

Project Work

Specification Document

Functionality :

The Game: First let's explain that this project should be considered as a part of a project, as there is still a large room for improvement. The **Spiderman Game** is a basic ragdoll game. Let's explain how it works. This game should be played with a group of people, as it is a contest between all members of the group. We first see a ragdoll character (Spiderman) falling from a building. When this character touch the grounds, it ends in a specific position. The goal of this game is to reproduce (in real life) the position of the spiderman, as soon as possible. The last person to reproduce the position of the Spiderman loses the game. Then we can continue this game over and over. To make this game work we use a simple game object called a ragdoll.

Ragdoll object: In Unity we can turn our character into a 3D ragdoll to make it react to physics. This is what I did with the Spiderman here. By turning the character into a ragdoll, it can react to gravity and interact with everything it touches. Here the ragdoll model is simply a disarticulated body falling from a building and landing in a specific position. The ragdoll wizard assigns a Collider and a Rigidbody to the body parts of the character and that makes it react when he touches another object (like a building or the ground). The ragdoll is ideal for this game because it can make the Spiderman land in so many different and ridiculous positions.

Camera Control: in this game we need to see what the spiderman is doing at every moment. In order to do so, I wrote a script (**Assets\Scripts\CameraFollow.cs**) and assigned it to the Main Camera in the Game Scene. This script simply follows the position of the target (here the head of Spiderman) with a specified 3dimensional offset. With this code we can modify the offset value directly in the inspector window in Unity. No matter where the Spiderman is moving, the camera will follow his head and it will appear a bit smooth due to the smoothSpeed property.

User Interface – Front End:

The Menus: The user is able to interact with the game by using the menus. There is a Main Menu and a Pause Menu.

Main Menu: In this menu the user is able to see the title of the game and also two options: either PLAY or QUIT. When hitting the PLAY button, Unity simply load the Game scene and Spiderman is falling from the building. When hitting the QUIT button, Unity simply quit the application. Also, there is some background animations so that the user knows when his mouse is on the PLAY or QUIT button. The script of the Main Menu can be found by following this path: **Assets\Scripts\MainMenu.cs**.

Pause Menu: the user can also access a Pause Menu by pressing “escape” on the keyboard. In this menu we can see a Resume, a Menu and a Quit button. During the time the pause menu is active, the Game is temporary stopped and time is freezed. When clicking on the resume button, the game simply defreeze and continue playing. When hitting the Menu button, the game return to the Main Menu and when hitting the Quit button, it just quit the

game and the application. Also, when we are in the Pause menu, we can resume the game simply by pressing the escape key button again.

Userbase Characteristics:

Here there can be two types of users. This game is very simple and the only reason to play it is to have fun, so it can be suitable for children, from 3 to 10 years old.

Since this game is made to have fun, it can also be considered as a drinking game. For example, the person who lose the game turn needs to do something or drink some alcohol. So, users of this game can also be young people, maybe from 18 to 25 years old. However, this game is suitable for a community of young people.