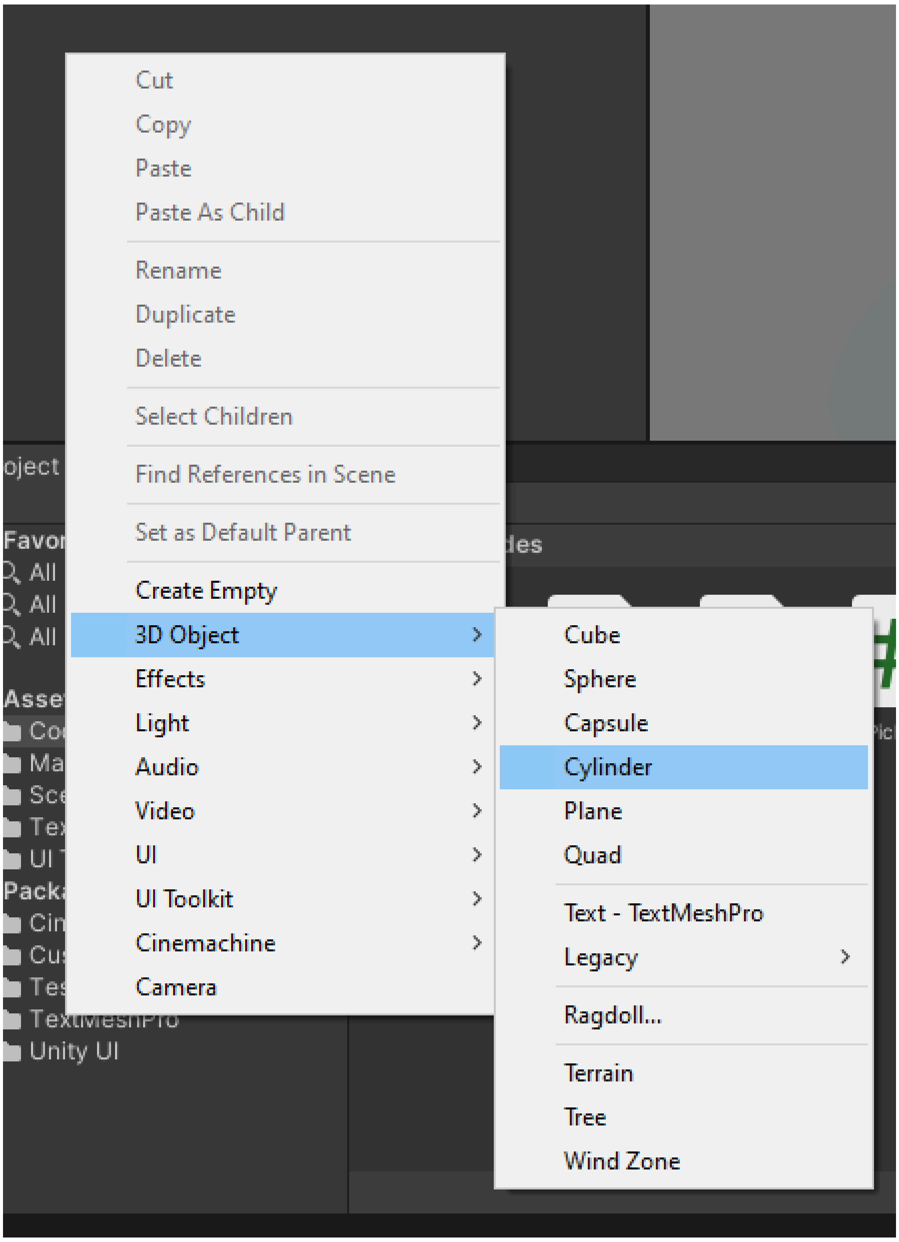
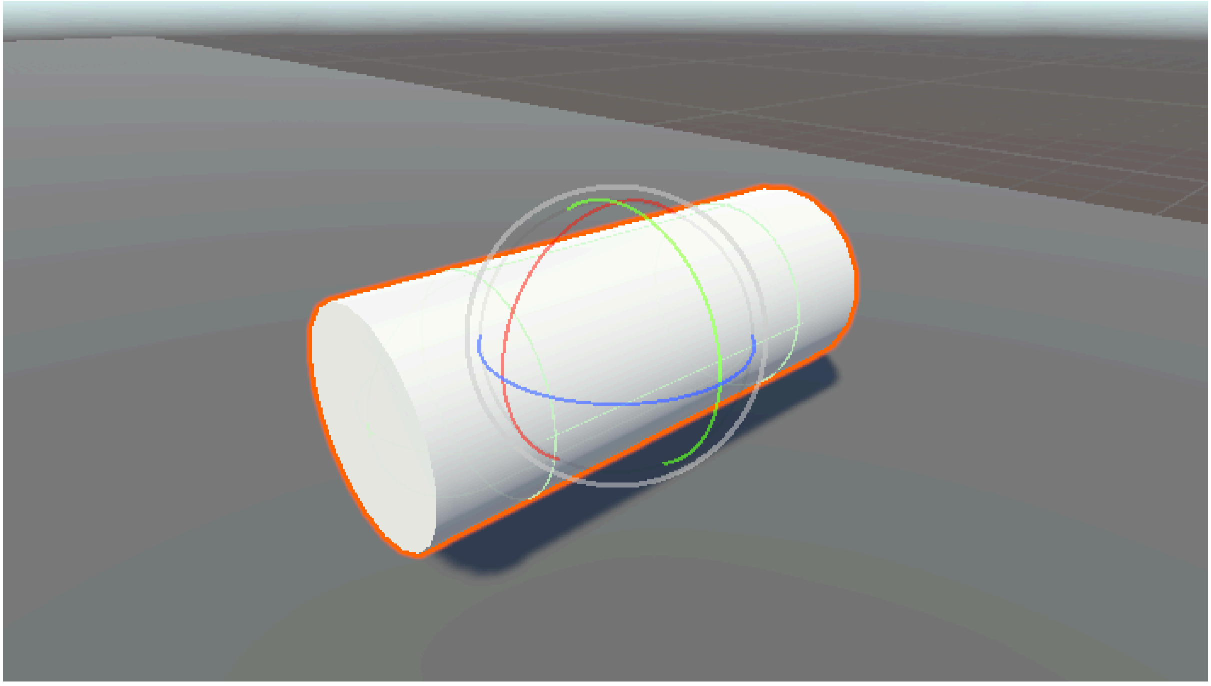
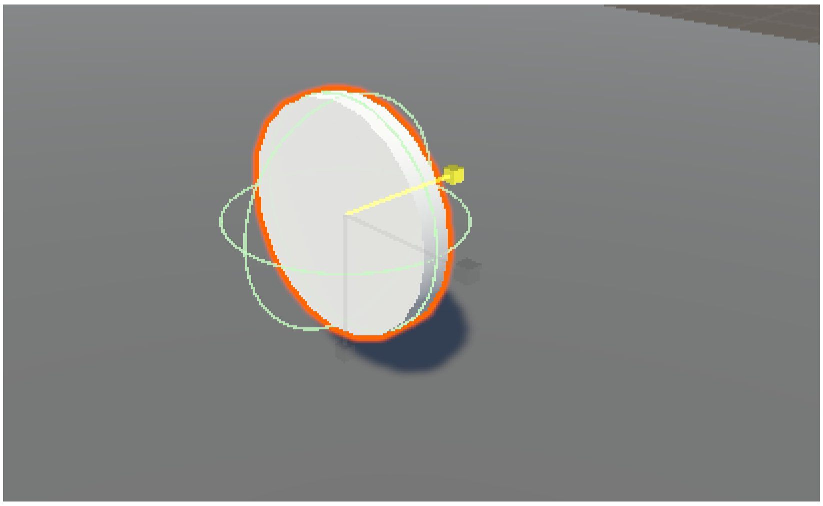
For the second tutorial I will be explaining how to create simple pickups that can be collected by the player and counted towards a UI count

First we need to make the pickups themselves

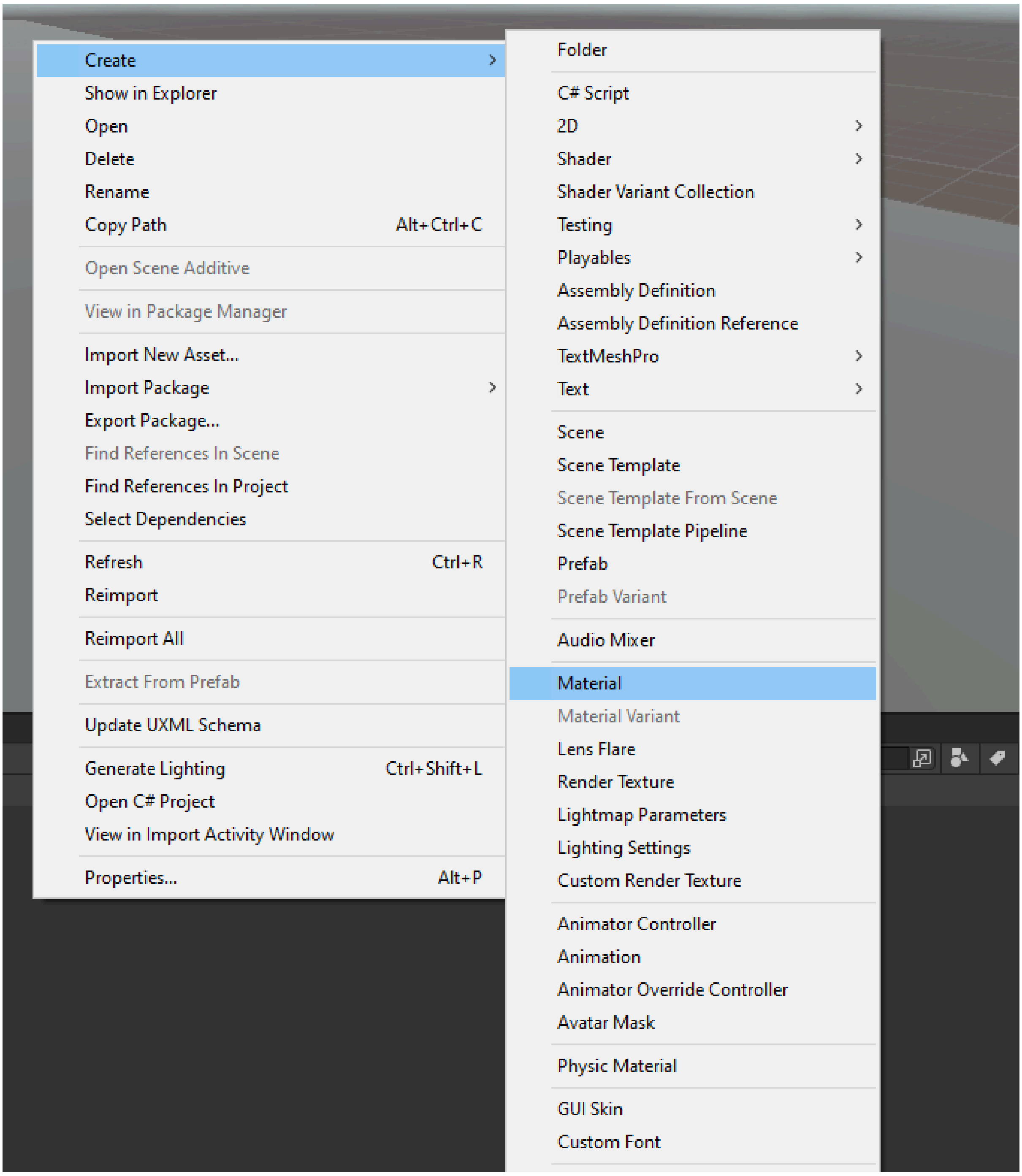
For simplicity we will be making basic coins to collect. In the Hierarchy right click an empty space and create a Cylinder, scale it down using R and rotate it using the Transform axis in its inspector tab (usually X -90)

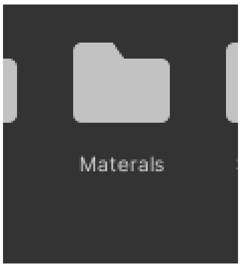




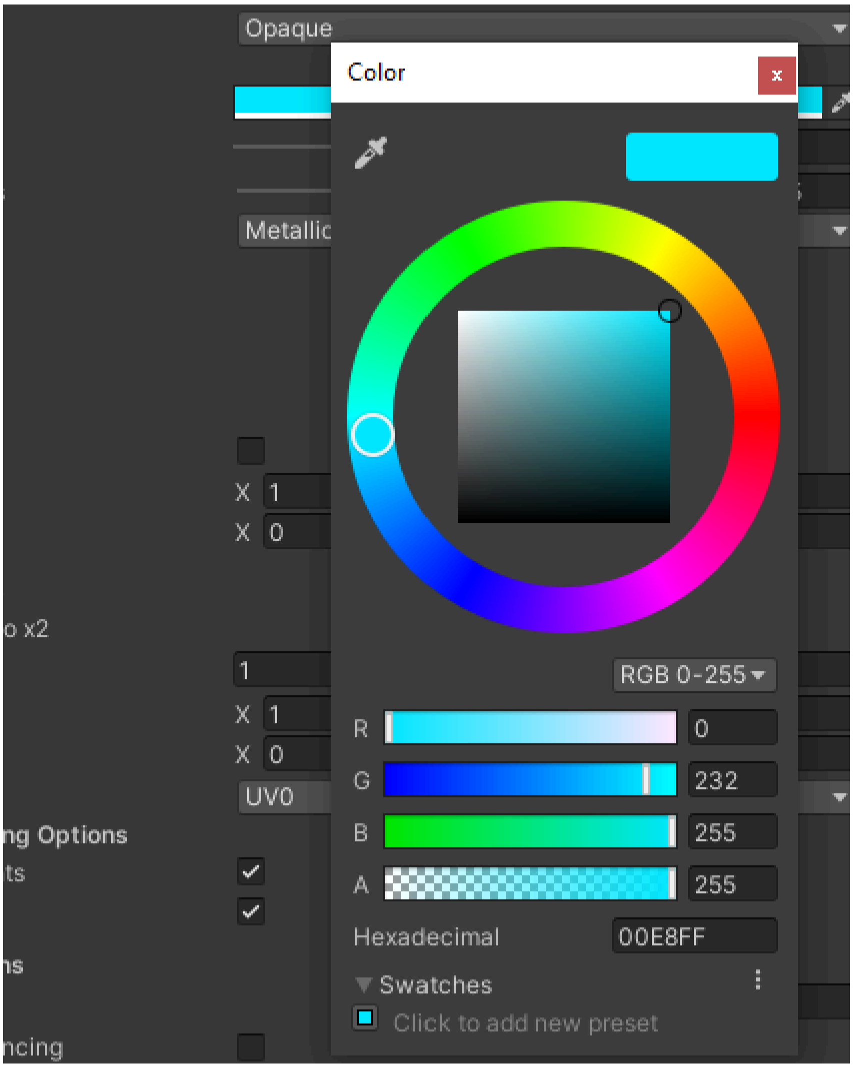


Now, we need to make this look more like a coin in game using its Mesh renderer. Go to the assets folder, create a new folder named Materials right click, go to create and make a new Material





To get that nice gold metal gleam effect, slide the metallic slider up to 1 and then choose an appropriate colour for our coin. I will be using a nice blue for this demo. I like blue :D



RGB 0-255

R 0

G 232

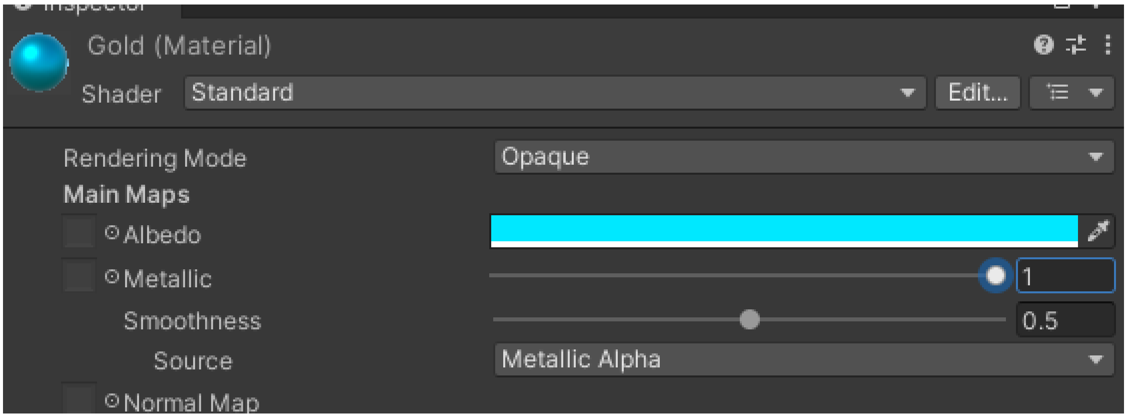
B 255

A 255

Hexadecimal 00E8FF

▼ Swatches

Click to add new preset



Gold (Material)

Shader Standard

Rendering Mode Opaque

Main Maps

Albedo

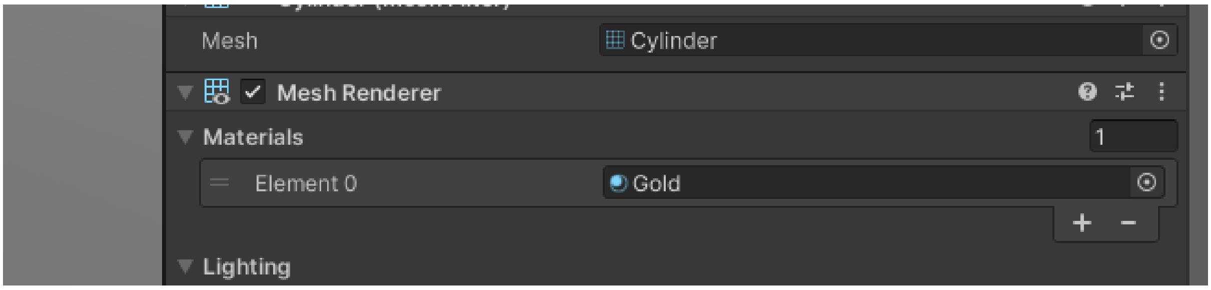
Metallic 1

Smoothness 0.5

Source Metallic Alpha

Normal Map

Finally drag the new material into the Mesh Renderer Element and the coin should now take whataver settings you apply to that material



Mesh: Cylinder

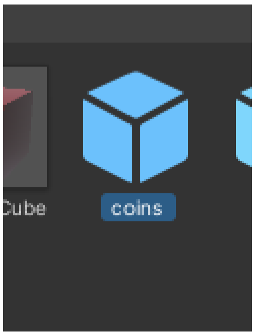
Mesh Renderer

Materials: 1

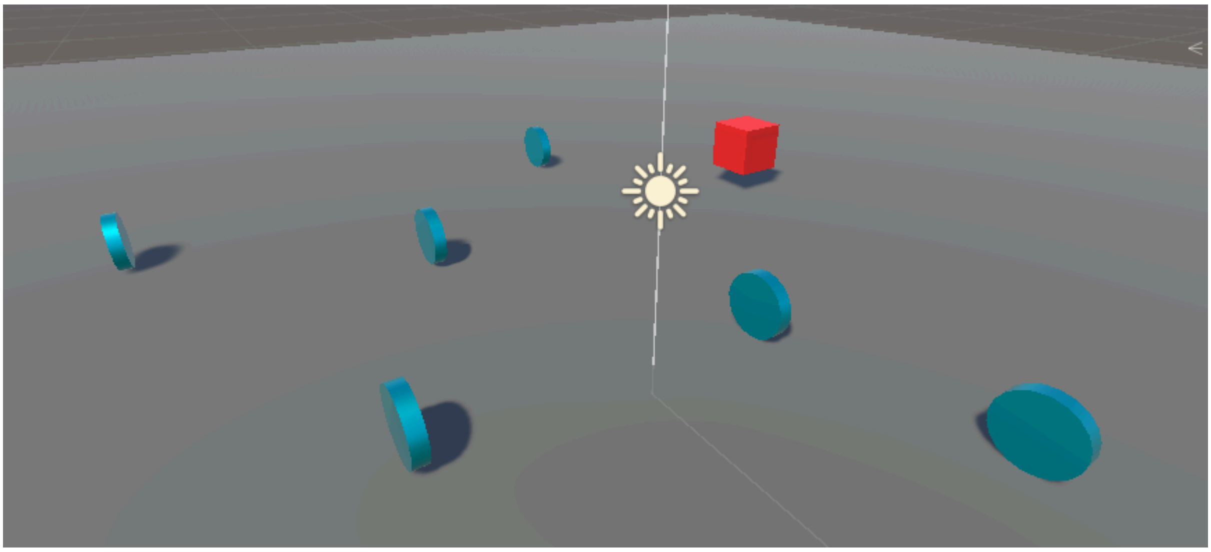
Element 0: Gold

Lighting

Next, return to the assets folder, click on the cylinder in the hierarchy and rename it Coin. Drag the coin into the Assets table at the bottom of the screen and this will make it a set Asset that can be repeated and inserted multiple times and be edited as a group rather than as individuals. This means any changes will occur with all coins made from this asset.

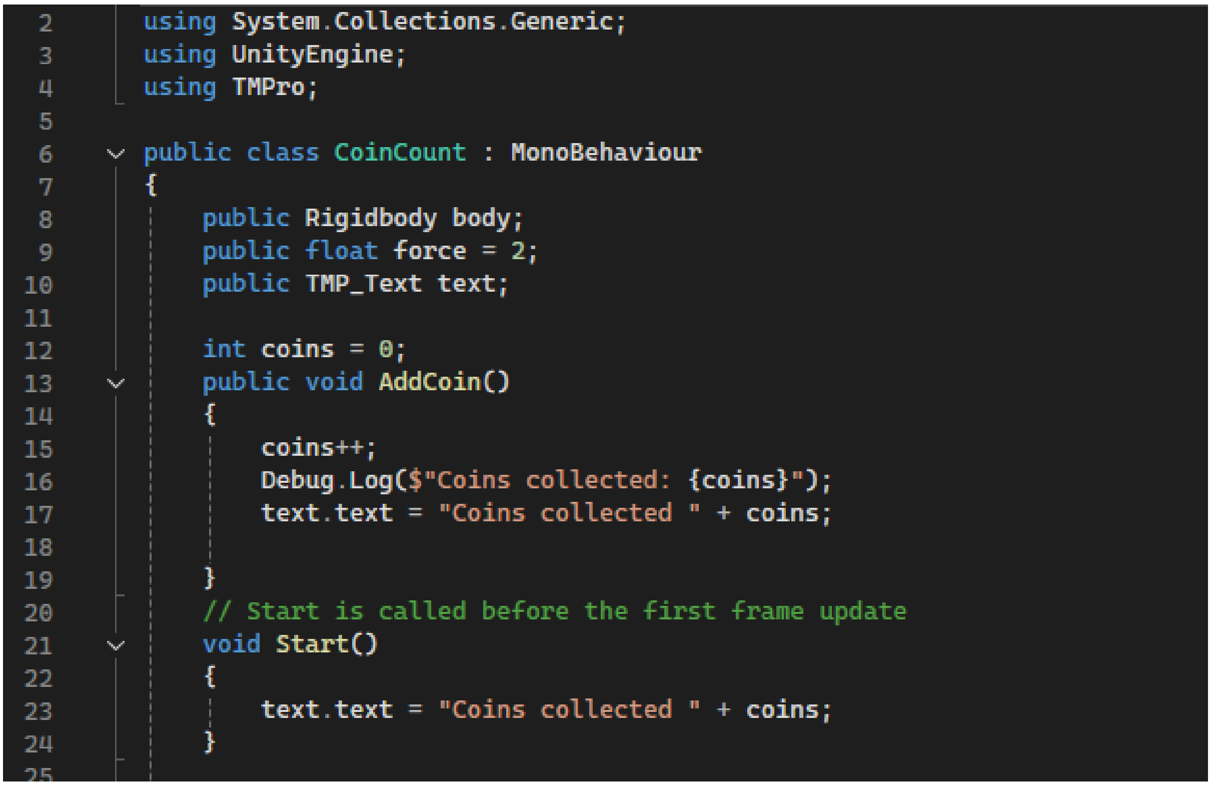


Delete the coin from the hierarchy on the left and then drag and drop however many coins as you wish from the new one in the Assets table.



Find your "player" in your scene and attach a new script to it named "CoinCount"

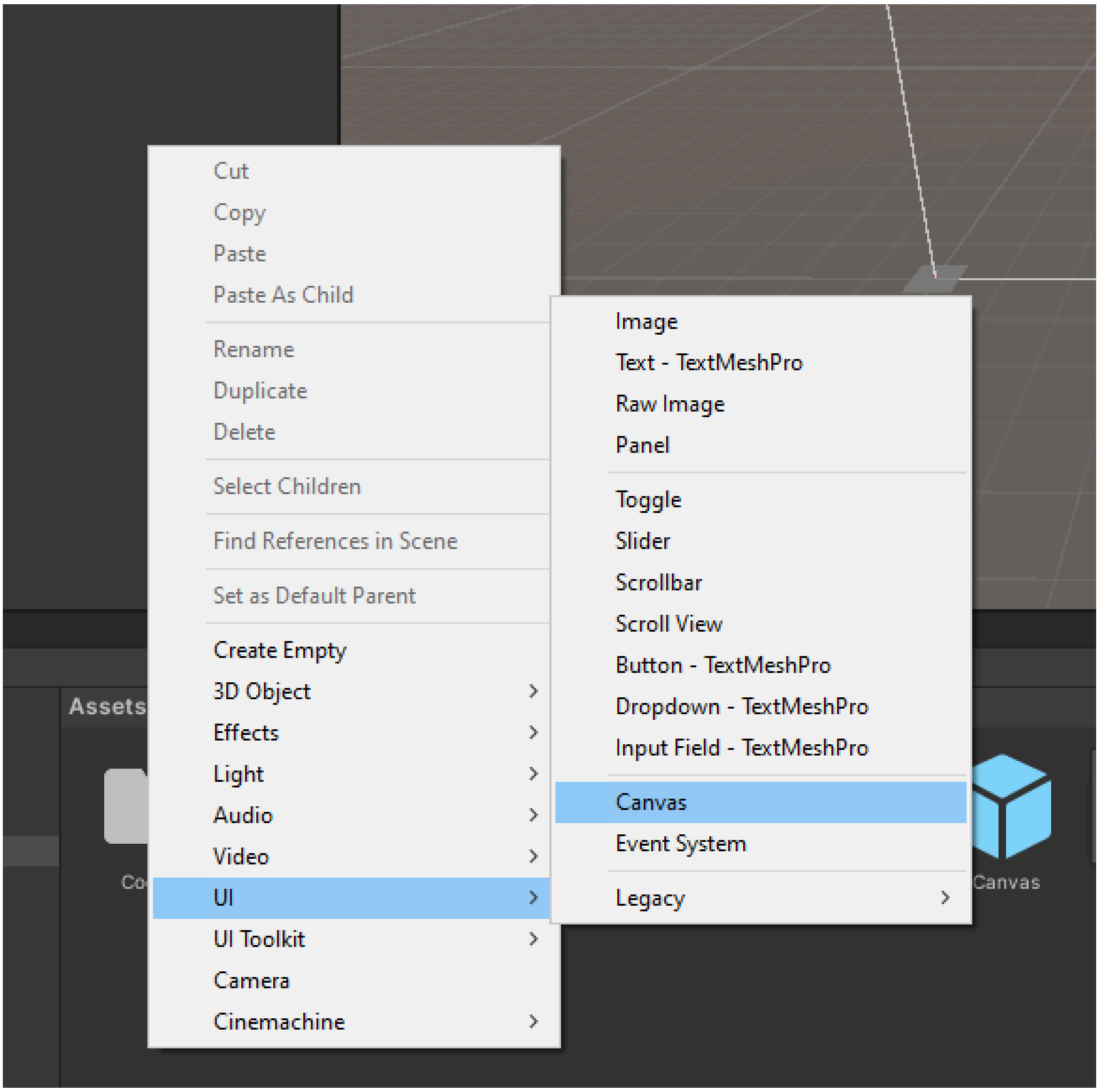
Insert the following script into the file:



```csharp
using System.Collections.Generic;
using UnityEngine;
using TMPro;

public class CoinCount : MonoBehaviour
{
    public Rigidbody body;
    public float force = 2;
    public TMP_Text text;

    int coins = 0;
    public void AddCoin()
    {
        coins++;
        Debug.Log($"Coins collected: {coins}");
        text.text = "Coins collected " + coins;

    }
    // Start is called before the first frame update
    void Start()
    {
        text.text = "Coins collected " + coins;
    }
```

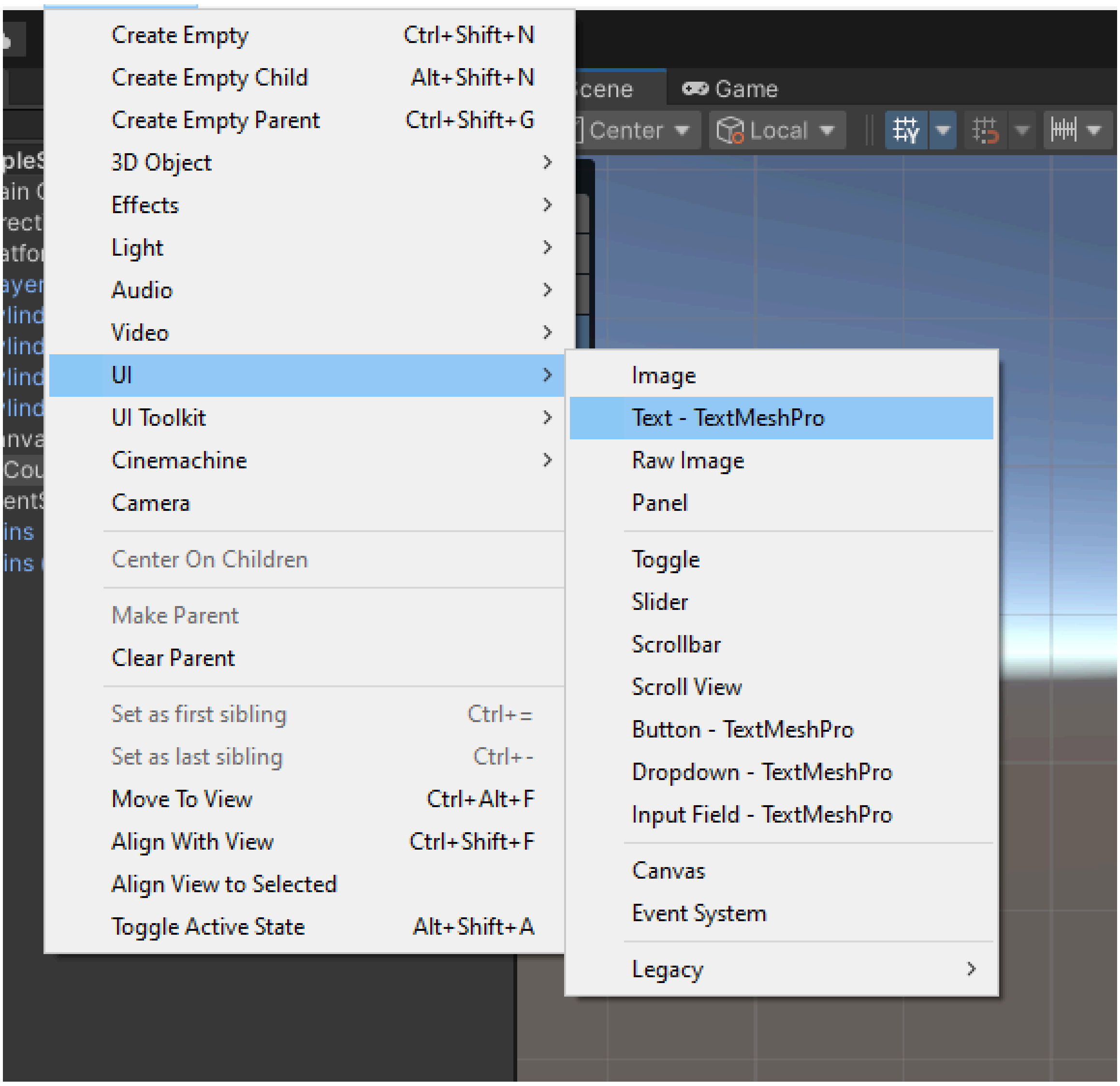
After that we need something that will display the number of coins on our screen and make sure that it stays in frame during gameplay

First create a Canvas in the hierarchy. It is located within the UI tab when right clicking.

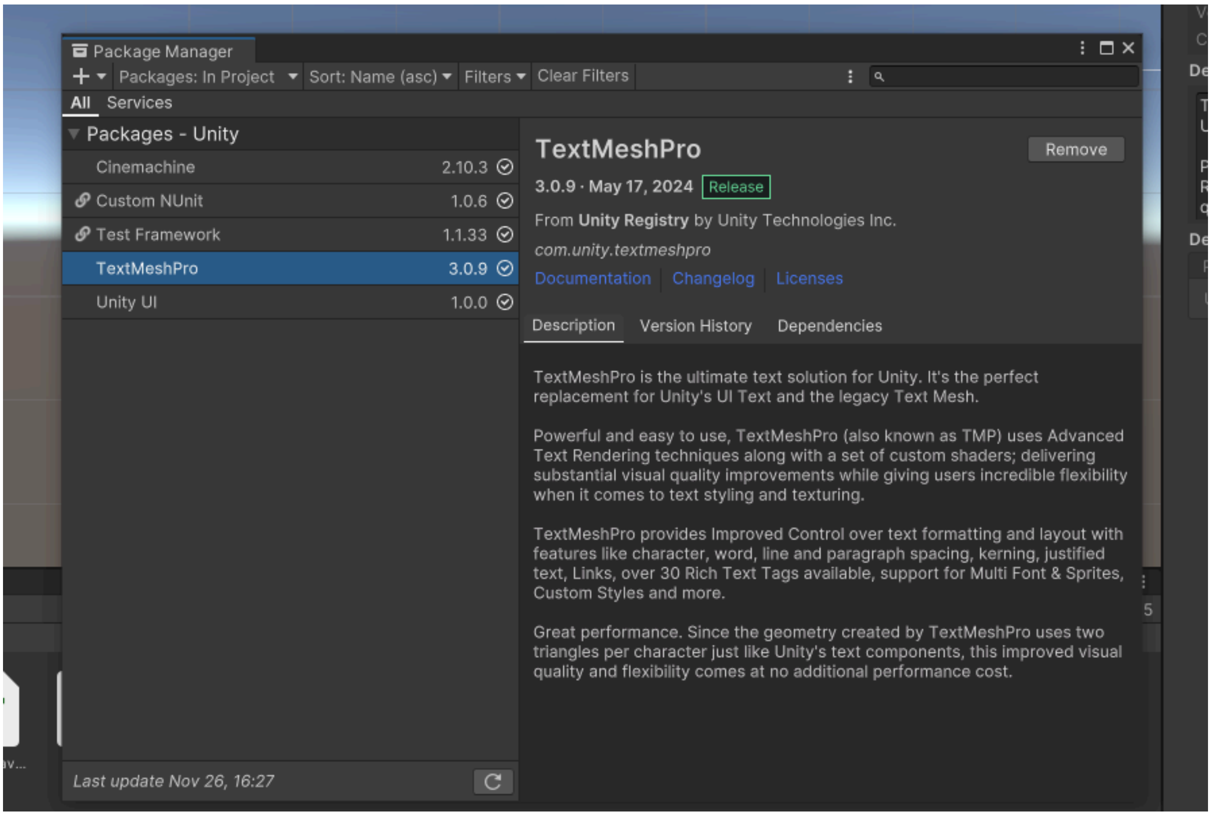


This will hold the items that will display on our screen during gameplay such as the text we will now be adding.

Head to game objects at the top of your screen and find the Text Mesh Pro in the UI tab



If you cannot find this add on simply download it from the Package Manager



Packages - Unity

Cinemachine	2.10.3
Custom NUnit	1.0.6
Test Framework	1.1.33
TextMeshPro	3.0.9
Unity UI	1.0.0

Last update Nov 26, 16:27

TextMeshPro

3.0.9 · May 17, 2024 Release

From **Unity Registry** by Unity Technologies Inc.

com.unity.textmeshpro

Documentation | Changelog | Licenses

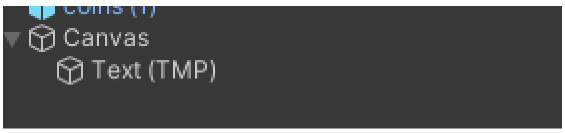
TextMeshPro is the ultimate text solution for Unity. It's the perfect replacement for Unity's UI Text and the legacy Text Mesh.

Powerful and easy to use, TextMeshPro (also known as TMP) uses Advanced Text Rendering techniques along with a set of custom shaders; delivering substantial visual quality improvements while giving users incredible flexibility when it comes to text styling and texturing.

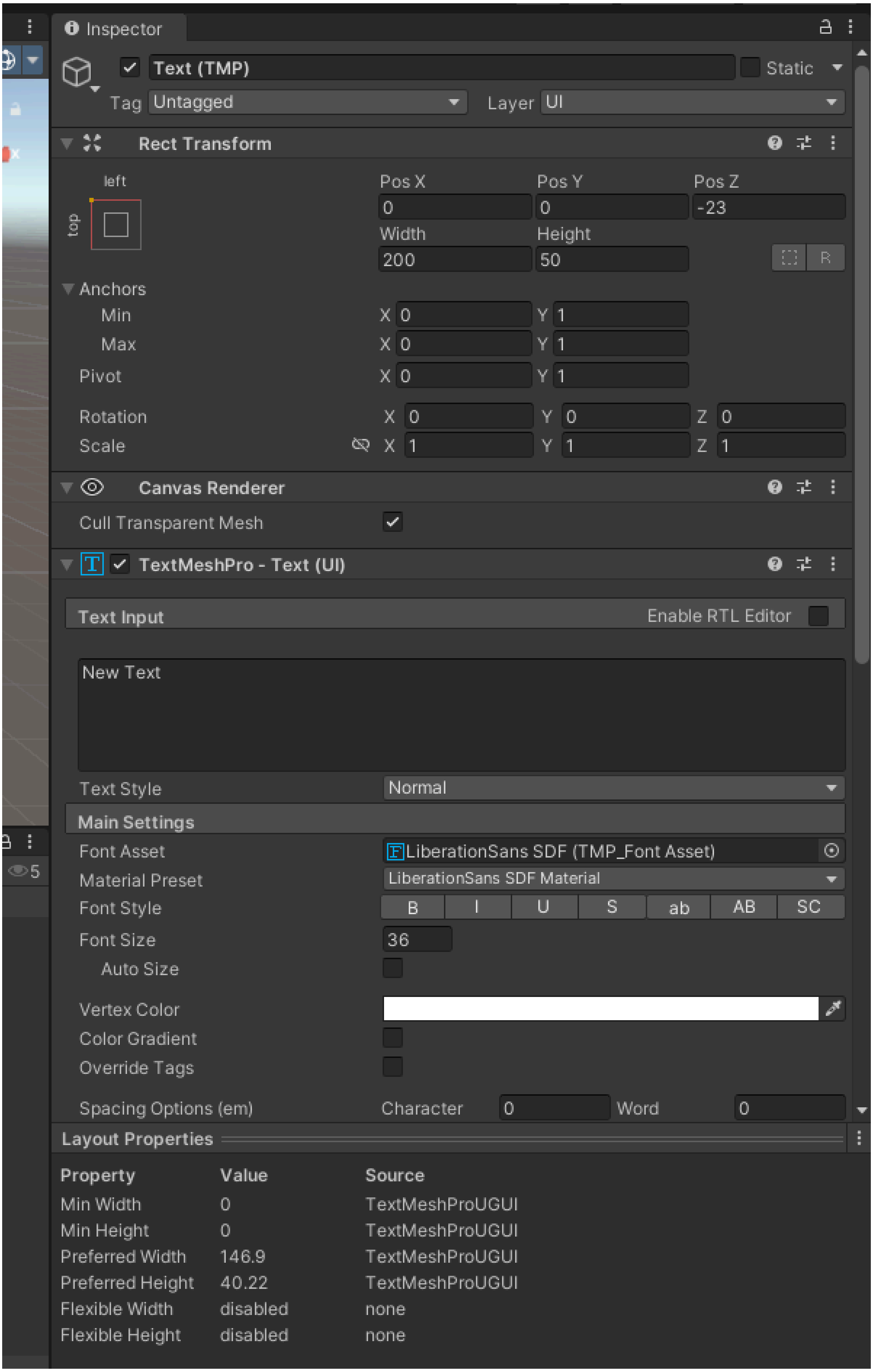
TextMeshPro provides Improved Control over text formatting and layout with features like character, word, line and paragraph spacing, kerning, justified text, Links, over 30 Rich Text Tags available, support for Multi Font & Sprites, Custom Styles and more.

Great performance. Since the geometry created by TextMeshPro uses two triangles per character just like Unity's text components, this improved visual quality and flexibility comes at no additional performance cost.

Make sure that the Text mesh UI is within the Canvas item within the hierarchy like so.



Next click on the text asset within the canvas and look over the right of the screen to edit its attributes.



Inspector

☑ Text (TMP) □ Static

Tag Untagged Layer UI

Rect Transform

left top

Pos X 0 Pos Y 0 Pos Z -23

Width 200 Height 50

Anchors

Min X 0 Y 1

Max X 0 Y 1

Pivot X 0 Y 1

Rotation X 0 Y 0 Z 0

Scale X 1 Y 1 Z 1

Canvas Renderer

Cull Transparent Mesh ☑

☑ TextMeshPro - Text (UI)

Text Input Enable RTL Editor □

New Text

Text Style Normal

Main Settings

Font Asset LiberationSans SDF (TMP_Font Asset)

Material Preset LiberationSans SDF Material

Font Style B I U S ab AB SC

Font Size 36

Auto Size □

Vertex Color

Color Gradient □

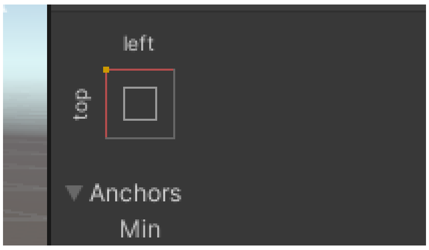
Override Tags □

Spacing Options (em) Character 0 Word 0

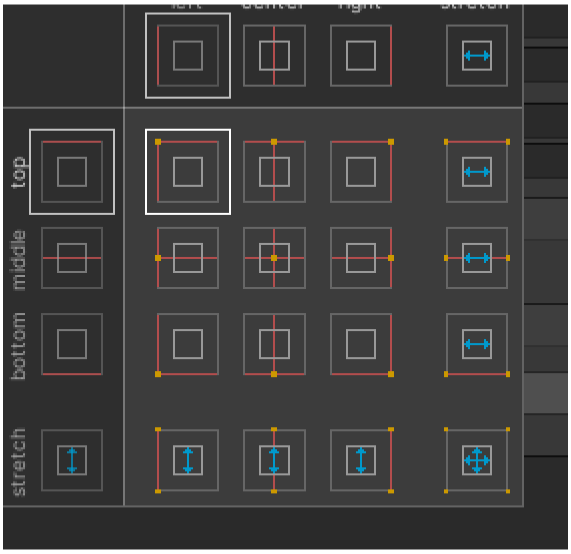
Layout Properties

Property	Value	Source
Min Width	0	TextMeshProUGUI
Min Height	0	TextMeshProUGUI
Preferred Width	146.9	TextMeshProUGUI
Preferred Height	40.22	TextMeshProUGUI
Flexible Width	disabled	none
Flexible Height	disabled	none

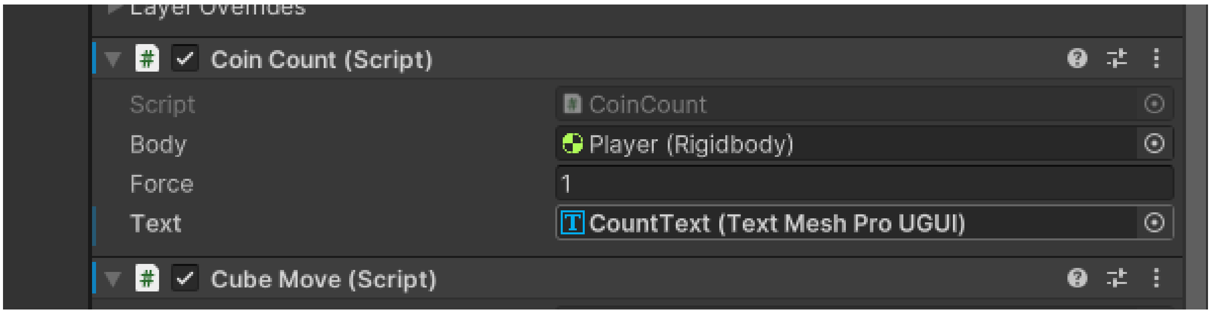
We are looking for this small square which will help lock its position in a suitable place



Click on the square to open up its menu. Depending on whether you use Shift, Alt or just clicking, the pivot, set position and the asset itself will all move to the chosen slot. Use Shift and Alt and click on the top left slot to attach our items to the left of the screen. (note there should be small blue circles within the squares as well which cannot be shown within this image)



Finally we need to connect the counting of the coins to the text itself. To do this click on the player that has the coin pickup script and drag the text asset in the hierarchy into the Text box



Layer Overrides

Coin Count (Script)

Script CoinCount

Body Player (Rigidbody)

Force 1

Text CountText (Text Mesh Pro UGUI)

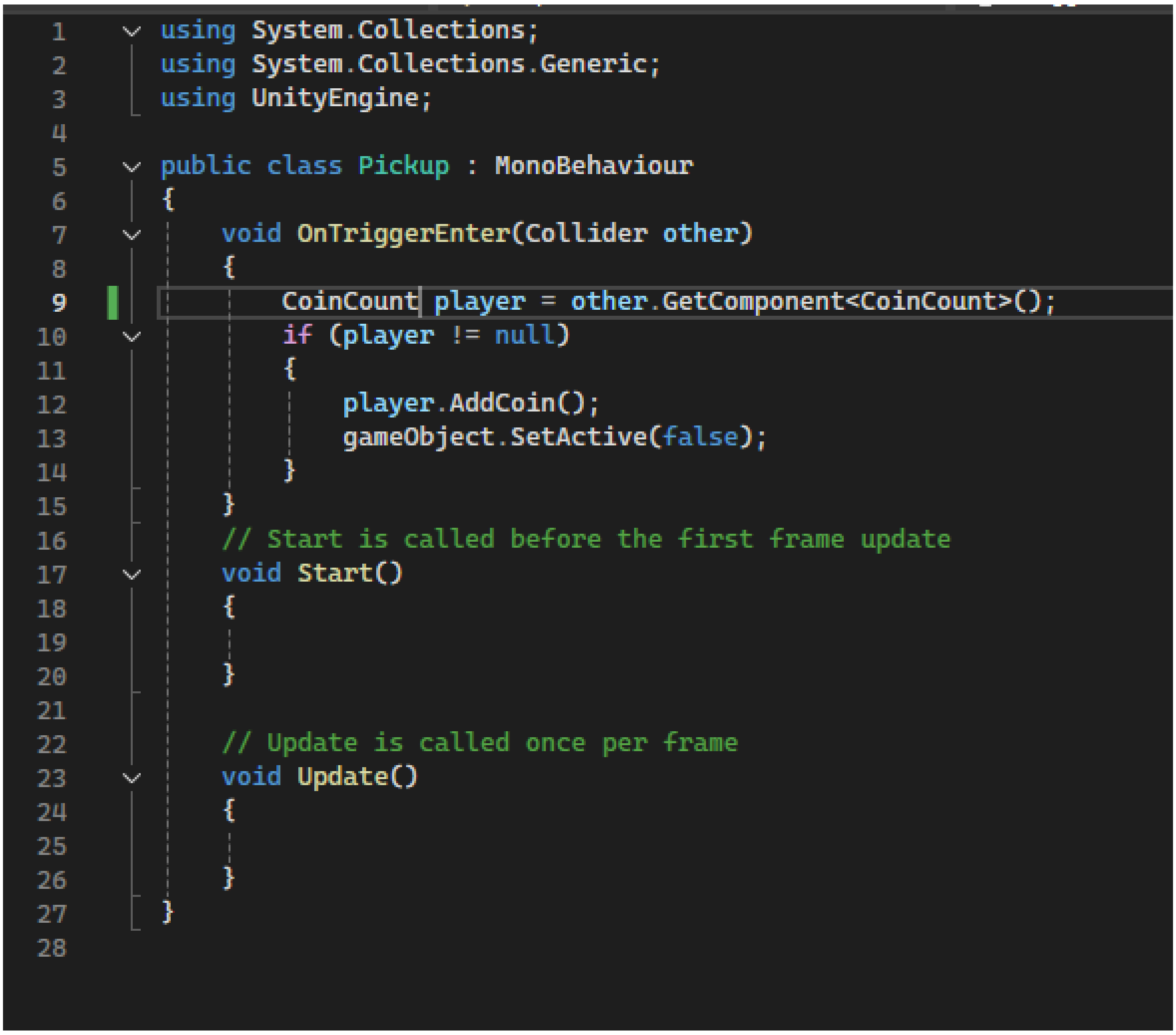
Cube Move (Script)

Click on the Coin asset to open up its inspector and attach a new script to it. Name this script "Pickup"

Next write the following above the Start function

```
void OnTriggerEnter(Collider other)
{
  CoinCount player = other.GetComponent<CoinCount>();
if (player!= null)
{
player.AddCoin();
gameobject.SetActive(false);
}
```

It should look like the following



```
using System.Collections;
using System.Collections.Generic;
using UnityEngine;

public class Pickup : MonoBehaviour
{
    void OnTriggerEnter(Collider other)
    {
        CoinCount player = other.GetComponent<CoinCount>();
        if (player != null)
        {
            player.AddCoin();
            gameObject.SetActive(false);
        }
    }
    // Start is called before the first frame update
    void Start()
    {

    }

    // Update is called once per frame
    void Update()
    {

    }
}

```

Essentially what this code is doing is that it is detecting when a collision is occurring with another object and when that object hits the player it adds a score to the number of coins collected and then sets itself inactive, disappearing from the scene.
This ensures that it is not picked up again until the next reload of the area.