**Test Plan**

**OOP Main Assignment**

**Ninja Game in Unity**

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In this projects, most of the scripts I wrote by myself. Before I start working on this project, I spend some weeks on trying to understand how Unity works. I watched a lot of tutorials on how to build different types of objects in Unity, how to connect objects with a script and how to make objects interact with each other. I also spend time in understanding how collision works, the difference between OnCollisionEnter, OnCollisionStay, OnTriggerEnter and OnTriggerStay. After understanding how to move objects in Unity, I went online, on Unity website and I follow all tutorials on how to use different functions in C#. I put the Link below.

<https://unity3d.com/learn/tutorials/modules/beginner/scripting>

For this assignment I used GitHub and at almost every change made to my assignment, I was pushing it into GitHub. The repository was private and I made it public now, before my assignment submission. The link to GitHub is: <https://github.com/MaximilianMihoc/Unity/tree/master/NinjaGame>

The link to my Blog is : <http://maximilianmihoc.weebly.com/>

# Scripts

In my game, I have a total of 24 C# Scripts:

1. **Character Controller Script**: This is the first script that I created for my game. It is 50% inspired from a tutorial online. The fixed update function is inspired and the Update function I wrote myself. The tutorial I followed is:

<https://unity3d.com/learn/tutorials/modules/beginner/2d/2d-controllers>

Because this was my first script, I chose to talk about it first, from now on I will take them in alphabetic order.

1. **Arrow Controller**: 100% mine, destroying an arrow after 1 second.
2. **Boss Controller**: 100% mine. All enemy controllers I build by myself. This Controls how the Boss enemy moves, when it has to be destroyed and changes the animation variables that changes the animations when needed.
3. **Cobra Movement:** 100% mine. Also controls when it dies and how to move. Cobra has only one animation in this game.
4. **Coin:** 100% mine. It also controls the GUI text that display current number of Coins and controls when the character should be able to throw shurikanes and arrows, depending on the current number of coins.
5. **Destroy Witch Fire:** 100% mine. Destroying the witch fire after 1.5 seconds.
6. **End**: 100% mine. At each level, I have one object in the end that has the ‘End’ tag and End script attached to it. When the character collide with that object, the level is finished.
7. **Enemy2Controller**: 100% mine. Controls the Enemy 2 in the same way as for Boss and Cobra.
8. **Enemy3Controller:** 100 % mine. Same principle as Enemy 2.
9. **Game Manager**: 80% mine. For this script, I watched some YouTube videos on how to use the GUI buttons. I watched the tutorial and I adapt the code from there to what I needed. It is controlling the player lives, displays the hearts on the screen and t also have some GUI.
10. **Instantiate Arrow**: 100% mine. When I wrote the code for this script, I remember I had a problem because my character was instantiating arrows in the right hand side every time when B key was pressed, even if the character was facing left.
11. **InstantiateEnemiesLevel1**: 100% mine. Instantiating the two enemies from first level, cobra and enemy 3.
12. **InstantiateEnemiesLevel2:** 100% mine. Instantiating enemies for level 2.
13. **Level3InstantiateEnemies**: 100% mine. Instantiating enemies for level 2.
14. **Look At**: 0% mine. This script is inspired from a tutorial online. This is the script attached to the main camera so it can follow the character in his journey.
15. **Lost Life**: 100% mine. The only thing is not mine here is the message sent to the Game Manager script: gameManager.SendMessage("PlayerDamage", damaged, SendMessageOptions.DontRequireReceiver);

Everything else is mine. It is controls when the character is losing percentage of his life.

1. **Options:** 100% mine. Display the background image and has a GUI button that can me pressed to go back to main menu.
2. **Shurikane Controller**: 100% mine. Destroy the shurikane after 1.5 seconds and rotate it so it will look better.
3. **Sword Controller**: 100% mine. I had a brilliant idea when I wrote the code for this because I thought a lot on how to make the sword hit in my game and I was rely proud when I actually did it. The idea just came when I remembered from my studies that you can enable and disable an object.
4. **Throw Shurikane**: 80% mine. In order to make this script, I watched the tutorial from unity website on how to use Instantiate function. The link is <https://unity3d.com/learn/tutorials/modules/beginner/scripting> on Instantiate link.
5. **Time Text**: 100% mine. I create this script to make the game more challenging. When I did tests of my game with others, like my sister, who was the person who made the most helpful critiques of my game, she said she didn’t like my game because of the timer. My game had a timer attached to it that was decreasing some time and when that time was finished, the player could lost a life. After she said about it, I remember that I never liked games with time and I took it off. The time is starting from 0 now and is there just if the player want to see how much time spends in each level.
6. **Win Text**: 70% mine. I was inspired from a YouTube video on how to make positions of the GUI buttons without hard coding numbers in and using the screen position.
7. **Witch Controller:** 100% mine. The difference between Witch Controller and Cobra or Enemy 2 or 3 controller is that this code is also made for shooting, the witch is also shooting.
8. **Main Menu**: 80% mine. I find the code to set the background picture on forums online and the rest is mine.

Some YouTube tutorials I used to learn for my assignment.

1. <https://www.youtube.com/watch?v=Mb9Iox8sIgM>
2. <https://www.youtube.com/watch?v=UMEqb38_axE>
3. <https://www.youtube.com/watch?v=iPwrARkifj0>
4. <https://www.youtube.com/watch?v=eg2LA2wesxQ>