Basics of Game Engines Task 3

a) **Graphical Assets :**
The graphical assets were planned well in task 1 where all the assets were created on Illustrator as vectors such as the typography , the main menu icons, and the cubes. The assets used in the game where the 3D cubes created in unity and the custom typeface for the score. The cubes where scripted to spawn in random colours to make the game look better.

b) **Scripts overview :**

#Moving Cube – This script was the most important one as it was the main function of the game where the first cube is moving across the start cube to be stacked , the role of this script is to stack the cube and to show the cube getting smaller in size and the falling block appearing as well. With this script the speed of the cube was adjusted and the random colours.

#Game Manager – The role of this script is to make the game work when the spacebar is pressed and make the game stop when the cube is so small that It cannot be stacked.

#Cube Spawner – The role of the script is to respawn the moving cube each time a cube is stacked from both directions this was a very important script since it basically had to respawn the moving cube script each time a cube is stacked.

#Move Direction – This script is to make the cubes spawn once from the x axis and once from the z axis.

#Score Text – This script is to make the score work once a cube is stacked one point is added to the score on the top of the screen.

c) **The Process**

The game was done in Unity where first the starting cube was set where it basically had no function as it was there to let the other cubes be stacked on it. After doing the first cube another 3D cube was created this one was the player basically where it starts moving from the x axes ready to be stacked on the first cube by means of the moving cube script created. After this the moving cube was created as a prefab and a new script was created the **Cube Spawner.**

At this point the main function of the game was done where the cubes where stacking properly and spawning from the x axes . The next step was to assign the key bind to make the cubes stack, so a new C# script was created **Game Manager** and the spacebar was set to make the cube stack when pressed.

The next script **Move Direction** was created to make the cubes spawn on both axes x and z to make the game more interesting. At this point the game was ready all we had to do is to make the cubes spawn in random colours and adding the score and make it work.

The last step was to create the score TextMeshPro was added and a new C# script was created called **Score Text** .This was created to make the score work once a cube is stacked the score will increase with 1 point. Then a custom typeface was added to the score and everything was working well.

After finishing the game, we were planning to create a simple main menu to add our icons that we created and have a better game but unfortunately, we did not manage as we did not have enough time to create a main menu a make it functionable.

d) The Testing Process