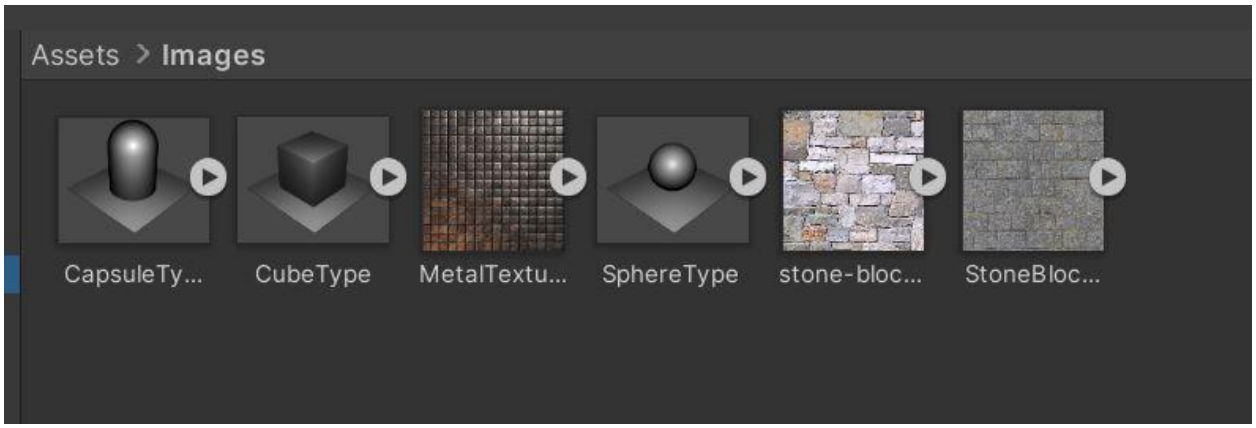
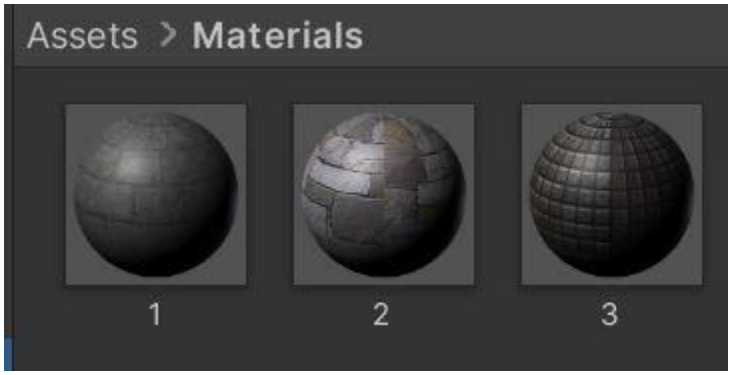
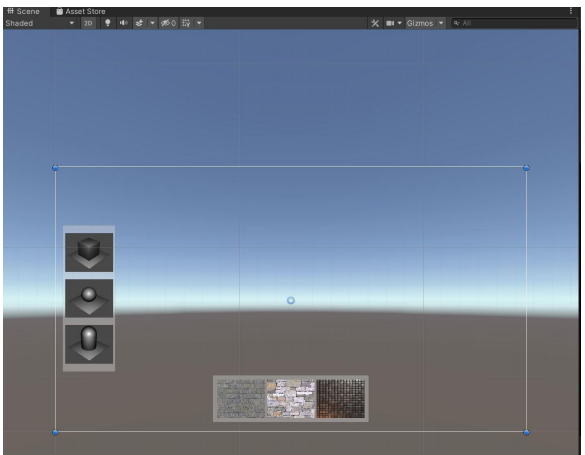
Comp 565 Unity mini Project

For this project we were tasked to create UI's, dynamically change geometry/materials, delete those materials on screen along with a given explosion script, and display a highlighted geometry when deciding where to place an object. I have completed all of the steps except displaying the highlight which I was not familiar of in unity.

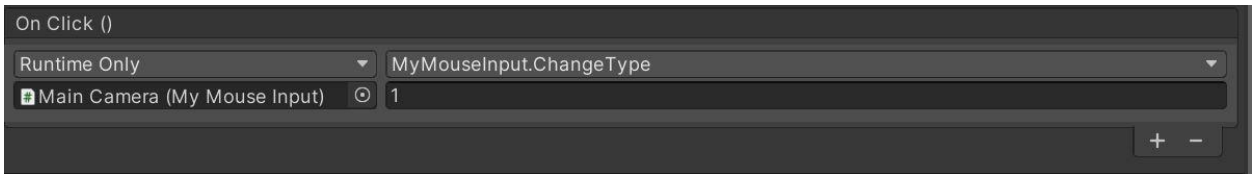






For this project approach I began downloading the textures provided for both UI and material so I can use it for the canvas. This will visually show the user what shapes

and materials will be used and implemented.I have created 2 panels each with 3 buttons. One panel containing the material, and the second panel containing the textures which both have their own functions regarding which will be implemented and affected. Once I have the buttons set up, I have created 2 functions in MyMouseInput which accepts parameters from the buttons so it will be used to figure out which asset to use. For the primitive shape I have used a switch statement and for the materials I have used an array which can be interacted with unity. Below is an example for changing shape.



For deleting a geometry, I have made another if statement regarding if right clicked has been activated. In that if statement, I have created a nested if which checks if the raycast interacts with a geometry that is not the “Base” and then uses the destroy function on what the hitInfo collides with. To activate the explosion script, I first determine which shape we are going to use. Once the shape is determined by the buttons(or by default), I would add a component to that object which would add the triangle explosion script. But that's not all, that only added the component instead of activating the script which can be solved using startCoroutine. Display highlighted shape placement was my biggest problem during this project and could not achieve it. For this I was planning on having a raycast to get the mouse position of the environment to determine where the transparent shape would follow. Once I have the position of the mouse every frame, I would then have the transparent cube follow the mouse position unless its another shape. If the

mouse position is on another geometry then it would determine the side it is facing by using the normal vector shown in class. But as I had the idea of showing the object, I did not know how to implement it. This was one of my challenges especially since I didn't know much about unity UI and raycasting. It took me a while to get a full understanding of the buttons and how to receive information on it, but after that it was pretty straight forward. Embarrassingly enough it took me forever to fully understand how the UI buttons work. As for learning, using unity documentation has been very useful when trying to figure out the solution to this project along with youtube on how they use specific methods. In the end, my hierarchy ended up looking as shown below.