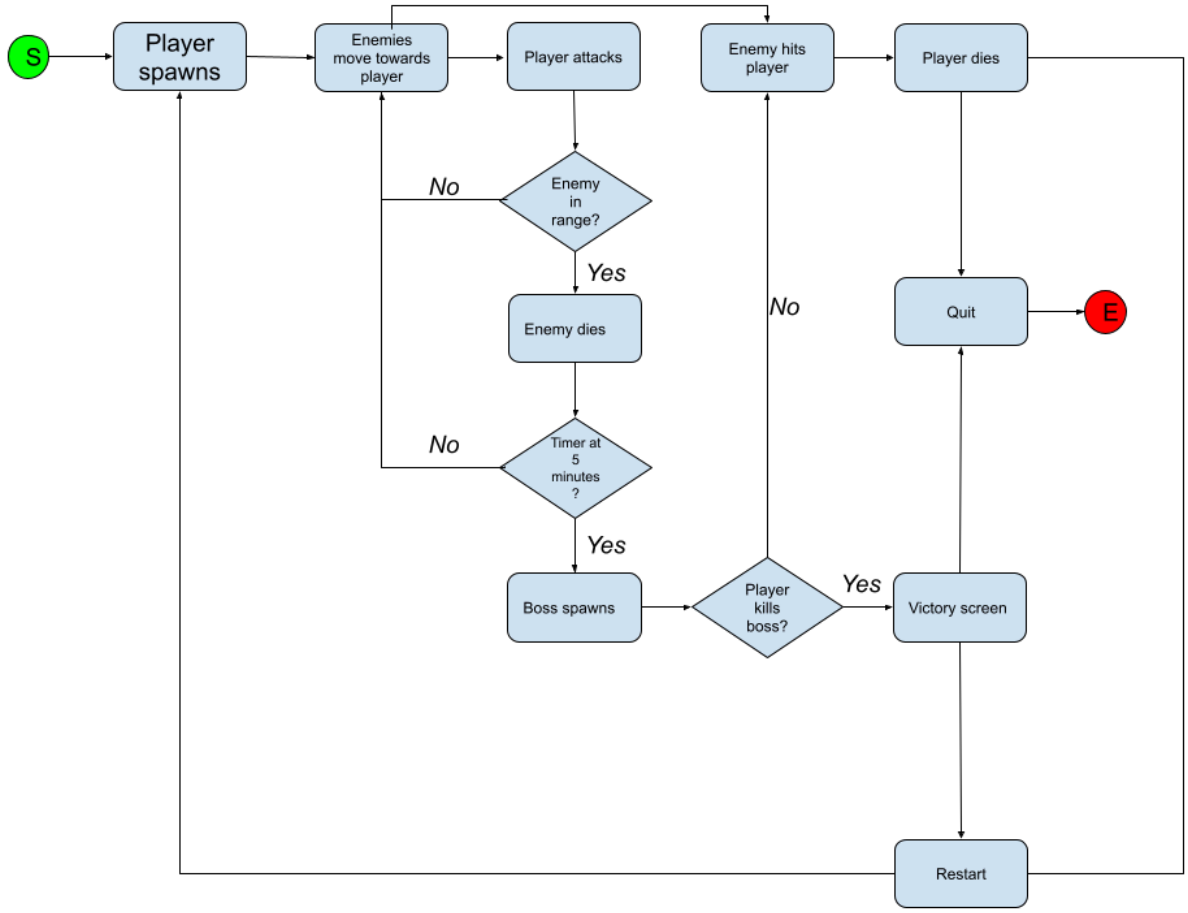
Key Algorithms

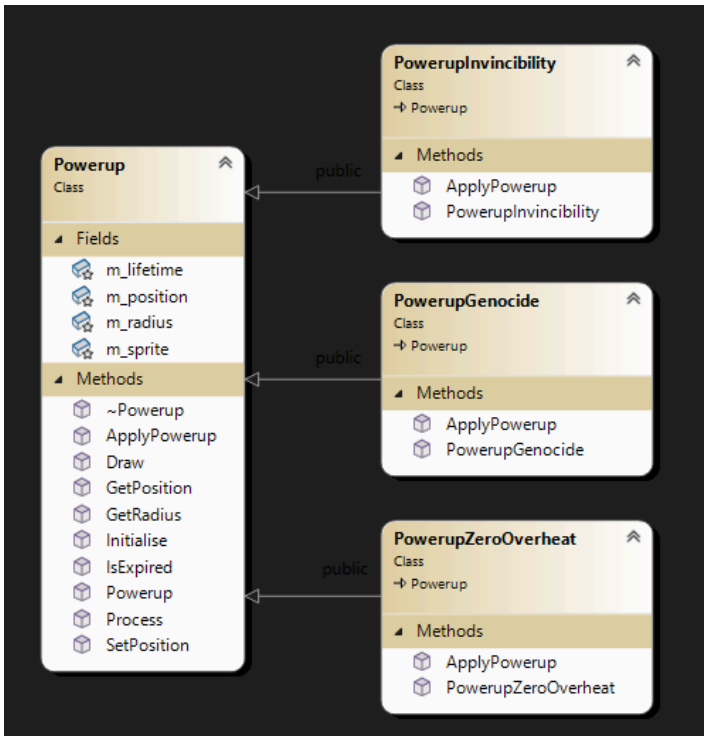
I will do this section next week.

Flowchart & UML Class Diagrams

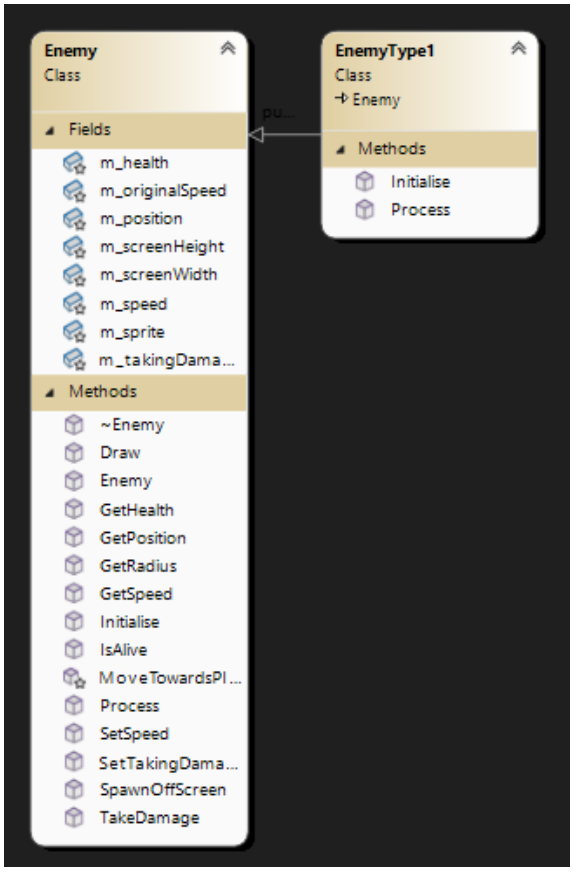
Flowchart:



Powerups:



Enemies:



There are still 3 more types of enemies to be implemented.

Cheat Features

Pyromaniac will have a variety of cheat/debug tools implemented using ImGui.

Access Debug Menu

- Key: *Backspace*
- Effect: Displays the ImGui menu which will allow the player to activate all of the below features.

God Mode

- Key: *F1*
- Effect: Player becomes invincible

No Cooldown

- Key: *F2*
- Effect: Allows the flamethrower to be used infinitely without overheating

Kill All Enemies

- Key: *F3*
- Effect: Kills all enemies currently on screen

Skip Timer

- Key: *F4*
- Effect: Skips the timer ahead to the next minute. E.g. 2:35 → 3:00

Display Attack Hitbox

- Key: *F5*
- Effect: Displays the exact hitbox for the flamethrower attack

Restart

- Key: *F12*
- Effect: Starts the game again at 0:00

Standards and Conventions

Coding Standards:

- *Pyromaniac* will be written in C++
- *Pyromaniac* will be written using OOP principles
- *Pyromaniac* will have only one class per file
- *Pyromaniac* will be frequent appropriate comments throughout the code

Naming Schemes:

- File names will use PascalCase
- Classes will use PascalCase
- Functions will use camelCase
- Local variables will use camelCase
- Member variables will be prefixed with ‘m_’
- Constant variables will be written in ALL_CAPS

Relevant File Formats:

- Code will be written in .cpp and .h files
- Game image assets will be stored as .png or .jpg
- Game audio assets will be stored as .wav or .ogg

Acceptance Test Plan

To determine whether *Pyromaniac* is fully complete or not, please look at the following ten acceptance tests and make sure the build of the game passes all of them.

1. The game launches successfully without error.
2. The player can move using WASD or a controller's left stick.
3. Enemy's continuously spawn on the edge of the screen and home in on the player.
4. The player can kill enemies with the flamethrower by holding down the attack button.
5. The flamethrower will overheat if used for too long.
6. Powerups spawn randomly on screen and can be collected for a special effect.
7. Time is tracked and displayed on screen, counting up from 0:00.
8. After five minutes, the boss spawns and the game ends when the boss or the player is defeated.
9. All objects in the game have appropriate sprites and audio effects if necessary.
10. The Debug menu is accessible with the Backspace button and the player can toggle cheats.