

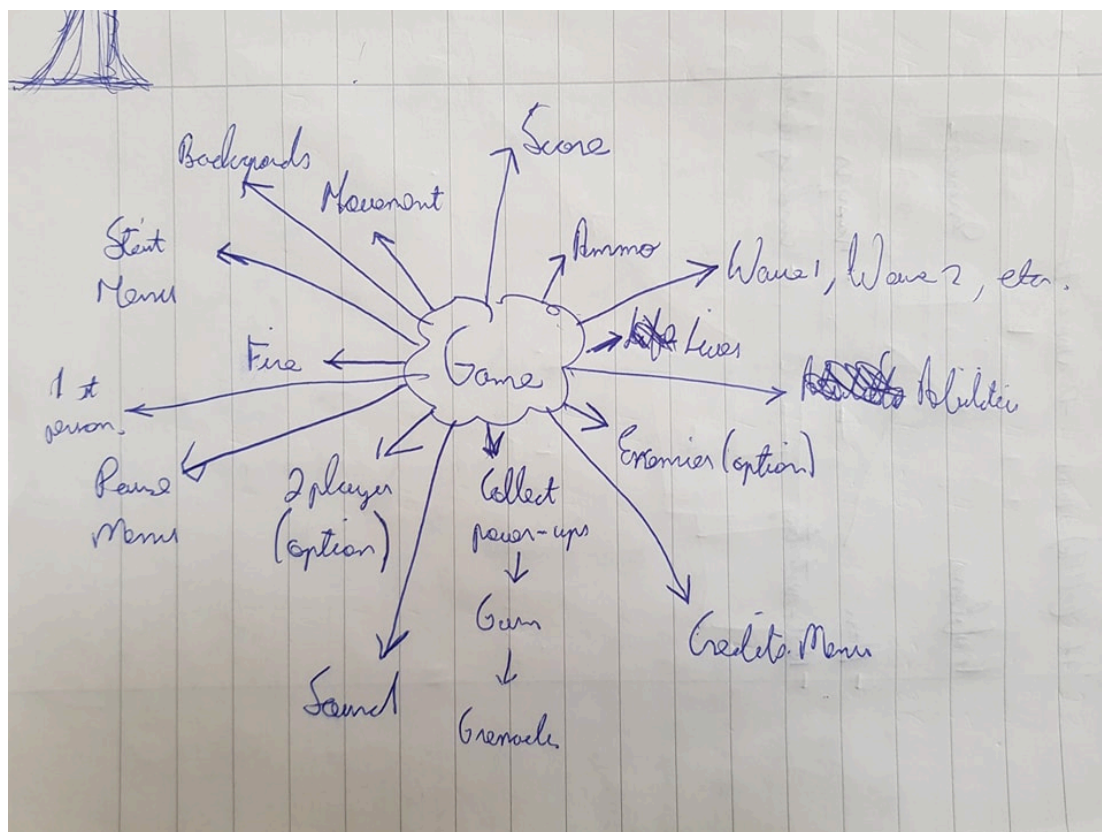
LO1: Explore the use of game engines in real-world projects.

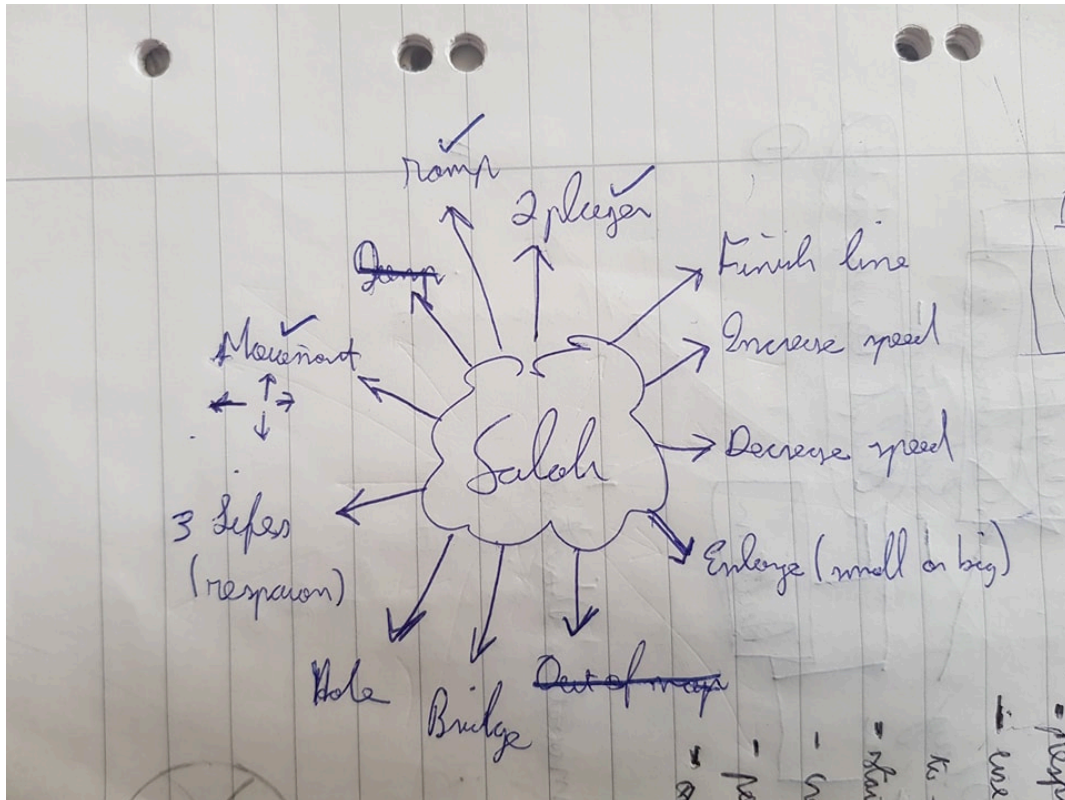
Clash of Cubes:

We decided to continue working/ updating CUBECRASH as we really liked the concept and thought that it would be more convenient to do so. This is as starting a new game from scratch would only take more time to redo the things which we already had done earlier. Since it was already created we had the possibility to focus more on updating the previous version and for this reason decided to focus on creating a fun/ competitive game.

Part 1:

We decided to use the agile model as we were going to be working in the following manner: first we create a part of the game to add, test it and repeat this process. We started by brainstorming what mechanics and features to add:





Some features that we thought of adding include:

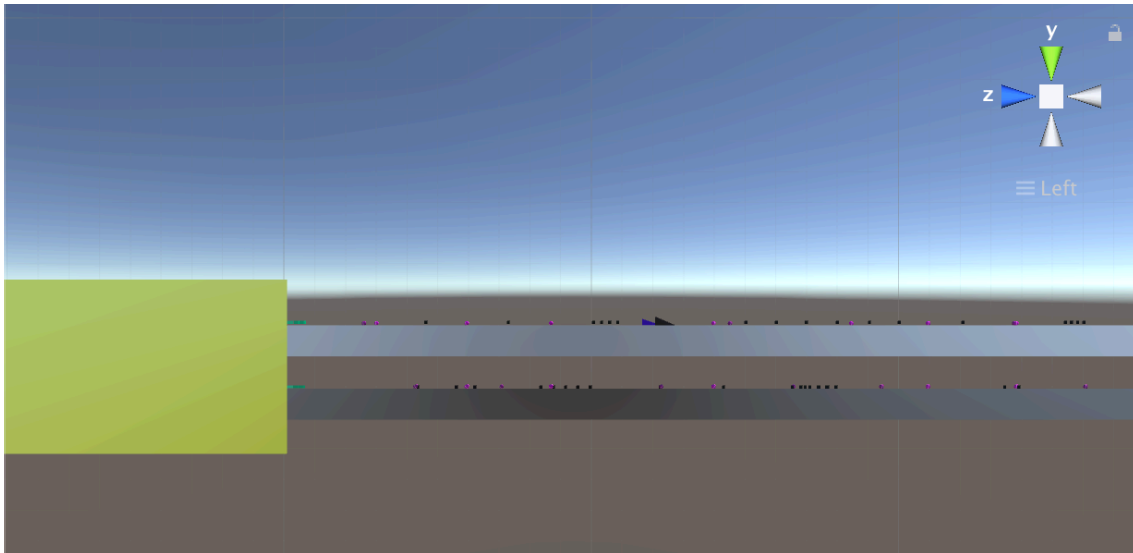
- split screen two player game
- Power ups that:
 - Increase speed
 - Decrease speed
 - Increase size of the player
 - Decrease size of the player
- Fake power ups
- Teleport (Respawn point for player)
- Ramps
- Tunnel
- Underground

Since there will be many variables, making use of the agile model will help us in adding features and testing whether will work as intend it to. Furthermore, since we will be working in a team of two, collaboration will be easier between us. Furthermore, since we will be given feedback regularly from the lecturer and other students who will be testing our game, the agile model will be of great use.

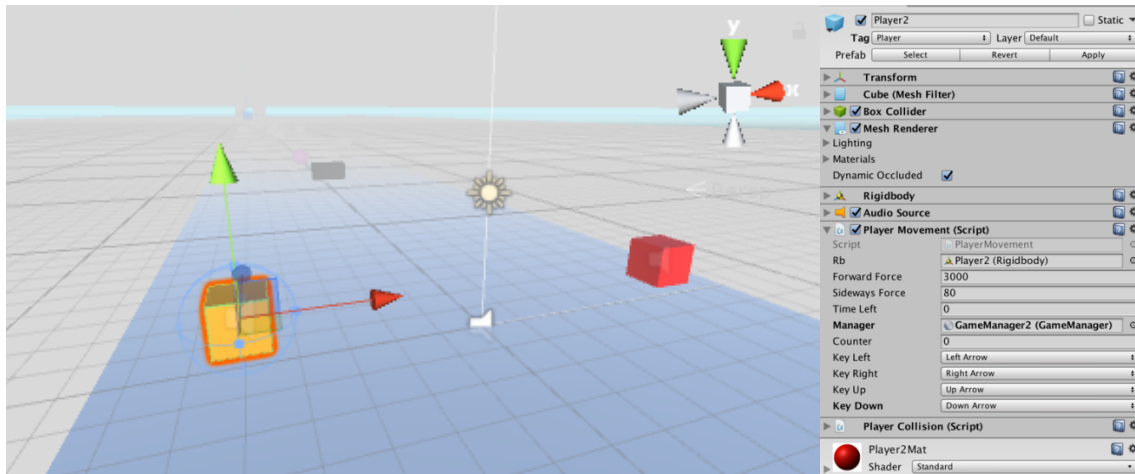
Part 2:

The components and code that we will need to build this game include:

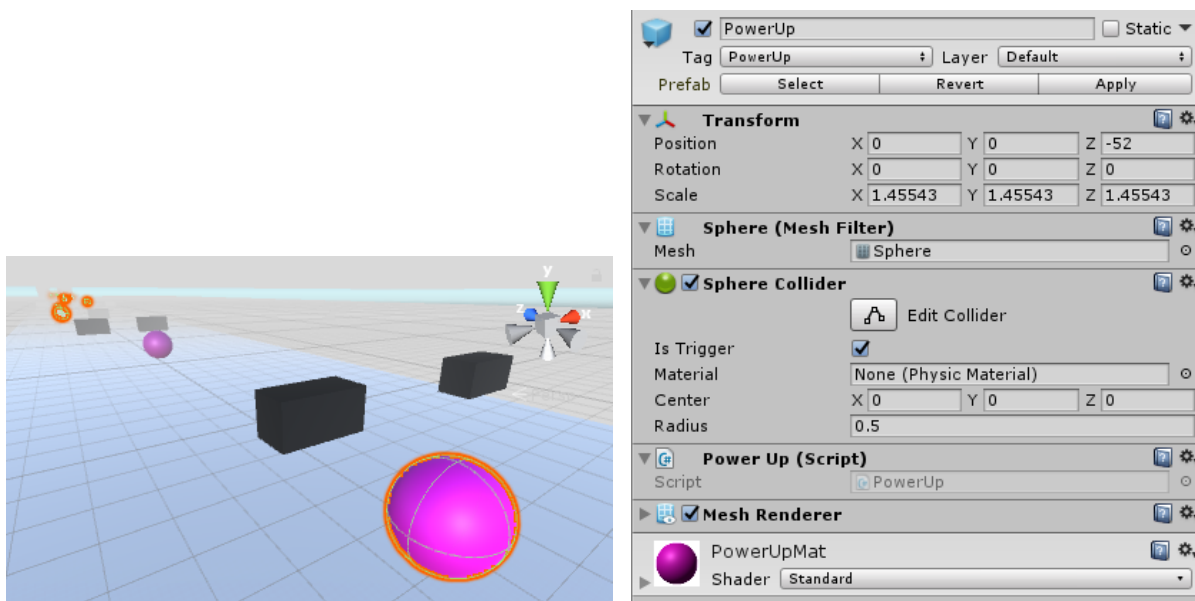
1. A **Ground** that will act as a surface for the cubes to move on. We will give it a Physic material so that the cubes will move smoothly. We will also add an **underground** beneath it as well as a **tunnel**.



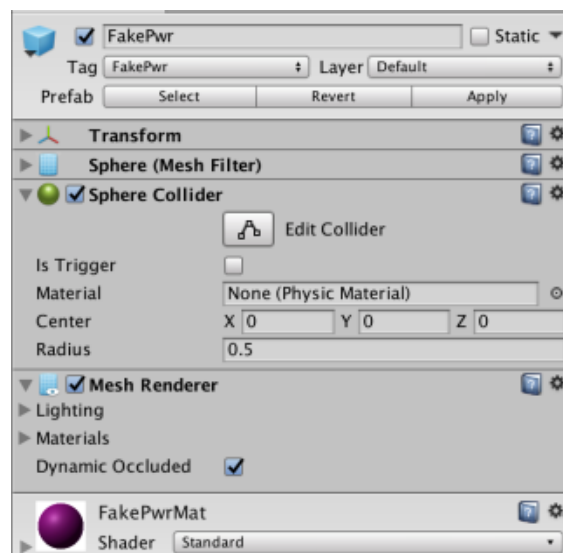
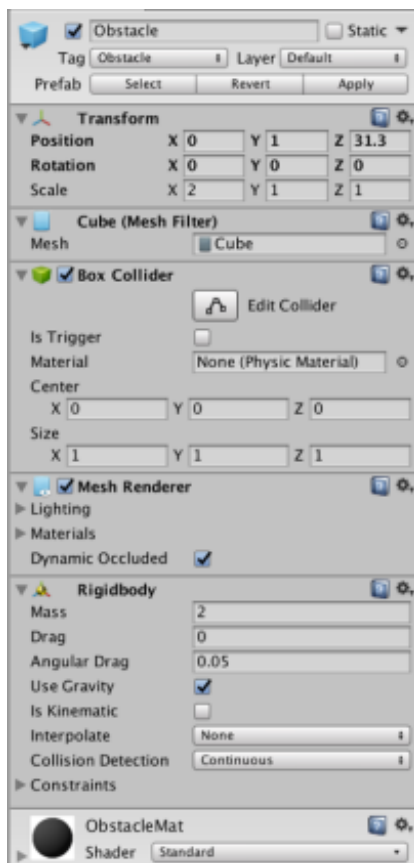
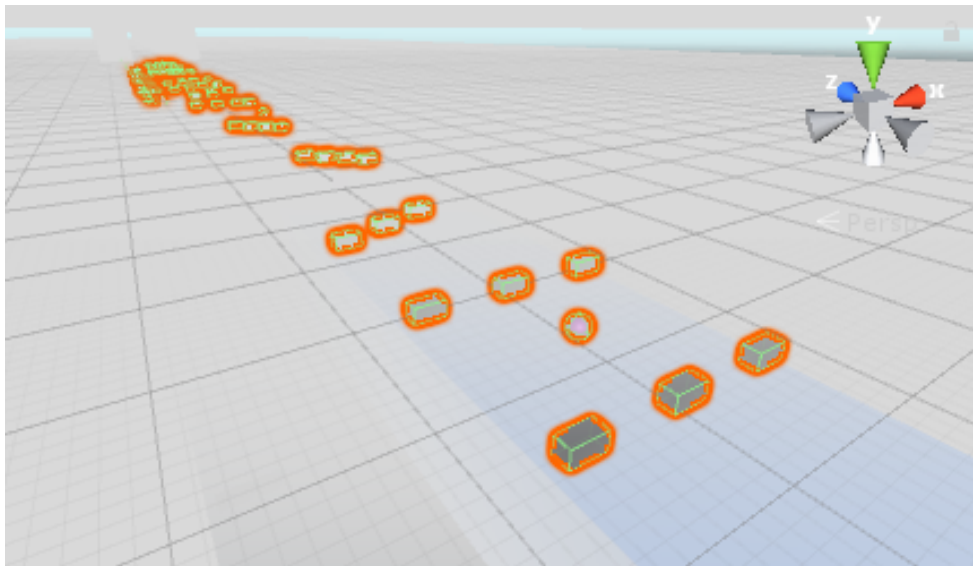
- The cubes will **move** to the left or right when pressing: **A** or **D** for one player **AND** **Left Arrow** or **Right Arrow** for the other player. A script will be created so as to make the cube move left or right. A **forward force** is also needed to move the player forward with a constant speed and a **sideways force** will have to be added so as to be able to move left and right.



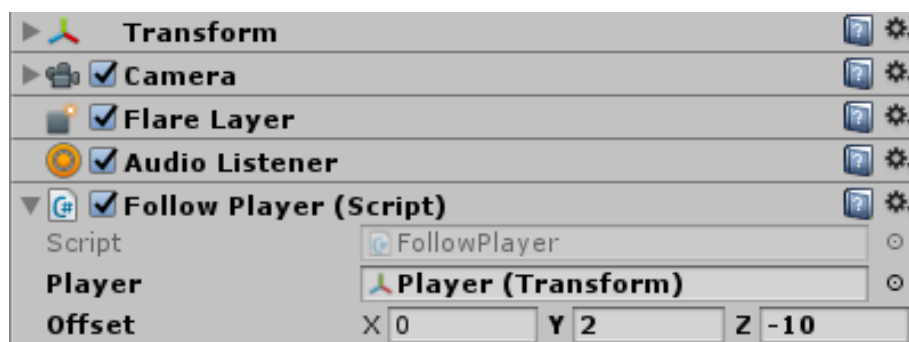
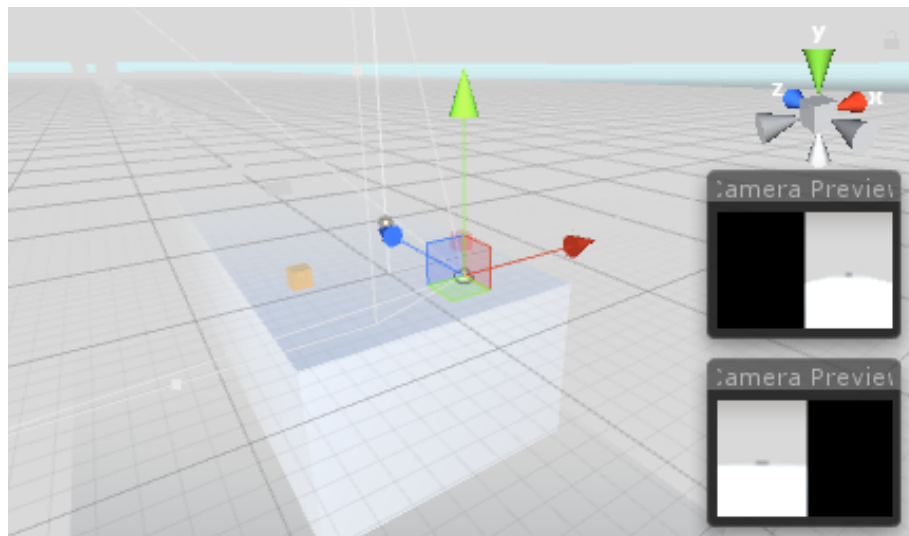
- When players will collide with a **Power-up**, that power-up will disappear and the players will be able to use that power-up. If they press the **W** or **Up Arrow** they will activate the ability on themselves **AND** if they press **S** or **Down Arrow** they will activate the ability on the other player.



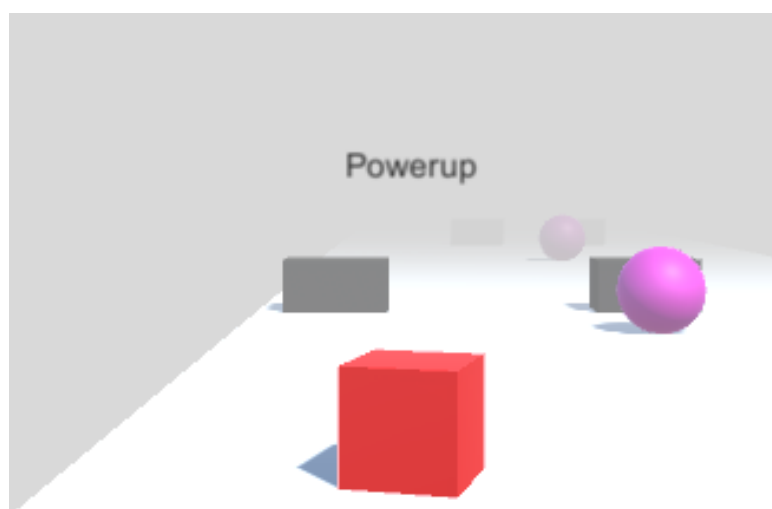
- The **Obstacles/Fake power ups** will be created as shapes so that when the cubes hit them they will slow down. (We will also add some ramps as shapes)

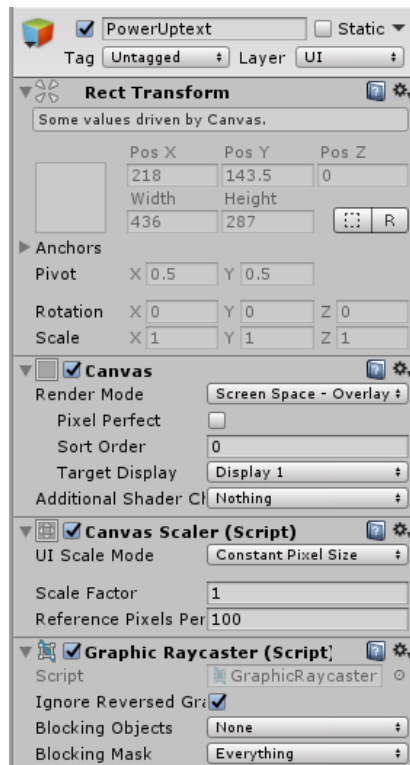


- Two **cameras** will be needed to follow each respective player. The cameras will follow the player in each and every direction: moving left or right, falling down from the ground etc.



- To create the **power-up text** we will use UI canvas and insert the text inside it. This text will be displayed whenever a player has collected a power-up and will be removed when the player uses it.

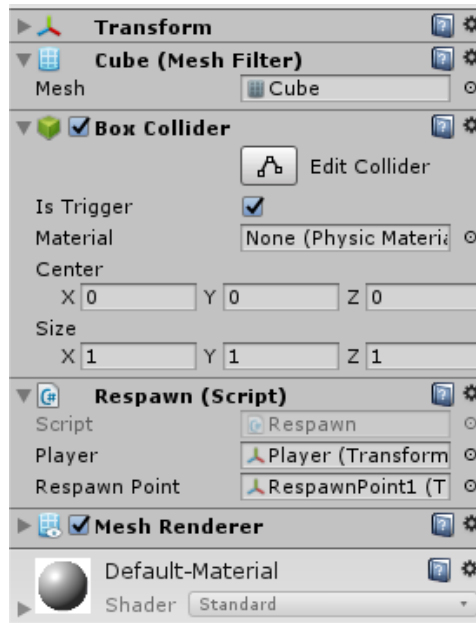




7. We will also need to output a game over screen when a player wins, using the same technique mentioned earlier.



8. If players fall off the ground, we will make them respawn by teleporting them above the ground. (colliders)



9. We will need UI buttons for the Start Menu, Pause Menu and at the End of the game.

a. Start Menu:

- i. **Play Button** to start game.
- ii. **Sound Button** to adjust sound.
- iii. **Quit Button** to quit the game.

b. Pause Menu:

- i. **Resume Button** to continue the game.
- ii. **Sound Button** to adjust the sound of the game.
- iii. **Menu Button** which will take you to the Start Menu.

c. End:

- i. **Quit Button** to quit the game.

CLASH OF CUBES

PLAY

SOUND

QUIT

PAUSED

Resume

Sound

Menu

Thanks For Playing!!!

Made By:

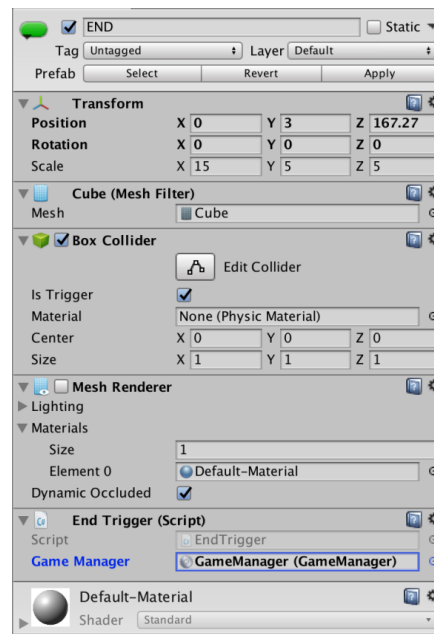
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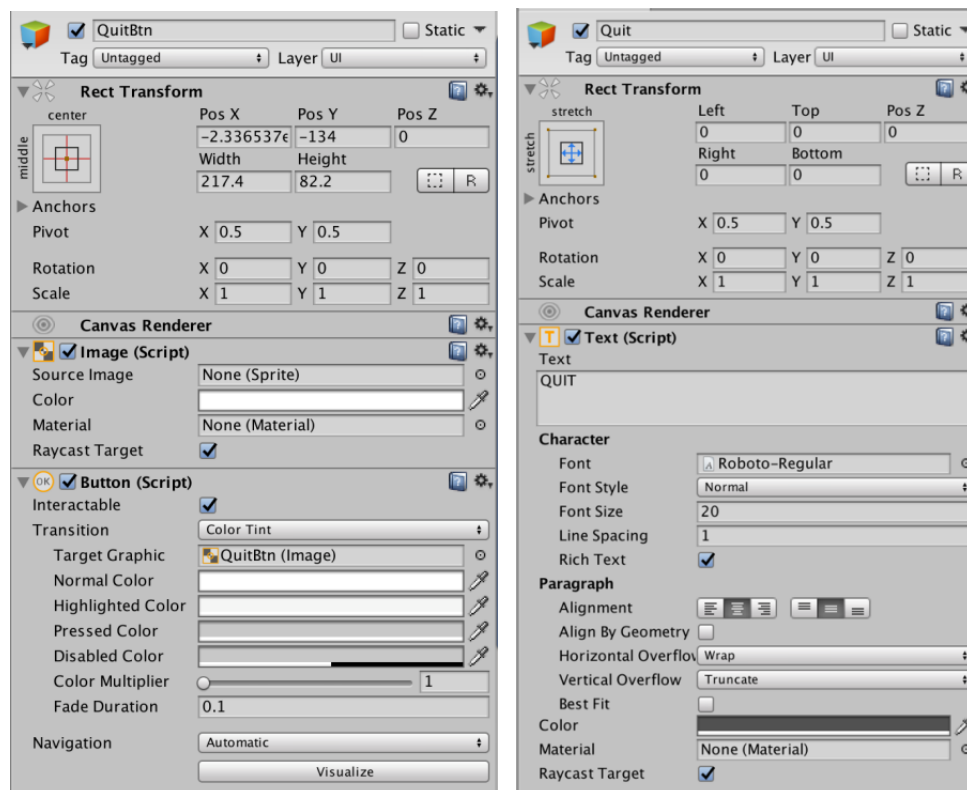
Carlston Cardona

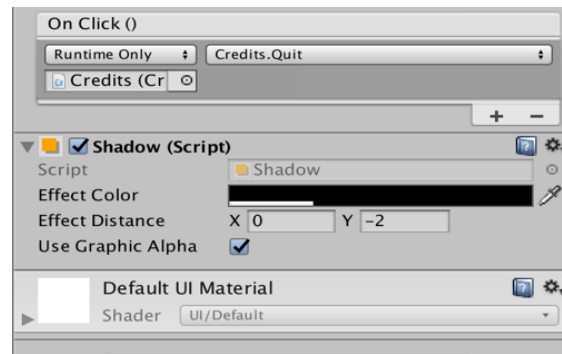
QUIT

10. We will also need to create an end trigger so that when the players reach the finish line (collide), a game over screen will be displayed.



11. To create the credits at the end of the game when you pass all the levels a screen will be displayed. We will create a Quit button so that the players can quick back to the main menu.





12. The last things that we have to add is the sound. We will need the following sounds: audio at the beginning of the game in the start menu, background audio while playing the game and audio when the player hits the obstacles and takes power-ups.

