Immersive Environments

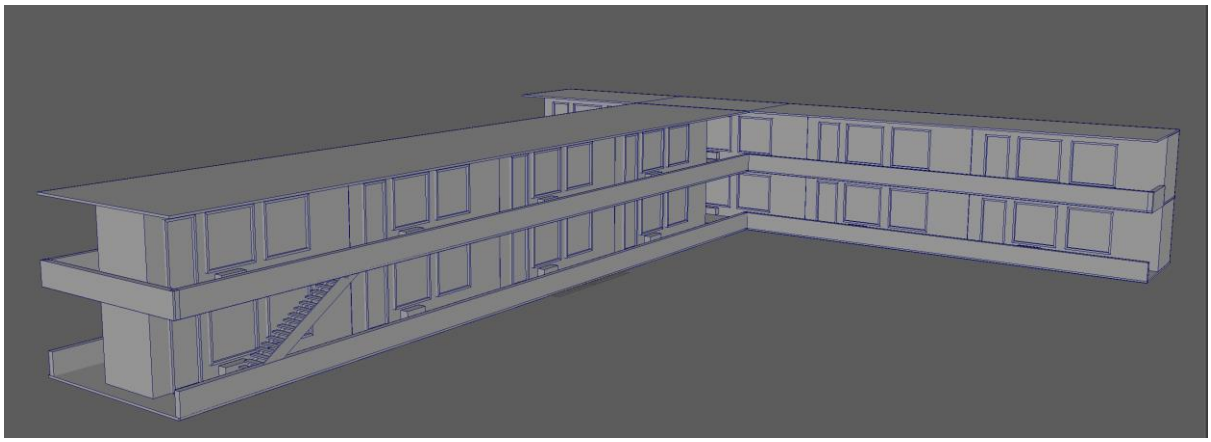
Goals:

- Path Animation

Load up Maya

Build Object: Animating along a path

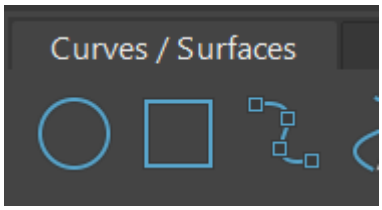
Aim: Create the following model



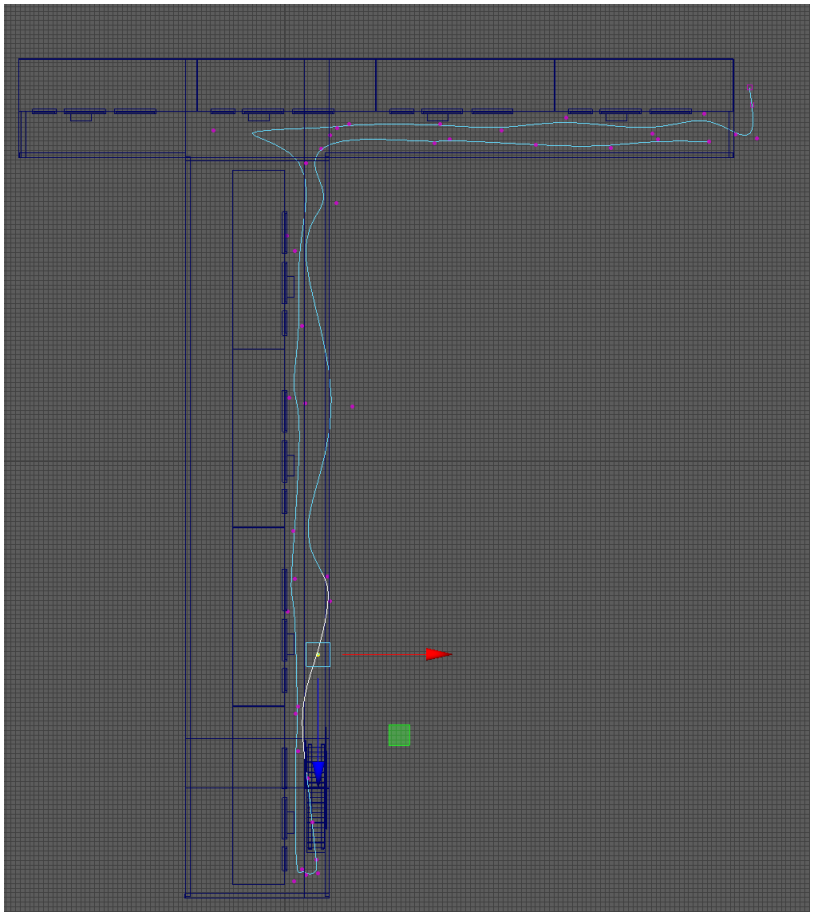
The above motel is constructed of multiple cubes.

Now that we have a scene to work through, we can start to add a couple of new items, one will be the camera that we are going to use for the walkthrough and the second is the path that the camera will follow.

To start with use the curve tool to create a path around the model.



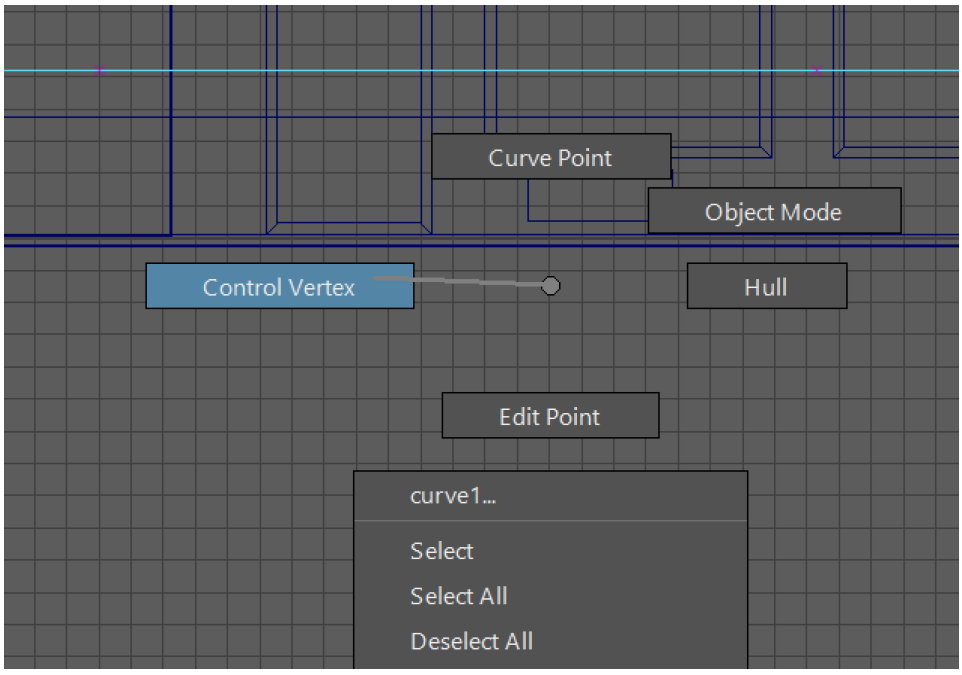
We will need to be able to manipulate all of the points on the curve. Then, go into top view and draw the path you want to take the camera around.



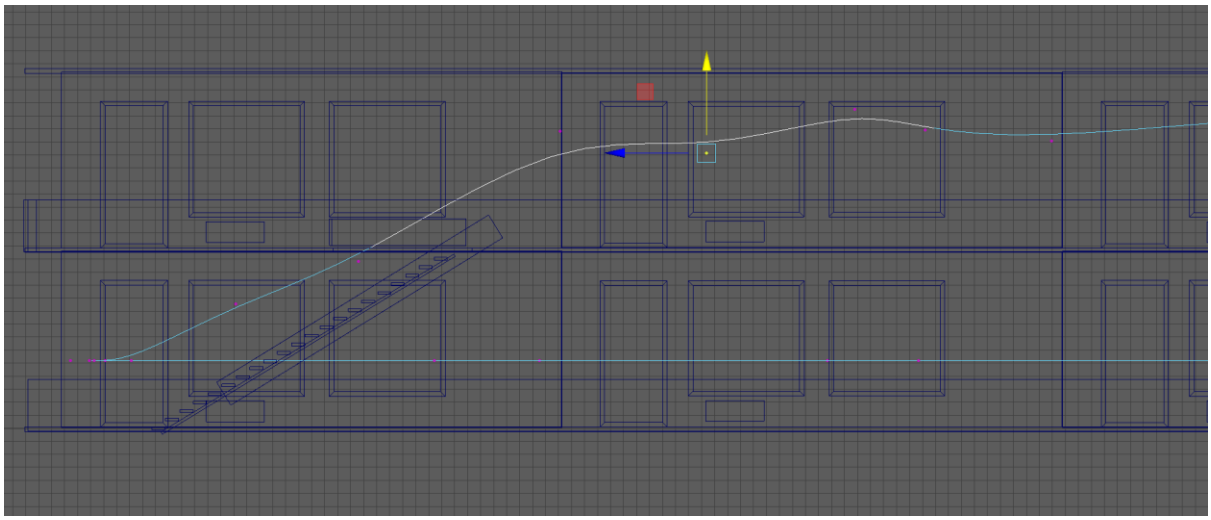
As the model is in top view you can see that the path starts on the exterior of the build and then follows a simple path along the walkway, up the stairs and stops at the end of the building.

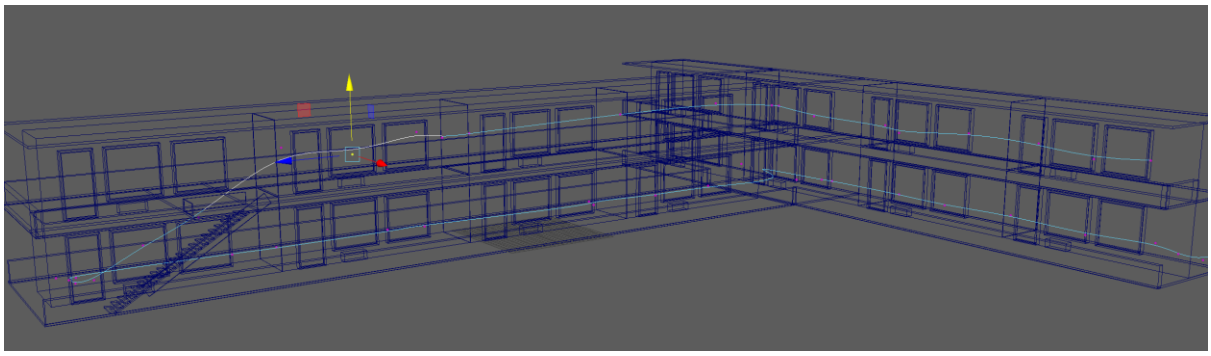
Once the path has been laid down, you will have to right click and go to the control points. Use the move tool to manipulate the path to be on the correct level and positioning.

Do this bouncing between top and side views.

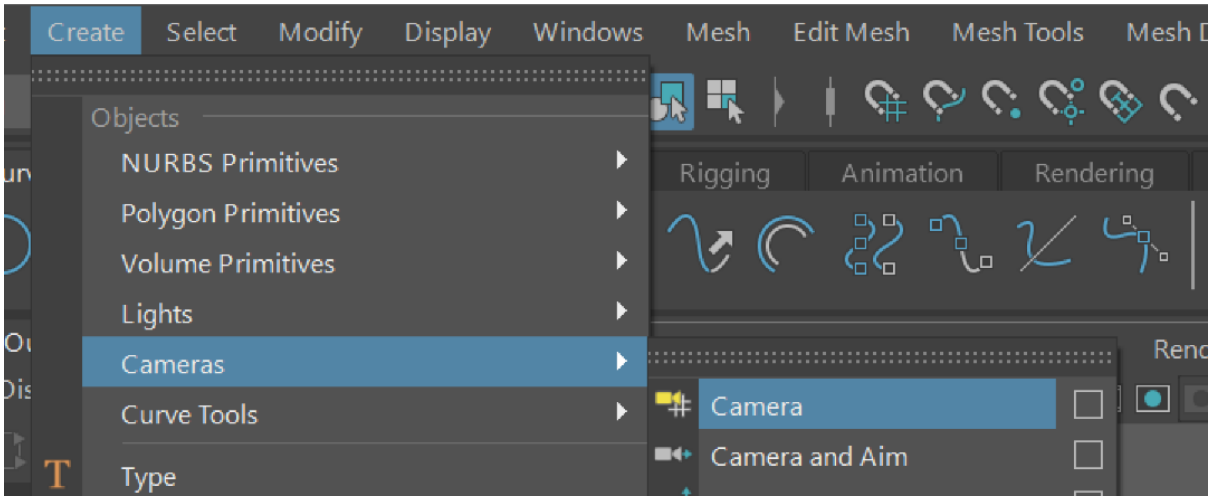


You want to end up with a path that covers the bottom and top levels of the motel.



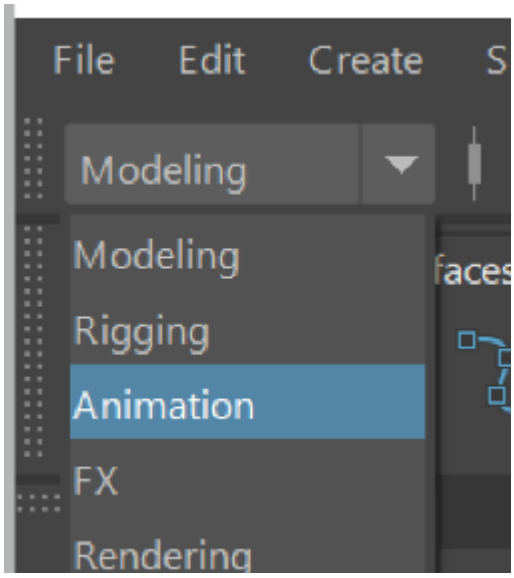


Now that this is done, note that the path would be at ‘eye level’. We add a new camera to the scene. To do this go Create->Cameras->Camera

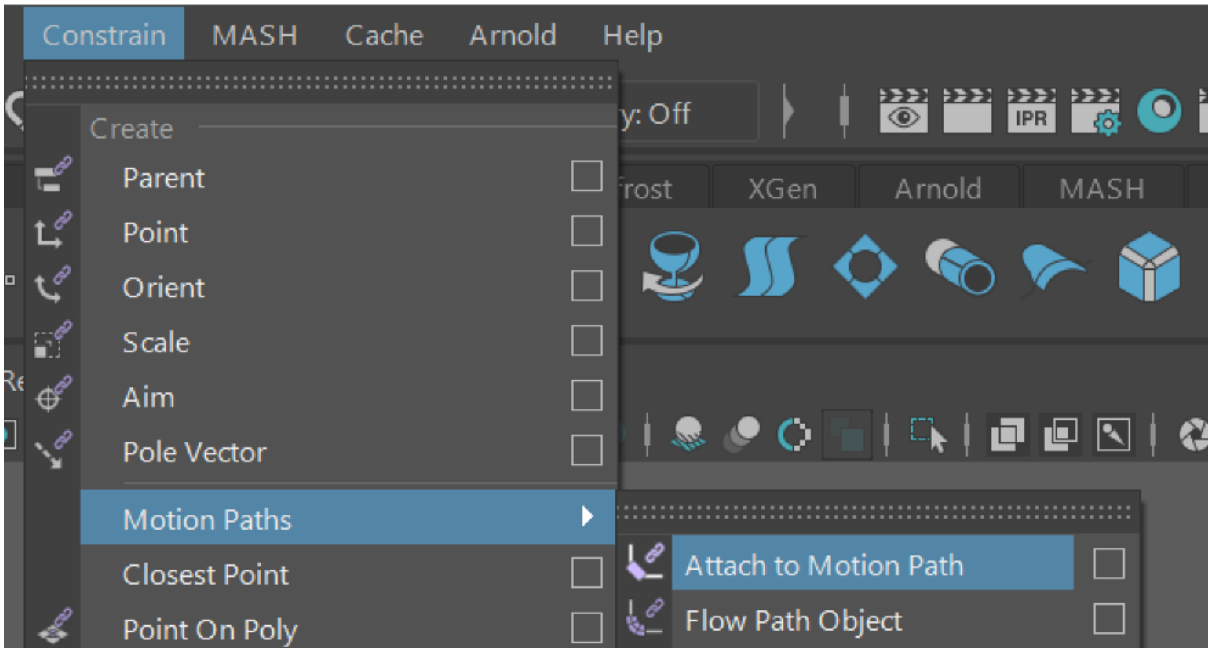


This will place a camera on the scene, at this point in time, we don’t have to worry about its position as we will map the camera to the path we just created.

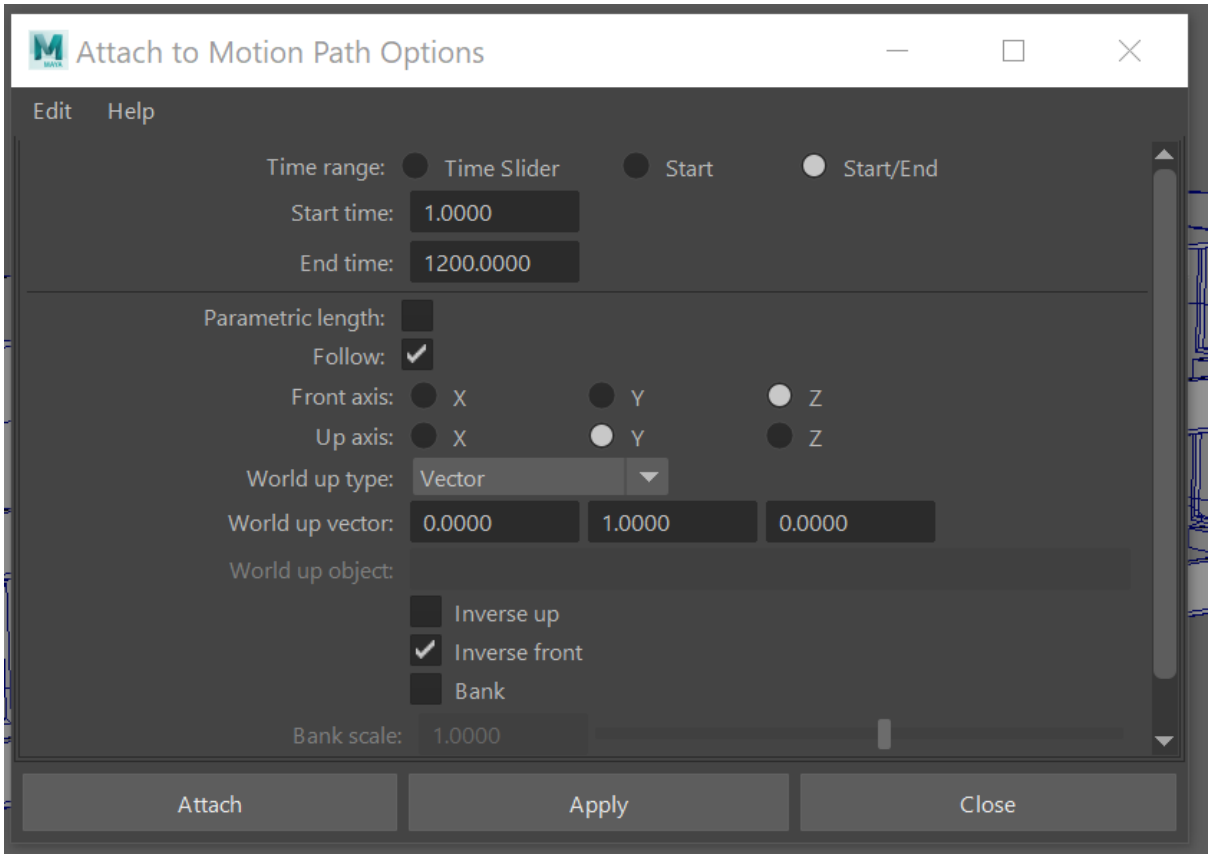
Select both camera and curve that we have just created then, in the animation menu (You will have to change the drop down) select.



With the new menu system, select Constrain->Motion Paths -> Attach to Motion Path->[] The box takes us to the settings of the motion path.



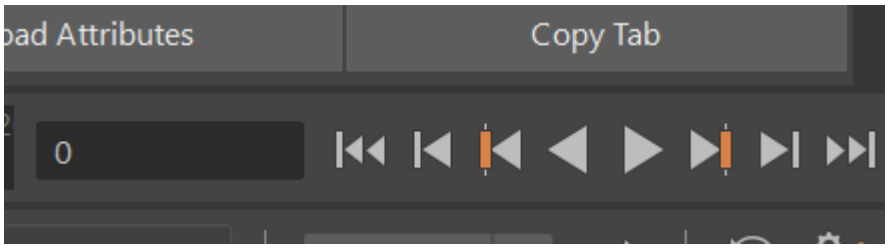
Change the settings to:



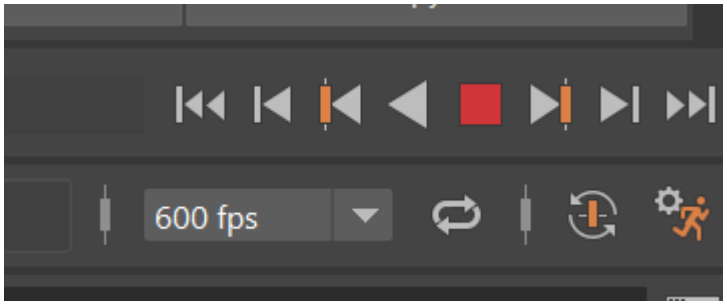
Then with both curve and camera still highlighted, click apply.

Next change the panel to the new camera.

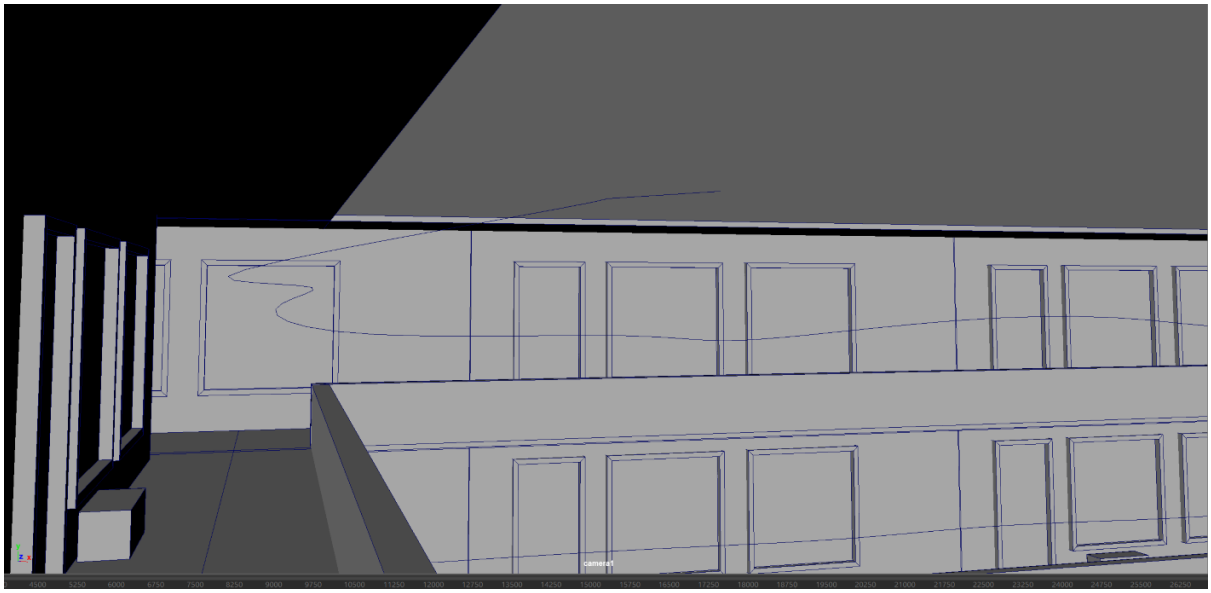
Then push play on the animation tab and see how it goes.



When testing, the camera ran through the frames really quickly, so I changed the FPS to 600



This should then let you move with the camera throughout the scene.



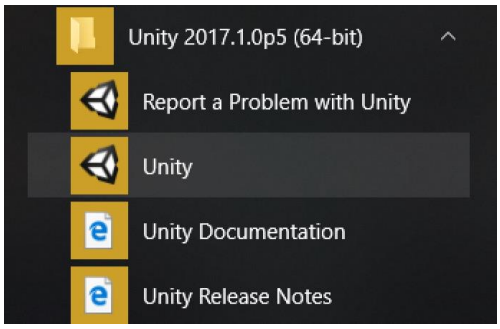
From here, you can see if you need to adjust any of the control points to fix the path.

Unity

Goals:

- Using Assets

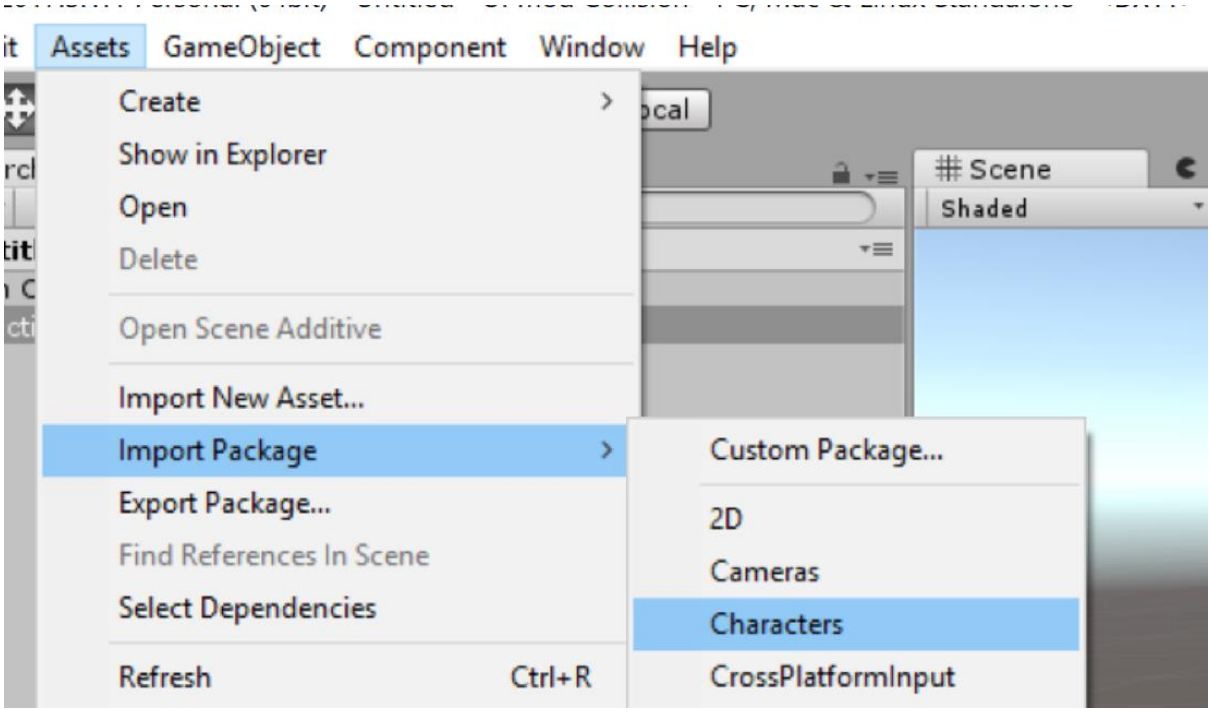
Load up unity



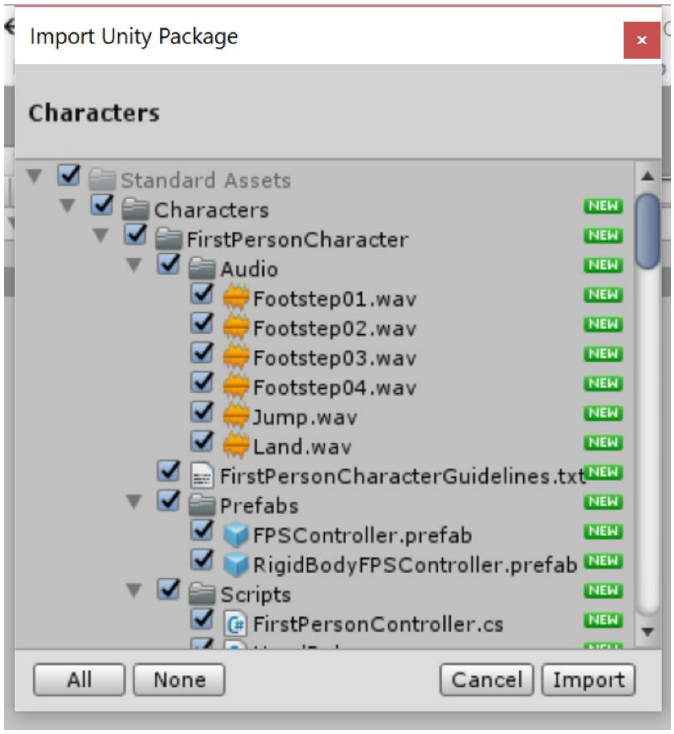
Build Object: Assets in Unity

Aim: Use Unity's assets

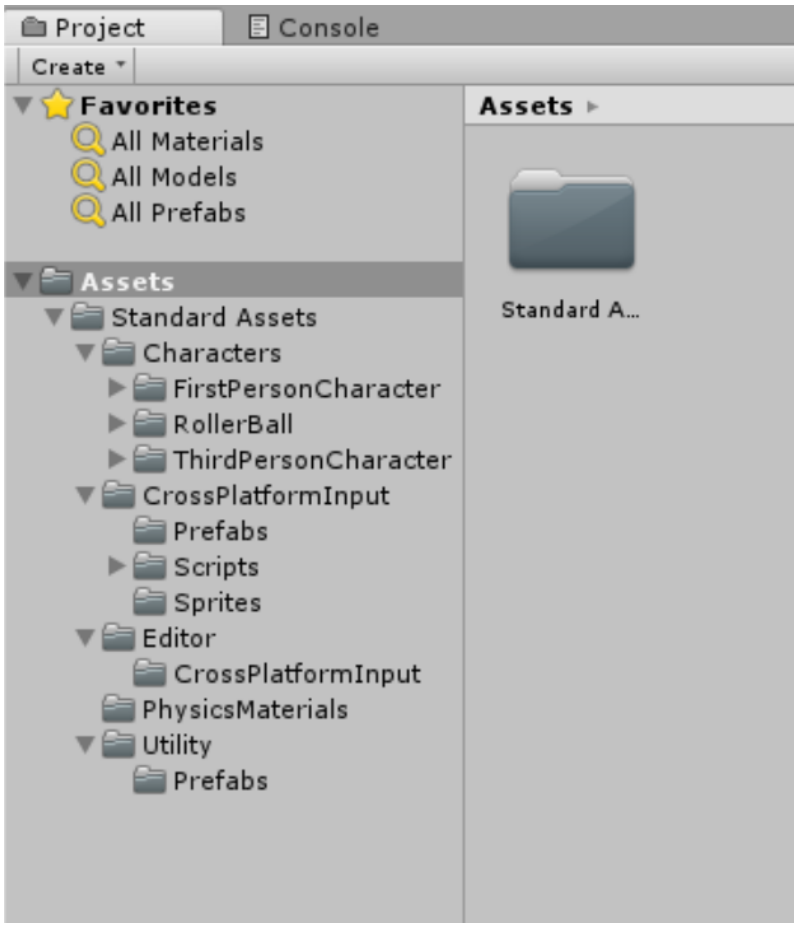
With an empty scene, go to Assets->Import Package->Characters



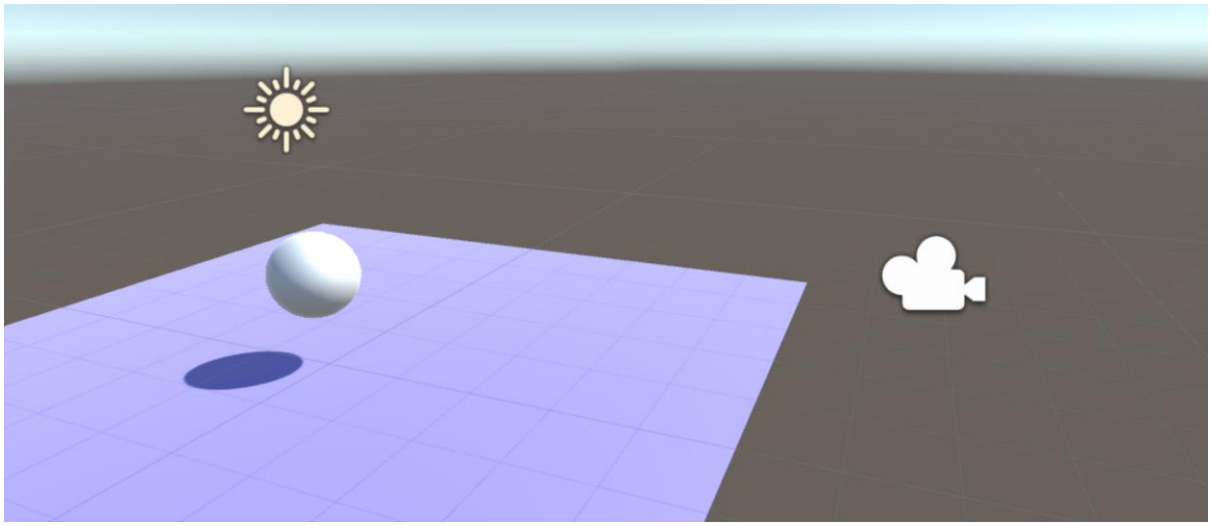
You should see the following import screen, then click import



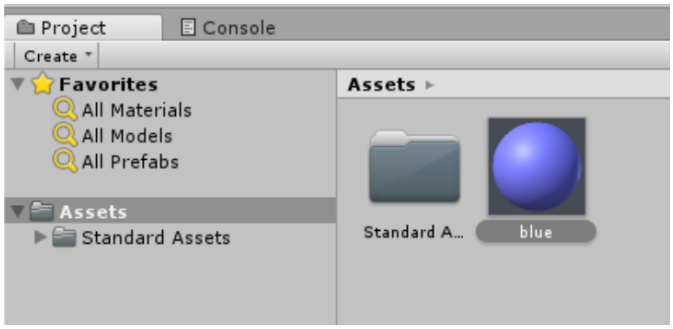
This then loads up the assets section of the project, with the following entities:



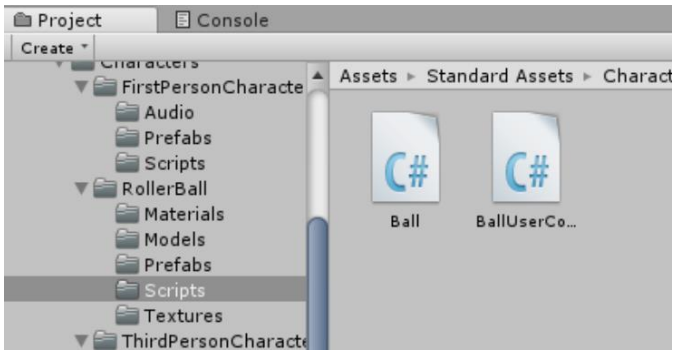
You can use these assets to assist with the creation of your own game, To start with generate the following scene, a sphere on a plane



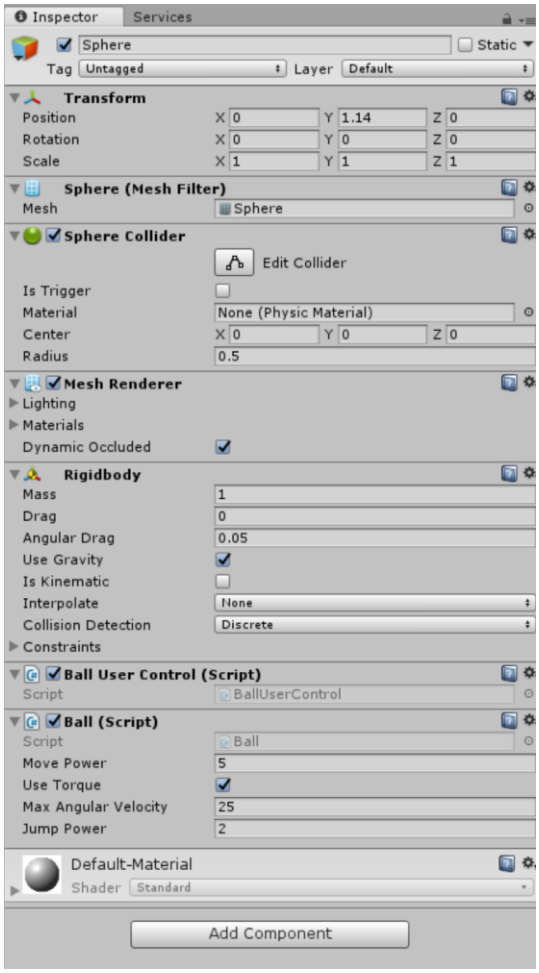
Your assets folder should look like the following



From here, we will go through the standard assets, locate the scripts from the RollerBall example.

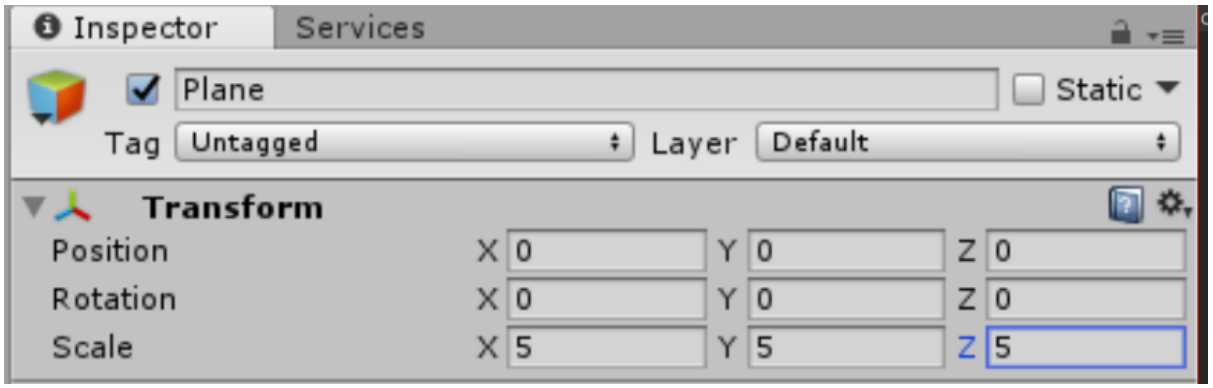


Once you have located these script, apply them both to the sphere. Using either the add component button, or dragging the scripts on the sphere object.



Once this is done, test the game. In this manner, you have used scripts written by other users to allow you to manipulate an object you have created.

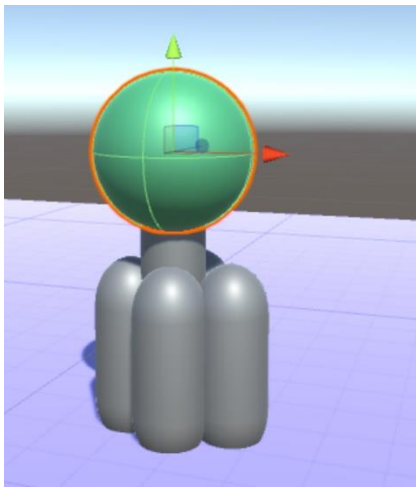
Next Increase the plane scale from 1 to 5.

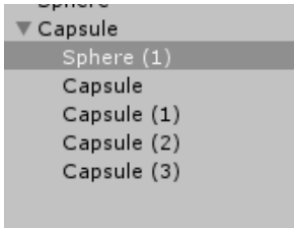


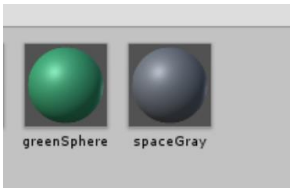
We've done this to increase the moving space for our sphere. Now that we have space, create the following object and add to the scene, the reason for using a slightly more complicated object is that we are going to turn it into a prefab, ie re-usable object for unity.

Prefabs

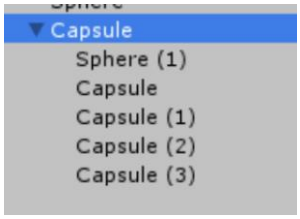
Create the following



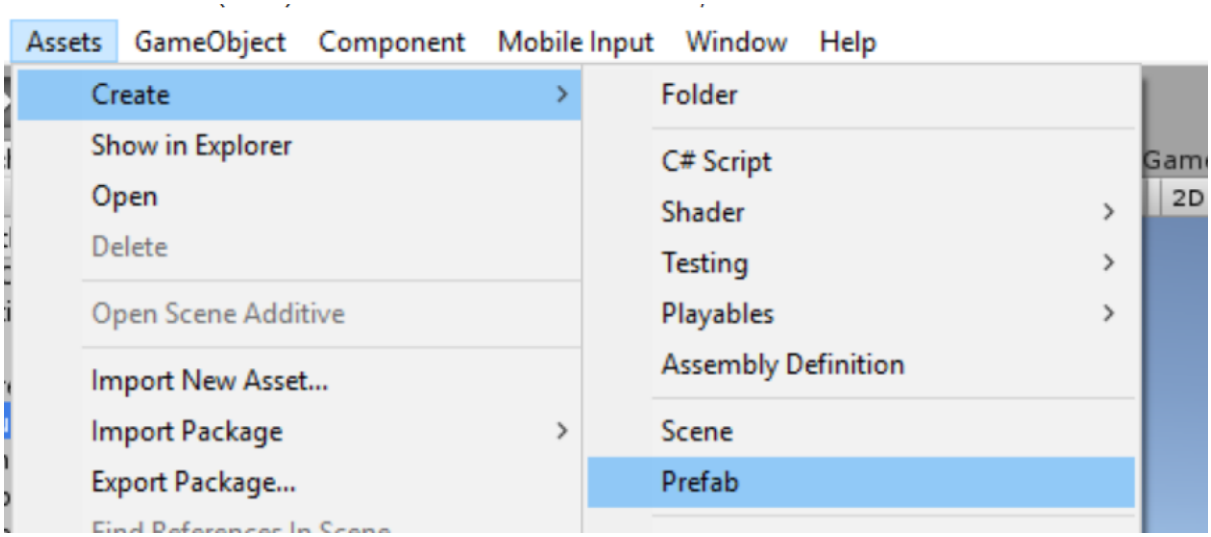




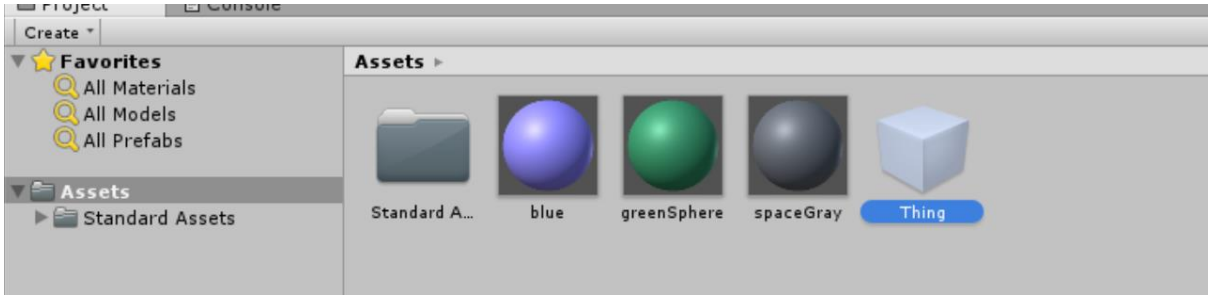
As you can see, this is a simple object sphere with nested objects inside and some colours applied. To turn this into a pre-fab object, click on the parent object.



Then from the menu go Assets->Create->PreFab

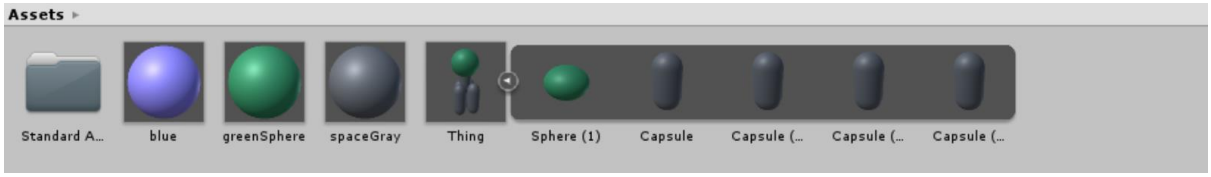


This will create a pre-fab in the assets folder, name it whatever you would like, in this case I named it thing.

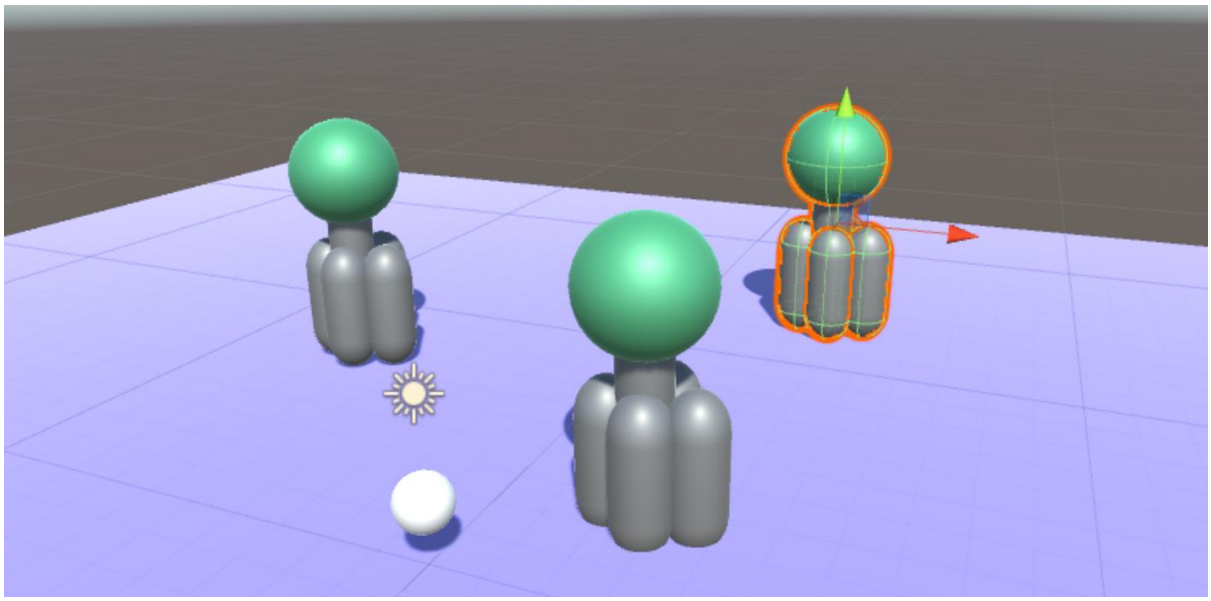


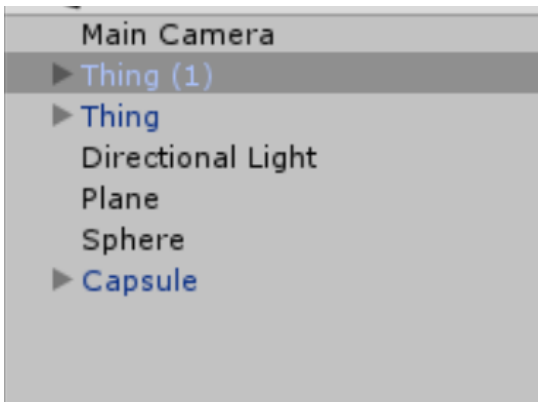
With the Parent capsule highlighted in the hierarchy, drag that object onto the newly created pre-fab.

This should change the prefab white box into the object in which you can then expand it.



From, here, if you want to add multiple objects of that type you can then drag the prefab object onto the scene.





By having all of the objects stored as a prefab you can then delete the original object set and just use the prefab to position all of the elements around the scene.