Mal80@aber.ac.uk

Major Project: Public engagement game Idea

General idea:

The idea for my major project consists of an arcade style shooter game in the style of classic "space invaders". The twist that I would like to add to the formula would be the concept of fighting off illness and unwanted materials within the bloodstream of a human.

The player will be able to add different "antibodies" to their, "white blood cell" to help combat the different illnesses. The correct "antibodies" chosen can have effects on how quickly a level can be completed, in contrast to this, the wrong ones can have a bad affect for the player. This could be in the form of more enemies or you take more damage from enemy projectiles.

Mock player design   Mock NPC design   Mock enemy design

Educational aspects:

The main educational aspect that I would like to convey, is teaching the public about different "antidotes" to illnesses that can affect the human body.

This could be implemented by having set "antibodies" being set to the player, or a simple idea of creating their own, from unique properties of actual antibodies to help create the correct one. I think a mixture of the 2 can be a good idea, but it depends on the time available.

The general premises for the educational aspect of the game is to be the "white blood cell" within the blood stream, that is helping to remove illness and disease from the body, by altering antibodies to help fight the illness faster.

The main idea of this is to help teach people what is used to help combat illness in a fun and interactive way.

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Code languages used:

I plan to use HTML and JavaScript for this project, as it is widely accessible, and I am very confident with using these languages. I would also like to add support with a PhP database, so that the "antibodies" and high scores of the players can be uploaded and kept accessible for new players to equip and beat respectively.

I may try to add three.js into the development, which uses 3D spaces and physics, however this may be dropped in the favour of a simple development process.

The elements I would like to add with JavaScript would be, the ability to move an object up, down, left, right and have a projectile fire from the front of the object. Simple physics and collision detection are also a must to help register hits and set boundaries for the player and enemy objects.

Art style:

I think a good idea for the design of this game, would be pixel art for the player and enemies, with some pixelated pictures of pills, and DNA strands, to give a biological theme, while keeping a retro charm in the visual style. Paint.net and maybe photoshop can be used to help create the art I want to achieve.

The music should reflect this, with an 8-bit music style, which can be achieve with Bosca ceol.

As I will be trying to follow an arcade theme, I think that pixel art and a retro sound track would work well for this game's aesthetic. The art style can be subject to change, but the idea for now is to keep a sharp pixel style with a straight forward and appealing HUD for the player to use.