Painful Smile Test

* **Objective**

Understand more about the candidate’s acknowledgement in game development, in OOP (Object Oriented Programming) and in Unity itself.

* **About**

It should be a simple first-person shooter game, a base project with all necessary art assets is provided at the end of the document.

Scenario: a cemetery. The developer should create the scenario with the assets provided in the base project. For the floor, it is recommended to use a Terrain, painting it with the textures included.

Player: first-person controls. The player should be able to walk, to jump and to shoot with a bow.

Gameplay: the player starts with a bow on a cemetery with a 3 seconds countdown on the screen. There are two types of enemies: one with a shield that has a close-range attack, and another one with a long-range attack. They should randomly spawn across the arena for 3 minutes. The enemies with a shield should follow the player across the arena and, when close enough, should attack the player. The long-range enemies should stay still in strategic spots aiming and shooting at the player. Each kill gives points to the player and has a chance to drop ammo or health for the player. At the end of the match, it should show the player score and how much enemies were killed. The rewards given by the enemies, the match duration, the player’s settings and collectables’ settings should all be configurable in the editor. It must be possible to pause and quit while playing. The enemies should have variation of textures and weapons, both easily editable in the editor too, giving support to easily add and customize the elements.

* **Rules**

All scripts should be written by the candidate, while other assets can be freely used.

The Unity project is needed, there is no need to generate a build.

The game should contain at least two scenes and one loading screen, being one scene the main menu with the following items:

1. Play Button: it should show the loading screen and then go to the game scene.
2. Options: things like music volume, sound effects volume, initial countdown duration and match duration. Those settings should be saved and loaded when starting the game again.
3. Exit Button: expected to do nothing inside the Unity editor.

* **Conclusion**

There are 4 items which will be individually reviewed:

1. Project Organization;
2. Engine Understanding;
3. Code Structure;
4. Programming Logic.

* **Base Project (Unity 2017.3.1f1)**

<https://1drv.ms/u/s!AqG85VhruuzahYZjTdZET4sw5FHpfw>