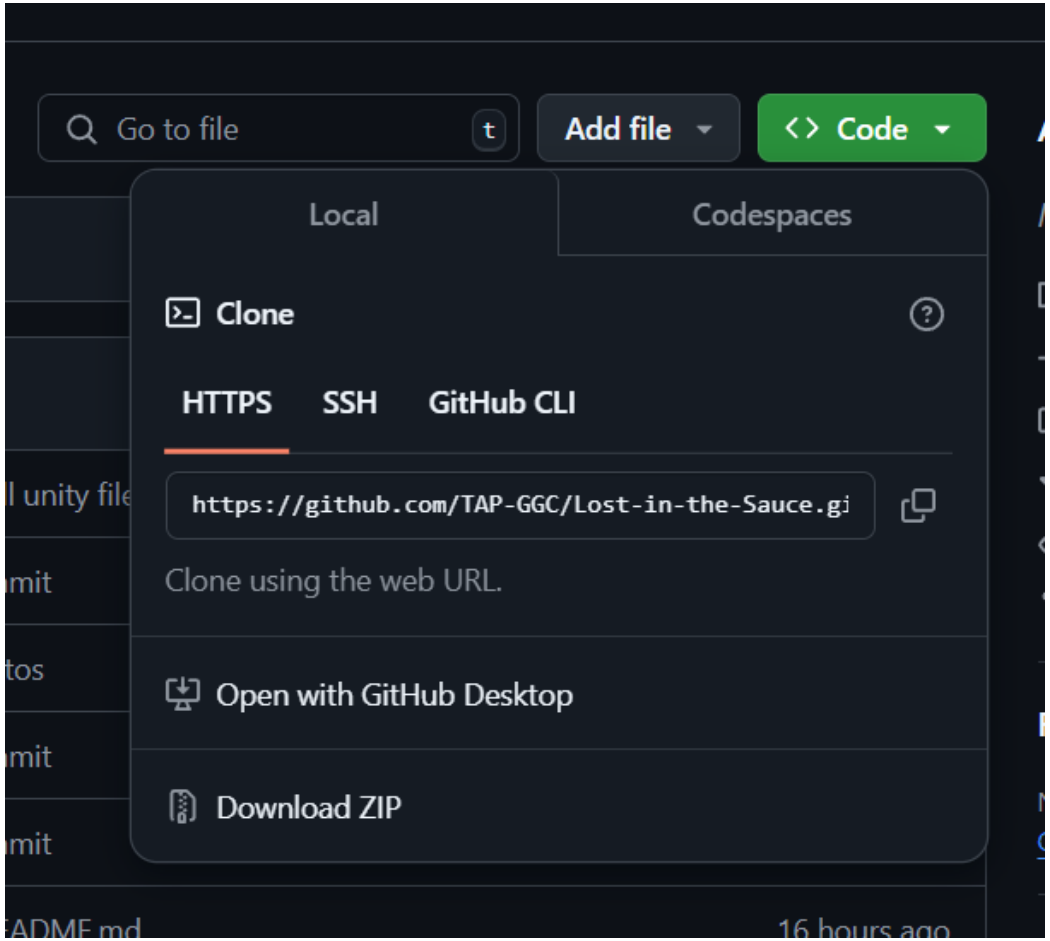
LOST IN THE SAUCE

PRESENTERS: Taisann Kham, Brittany Giordano, Edgar Alvarez

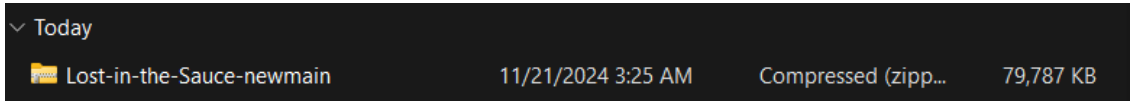
UNITY Prep / Import Game

1. Click this link and click the dropdown next to the green code button on the top right of the screen.



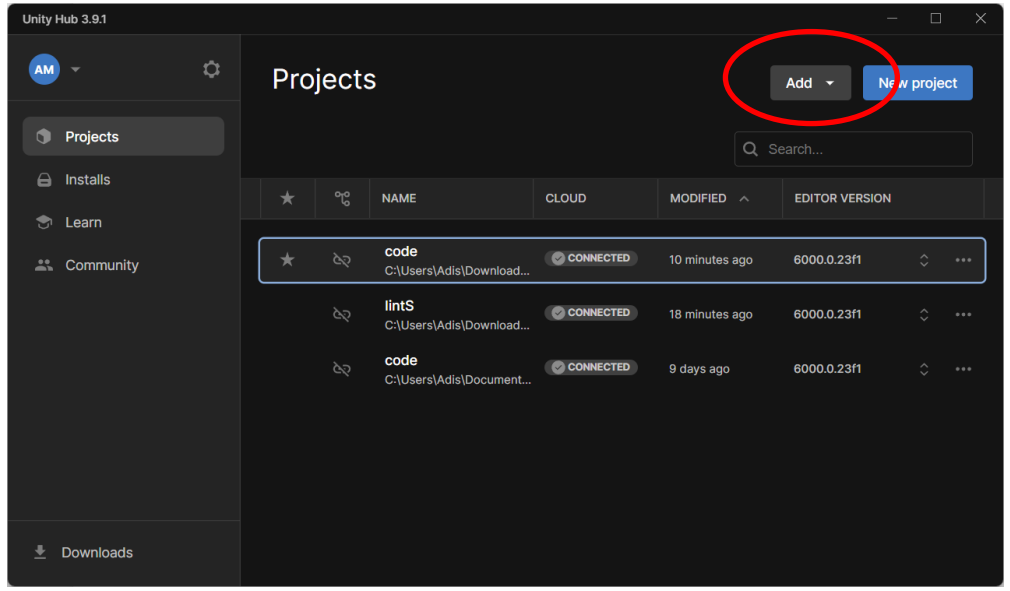
2. Next click on Download Zip on the bottom the popup shown in the previous image.

3. You should see this folder in your file explorer under downloads. Right click on it and click extract all.



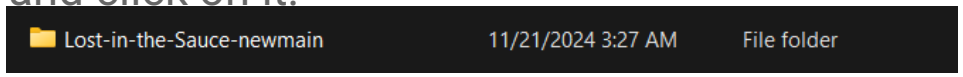
UNITY Prep / Import Game

4. Open Unity Hub and click on the Add button.

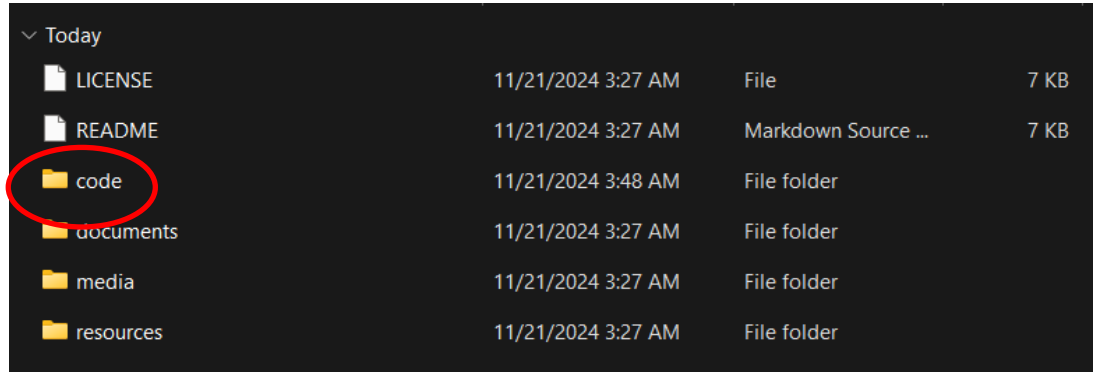


5. click on Add project from disk.

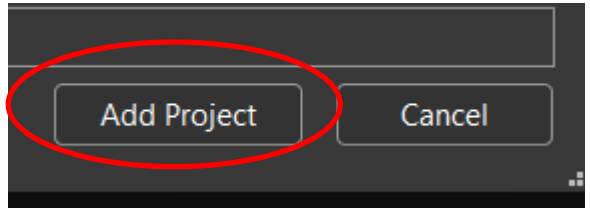
6. Find your exported file that we downloaded from GitHub earlier (should be in your downloads folder) and click on it.



7. Once in the folder click and enter the code file.



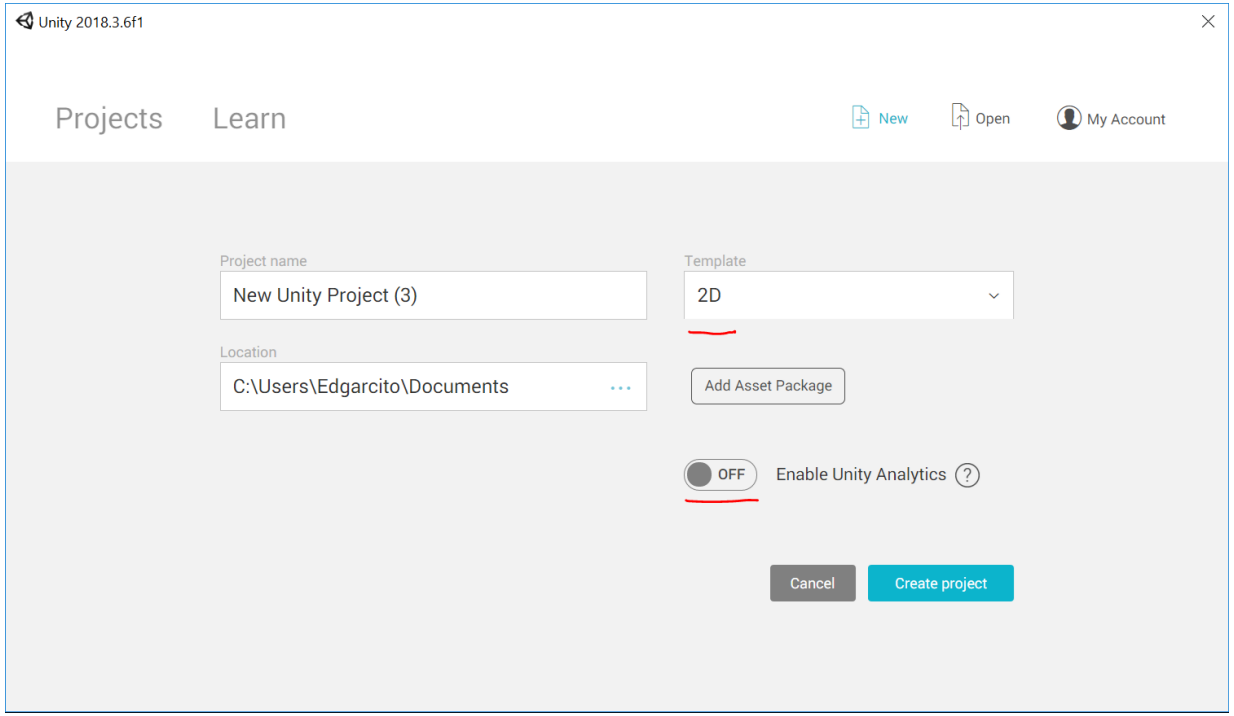
8. Click on add project



UNITY Prep / Import Game

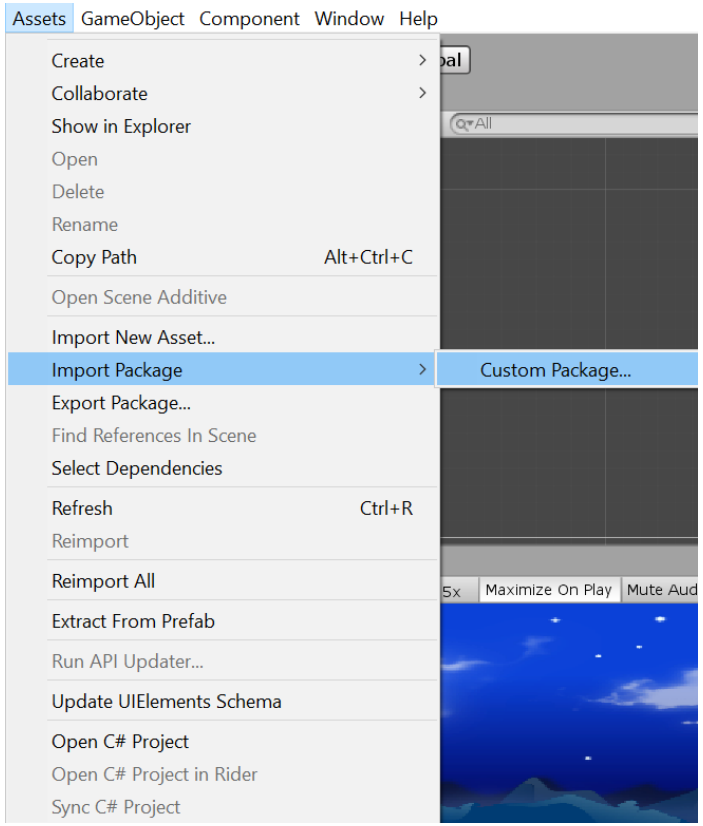
9. Change Template to 2d and turn off Unity Analytics

10. Change Template to 2d and turn off Unity Analytics

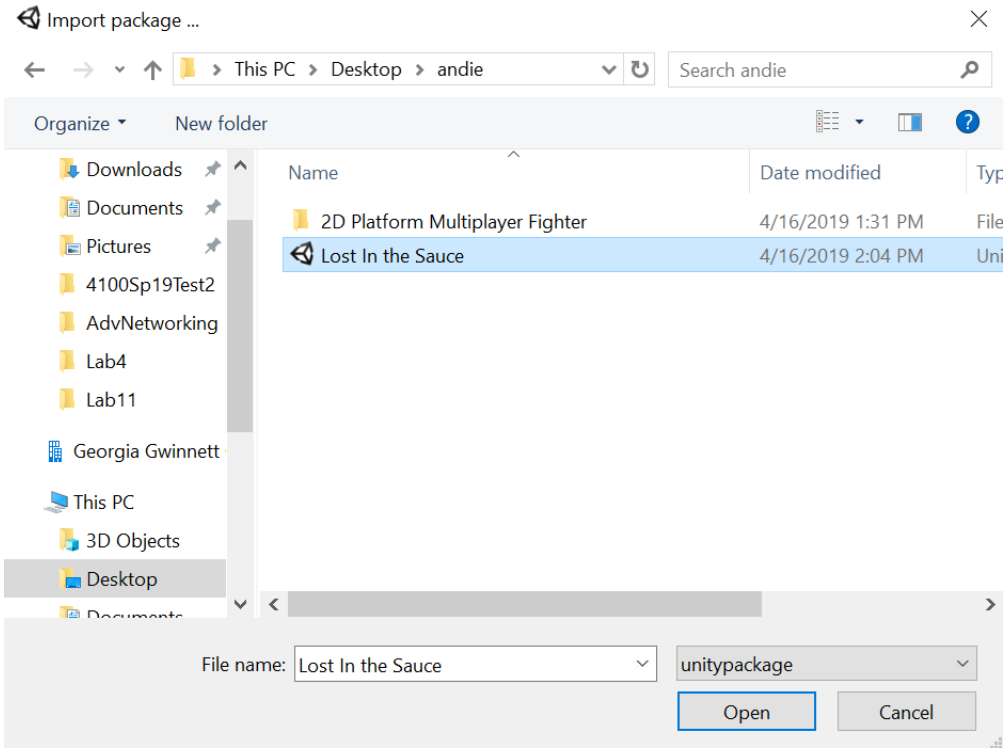


UNITY Prep / Import Game

1. Go to Assets Tab
   Under Import Package select Custom Package

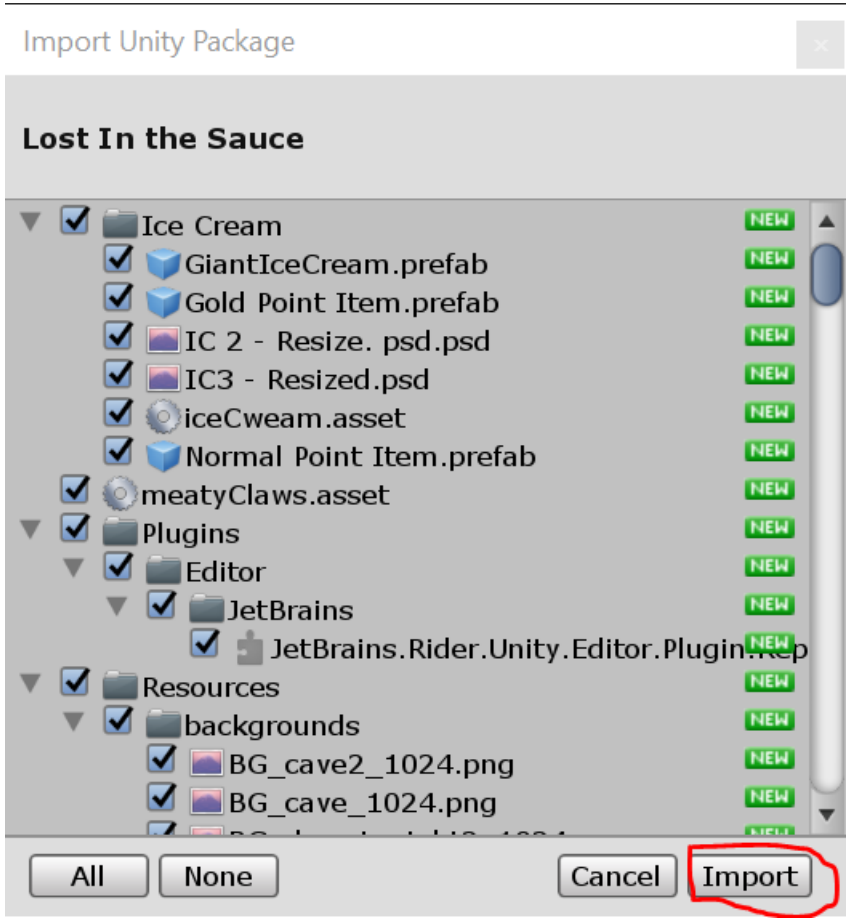


2. Choose our game file that was passed via USB



UNITY Prep / Import Game

1. Pop up will Show what is imported.
   Click Import



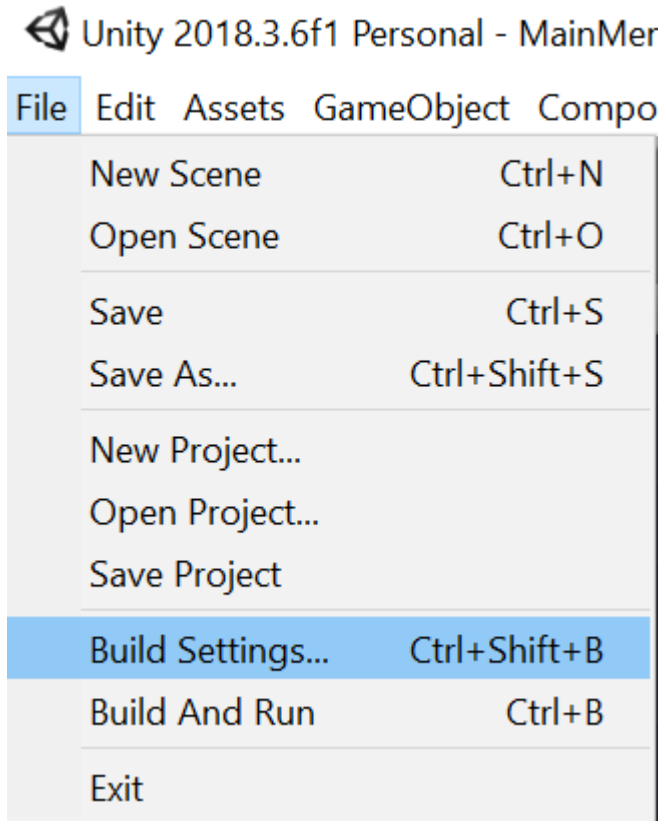
2. Next we Will have to Build the game. Adds Functionality

UNITY Prep / Import Game

1. Under File tab go to
   Build Settings

   Or Press CTRL + Shift + B

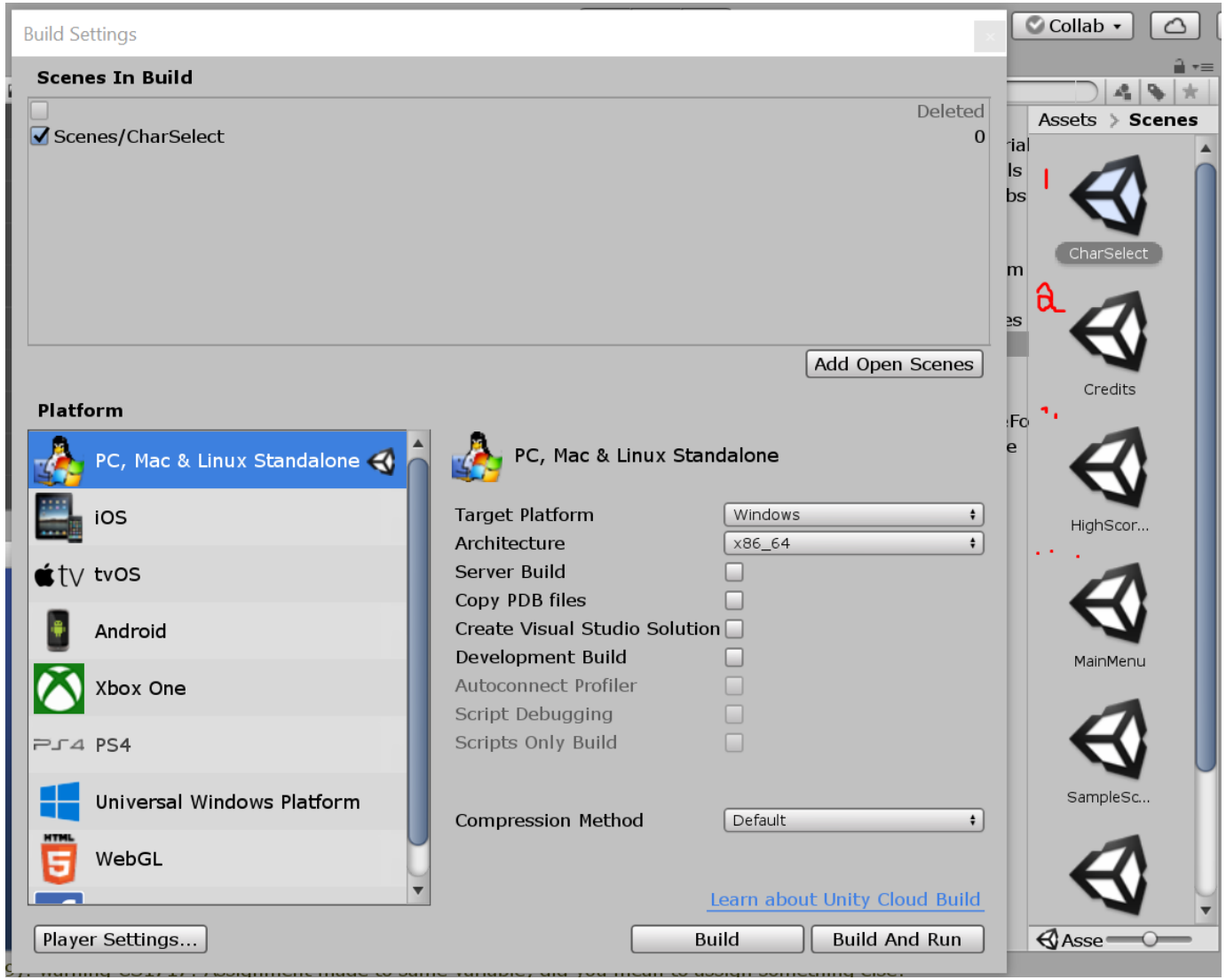
   Pop Up should appear



UNITY Prep / Import Game

For this Part you you will have to

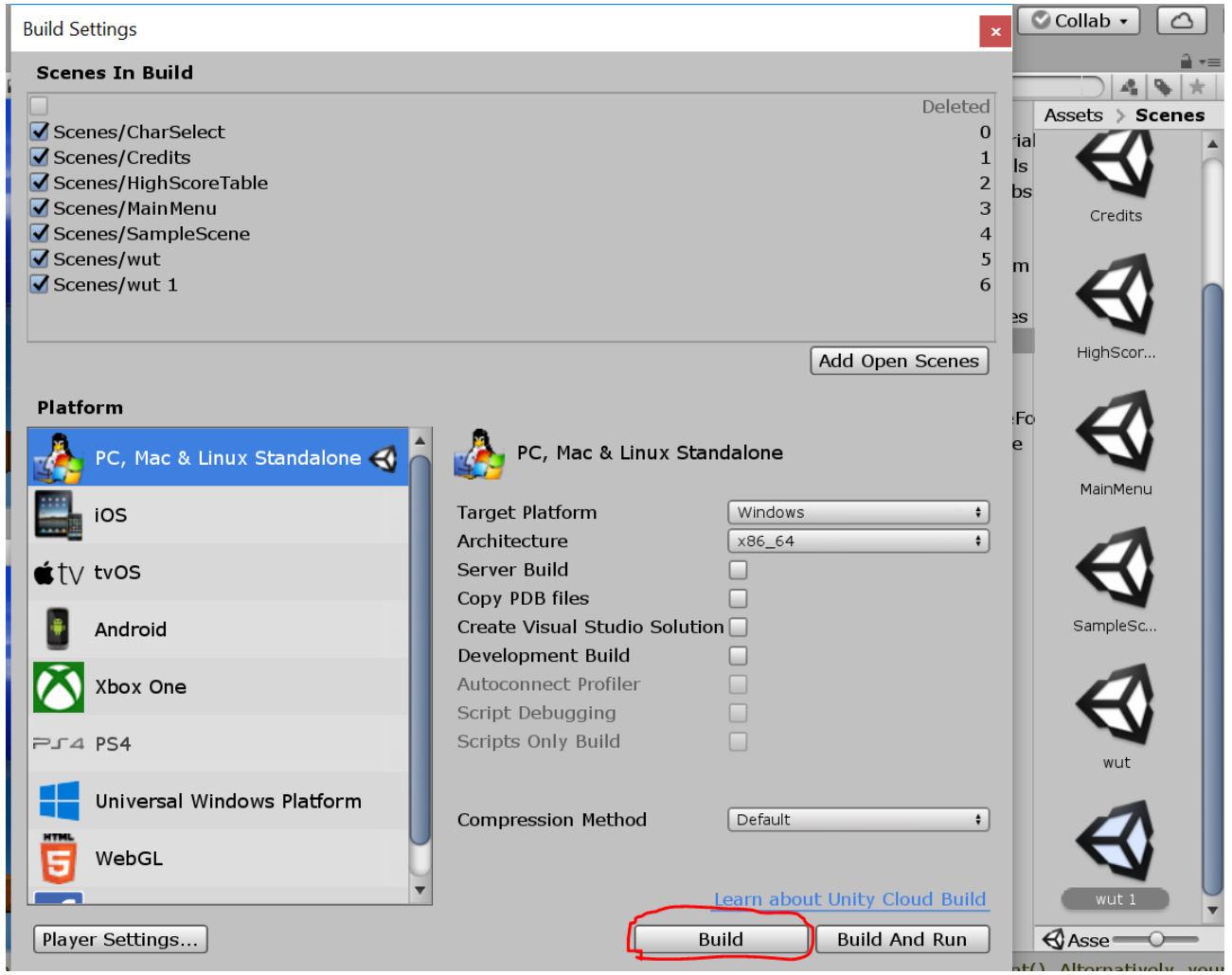
1. change the scene by double clicking
2. Then click Add Open Scene
3. Repeat till all Scenes are in the Build



UNITY Prep / Import Game

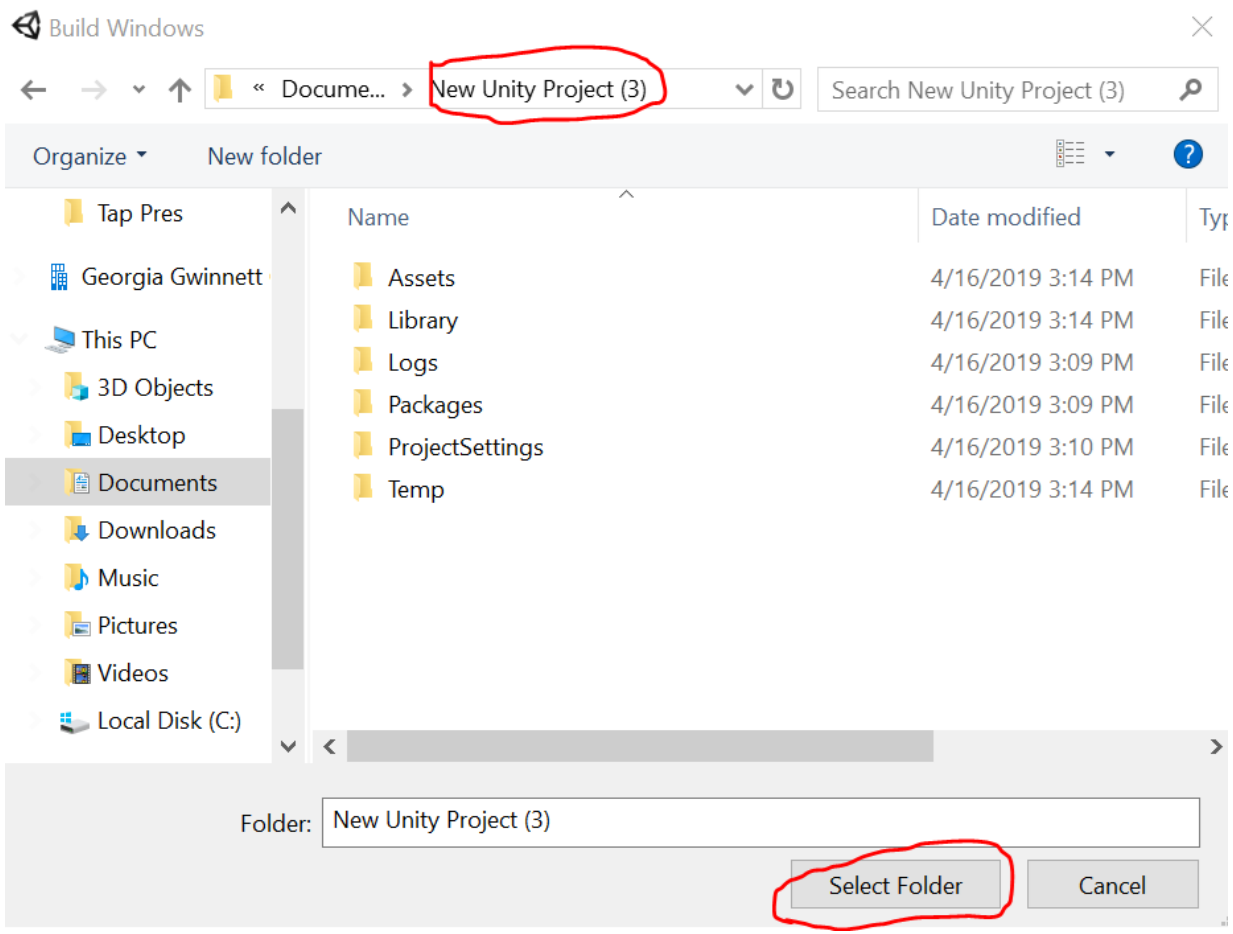
Should Look like this

Then click Build after all scenes are in build.



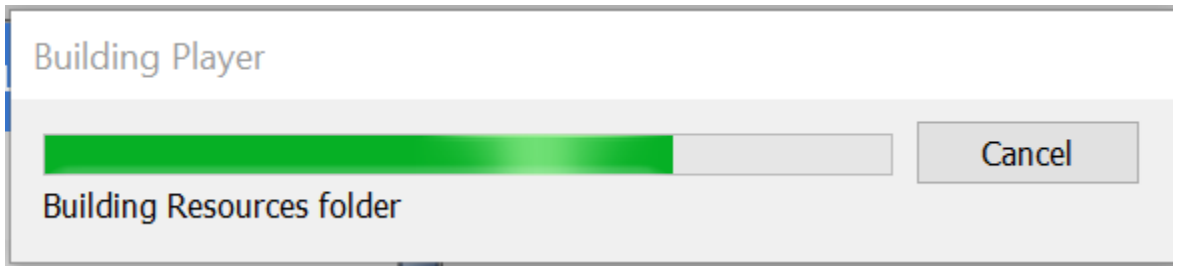
UNITY Prep / Import Game

1. Once you press Build this pops up.
2. You can just Click the folder name in the top bar.
3. Then press select folder to confirm.



UNITY Prep / Import Game

1. After loading it should be ready.

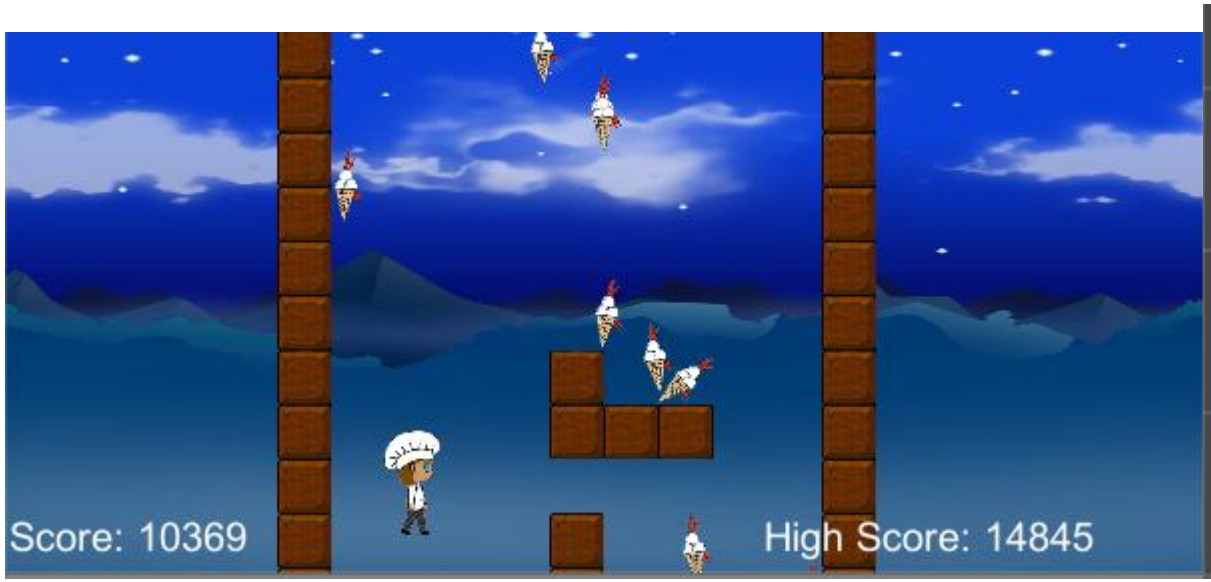


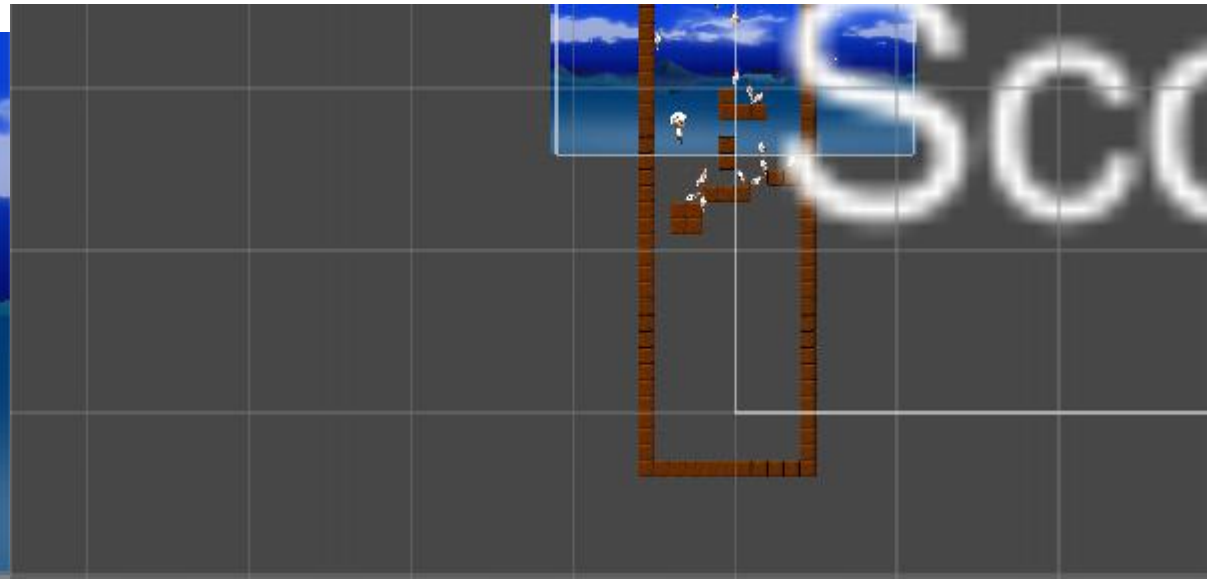
TAP

- TAP is a 3 credit hour course that you can take as an ITEC elective or free elective.
- TAP helps to improve leadership and communication skills and gives you the opportunity to work closely in a group and build strong peer relationships.

Lost in the Sauce

This game is an infinite wall jumping game where the player has to be on the wall or a platform to jump. The player must obtain as many points as possible until they fall below a certain point off the bottom of the screen.





Unity Overview

Unity is a game creating engine

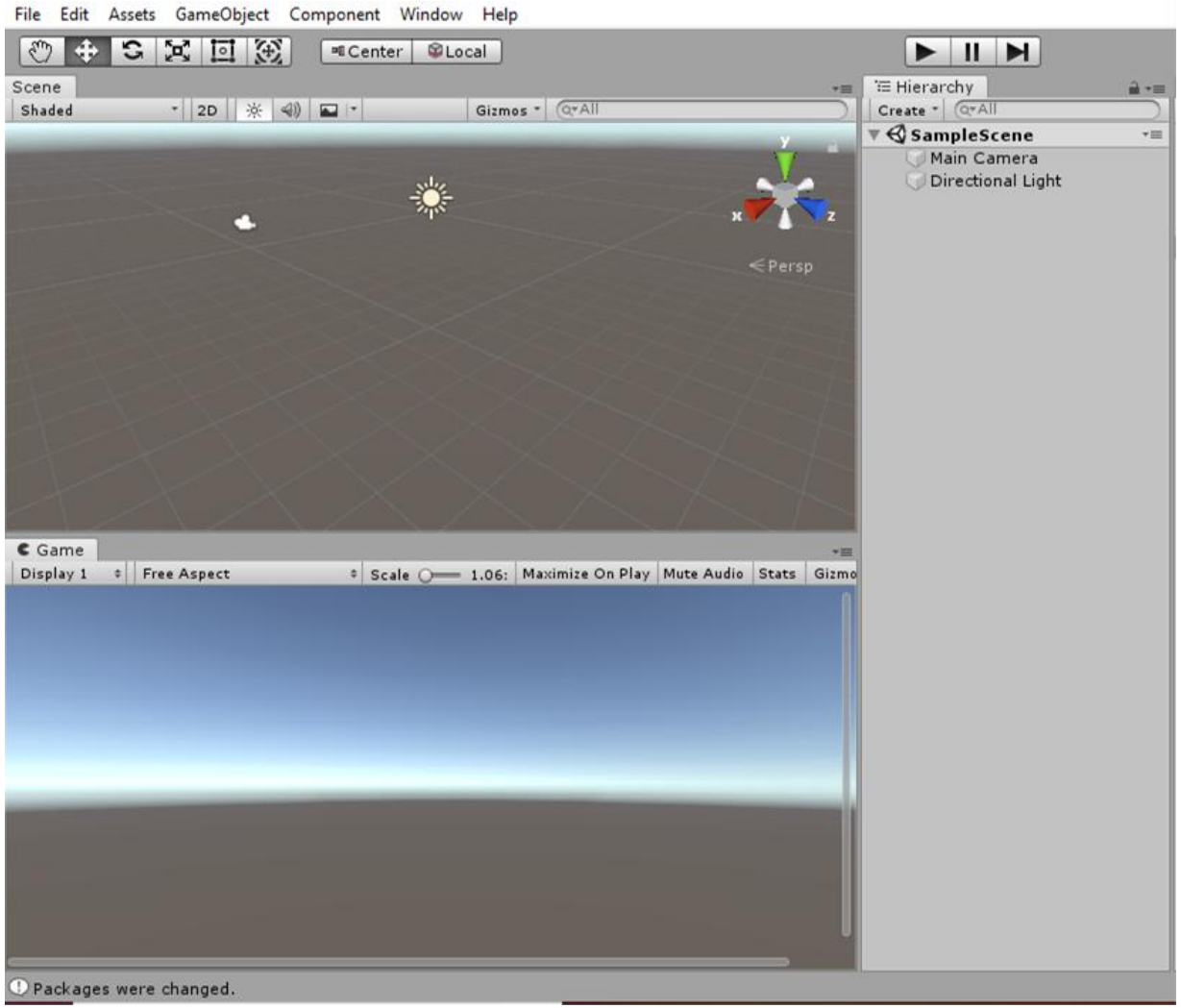
that provides many functions for

more easily creating games.

- Drag and drop an asset into the

  window to place it in the scene

- Import/Export assets
- Use of scripts (Programs)
- Allows easy playtesting
- Can modify values during test



Unity Overview Cont.

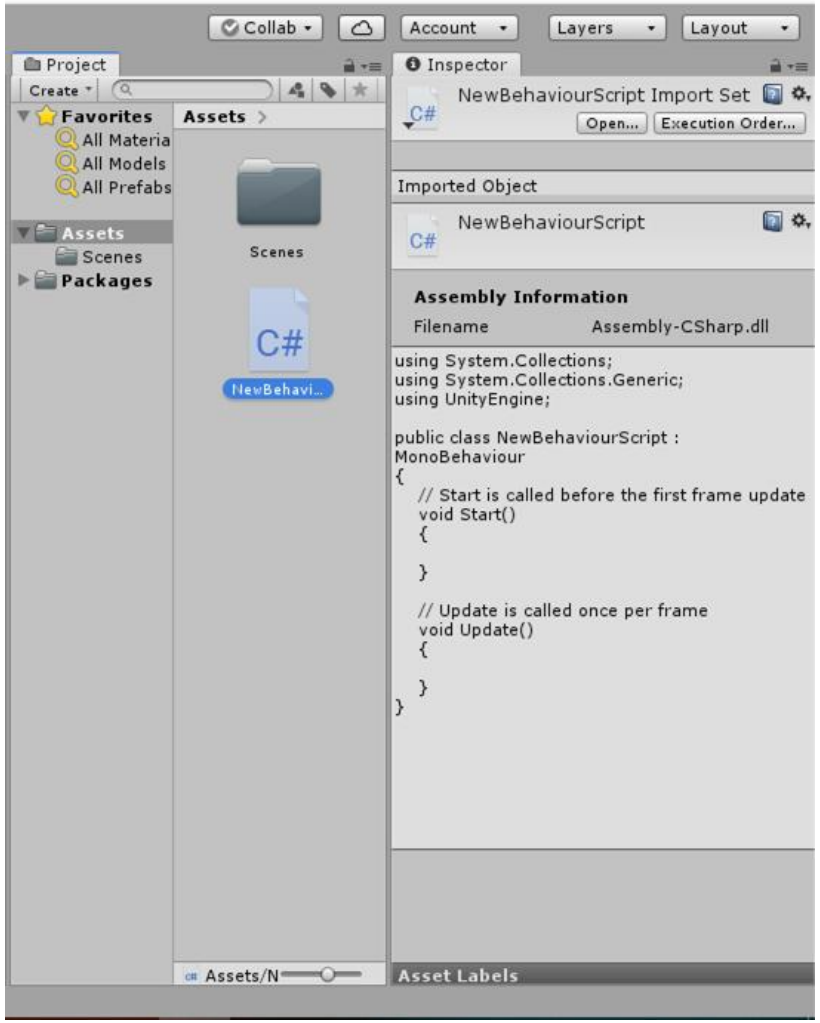
- Can organize assets to more easily access
- Can edit values inside script inside Inspector

  (But not the actual Program/script)

- Scripts support many predefined functions

  that serve as shortcuts to make

  programming certain things easier

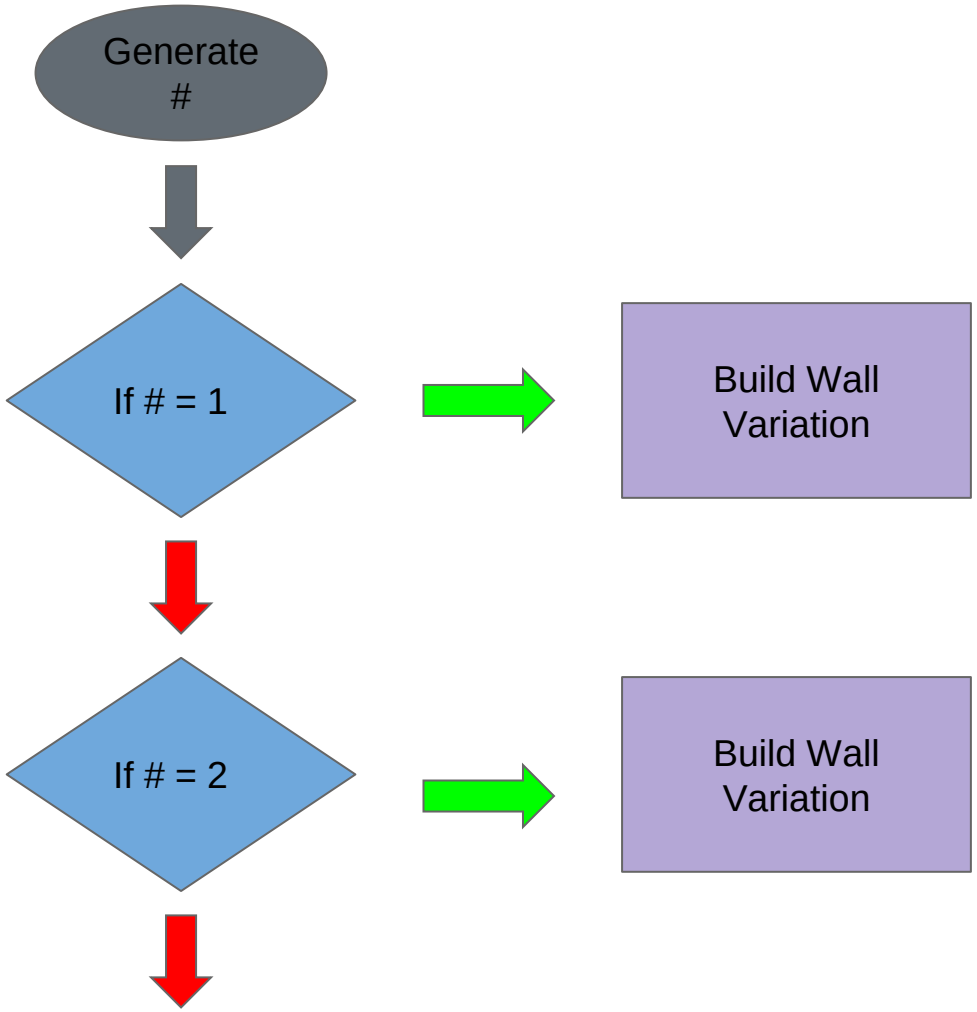


Generator

- The platforms are randomly generated based on what number randNum is given by Random.Range between numbers 0 - 20
- Its x coordinate will range from -6 to 4 because that is between the end walls

```
68      //WALLS (-6 Left --> -1 Middle --> 4 Right)
69      public void genPlatV2()
70      {
71          int y = highestYPoint + 10;
72          int randNum = Random.Range(0, 20);
73          print(randNum);
74          //wall combos
75          if (randNum == 1)
76          {
77              for (int lwx = -5; lwx <= -4; lwx++) //LeftWall
78                                                   //for (int x = -5; x <= 1; x++)
79              {
80                  Debug.Log("init left wall");
81                  platform = new Vector3Int(lwx, y, 0);
82                  Rendered.SetTile(platform, groundTile);
83                  Debug.Log("leftwall created");
84                  Debug.Log(x);
85              }
86              return;
87          }
88          else if (randNum == 3)
89          {
90
91              for (int rwx = 2; rwx <= 4; rwx++) //RightWall
92              {
93                  Debug.Log("init right wall");
94                  platform = new Vector3Int(rwx, y, 0);
95                  Rendered.SetTile(platform, groundTile);
96                  Debug.Log("rightwall executed");
97              }
98              return;
99          }
```

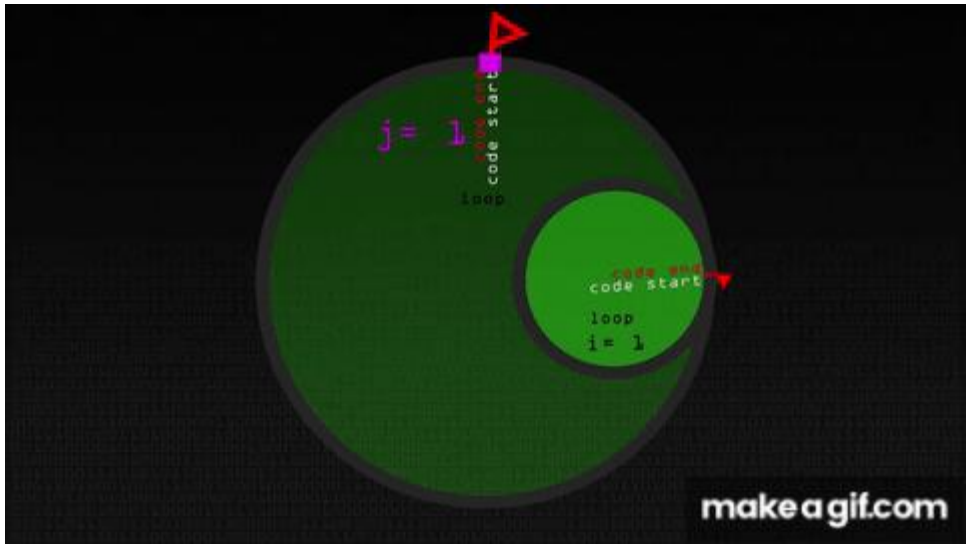
If Statement



Generator Cont

```
100     else if (randNum == 0 || randNum == 2 || randNum == 4 || randNum == 6 || randNum == 8 || randNum == 10 || randNum == 12 ||
101     {
102         Debug.Log("nothing");
103         int coinX = Random.Range(-5, 3);
104         coinSpawn = new Vector3Int(coinX, y, 0);
105         CoinTM.SetTile(coinSpawn, pointTile);
106         return; //Blank
107     }
108     else if (randNum == 5)
109     {
110
111         for (int mwx = -1; mwx <= 1; mwx++) //Right midWall
112         {
113             Debug.Log("init mid wall");
114             platform = new Vector3Int(mwx, y, 0);
115             Rendered.SetTile(platform, groundTile);
116         }
117         return;
118     }
119     else if (randNum == 7)
120     {
121
122         for (int mwx = -2; mwx <= -0; mwx++) //Left midWall
123         {
124             Debug.Log("init mid wall");
125             platform = new Vector3Int(mwx, y, 0);
126             Rendered.SetTile(platform, groundTile);
127         }
128         return;
```

For Loops



Generator Cont

- The y coordinate is based on the highest point the player has been during the run.

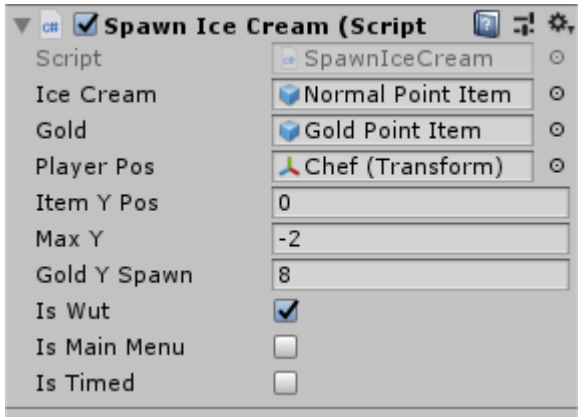
```
183     public void MaxHeight()
184     {
185         if (playerYPos > highestYPoint)
186         {
187             highestYPoint = playerYPos;
188             genPlatV2();
189
190         }
```

Public Values

DestroyerScript.cs | SpawnIceCream.cs* | HighScoreScript.cs

Assembly-CSharp | SpawnIceCream

```
1  using System.Collections;
2  using System.Collections.Generic;
3  using UnityEngine;
4
5  public class SpawnIceCream : MonoBehaviour
6  {
7      public GameObject iceCream;
8      public GameObject gold;
9      public Transform playerPos;
10     public int itemYPos;
11     public int maxY = -2;
12     public int goldYSpawn = 8;
13     public bool isWut;
14     public bool isMainMenu;
15     public bool isTimed;//Comment out to see it disappear in Inspector
16     private float timeCount = 0.0f;
17     private float timeThreshold = 0.0f;
18     private int totalIceCream;
19
```



DestroyerScript.cs | SpawnIceCream.cs* | HighScoreScript.cs

Assembly-CSharp | SpawnIceCream

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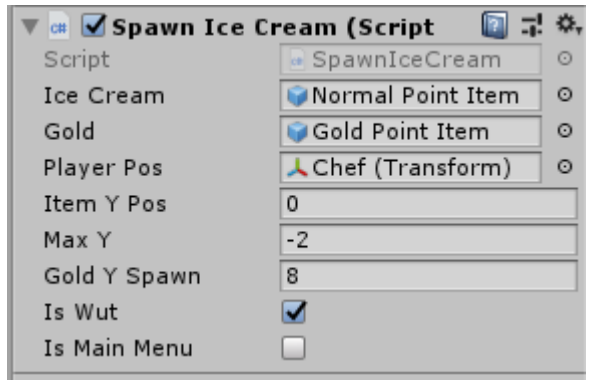
16     private float timeCount = 0.0f;
17     private float timeThreshold = 0.0f;
18     private int totalIceCream;
```



OnCollision

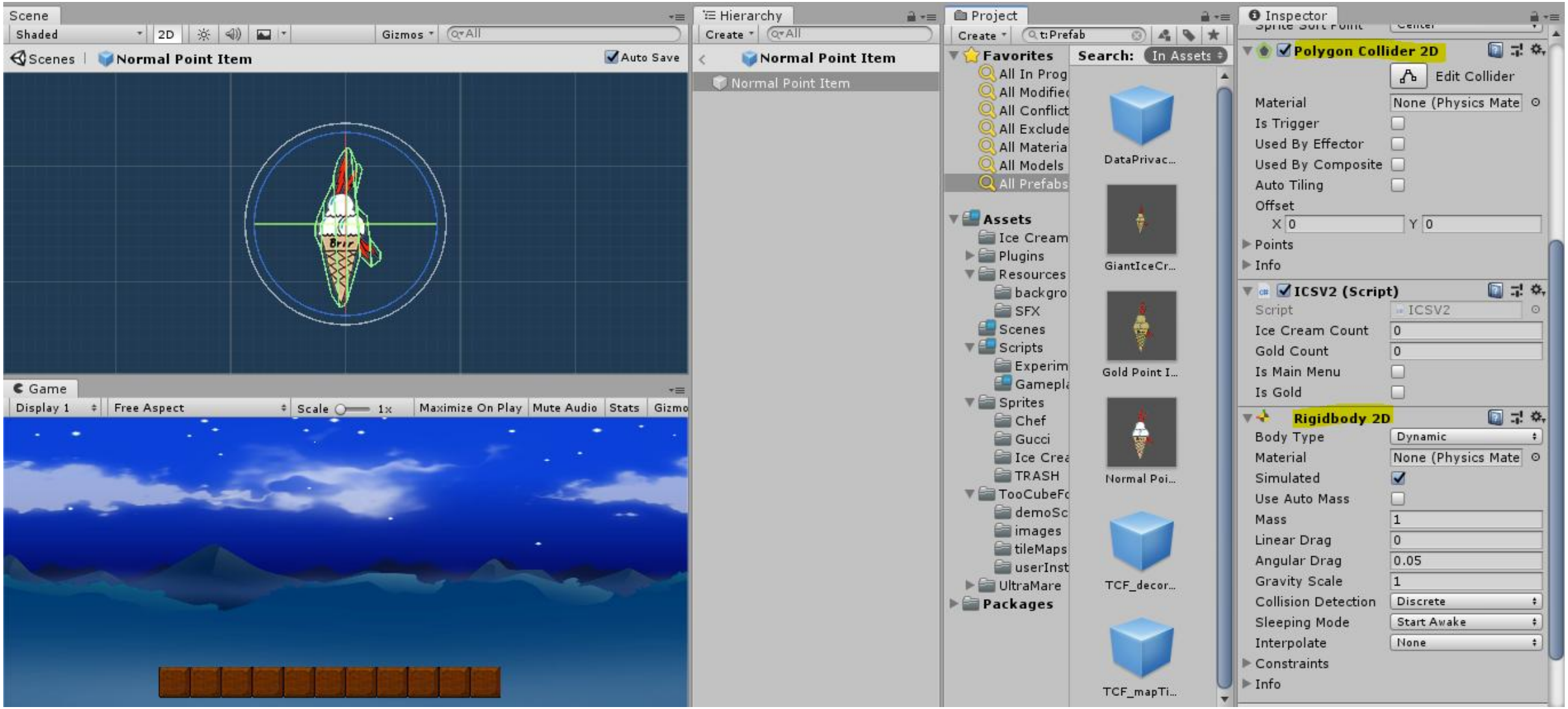
- A premade function in Unity
- If something touches the object, then the method inside Collision is triggered
- Needs a Collider or Rigidbody2D to function

ICSV2.cs | Generator.cs | SpawnIceCream.cs

Assembly-CSharp | ICSV2 | iceCream

```
19                  Destroy(this.gameObject);
20              }
21          }
22          if(isMainMenu)
23          {
24              int minY = -100;
25              if((int)gameObject.transform.position.y < minY)
26              {
27                  Destroy(this.gameObject);
28              }
29          }
30      }
31
32      void OnCollisionEnter2D(Collision2D col)
33      {
34          if (col.gameObject.tag == "Player" && !isGold)
35          {
36              iceCreamCount = PlayerPrefs.GetInt("IceCream");
37              iceCreamCount += 1;
38              PlayerPrefs.SetInt("IceCream", iceCreamCount);
39              PlayerPrefs.SetInt("PrefabCount", PlayerPrefs.GetInt("PrefabCount") - 1);
40              Destroy(this.gameObject);
41          }
42          else if(isGold)
43          {
44              goldCount = PlayerPrefs.GetInt("Gold");
45              goldCount += 1;
46              PlayerPrefs.SetInt("Gold", goldCount);
47              Destroy(this.gameObject);
48          }
49      }
50  }
51
```

OnCollision Cont



Values to Modify : Player Movement

- Chef → Player Control
- The Player's movement can be

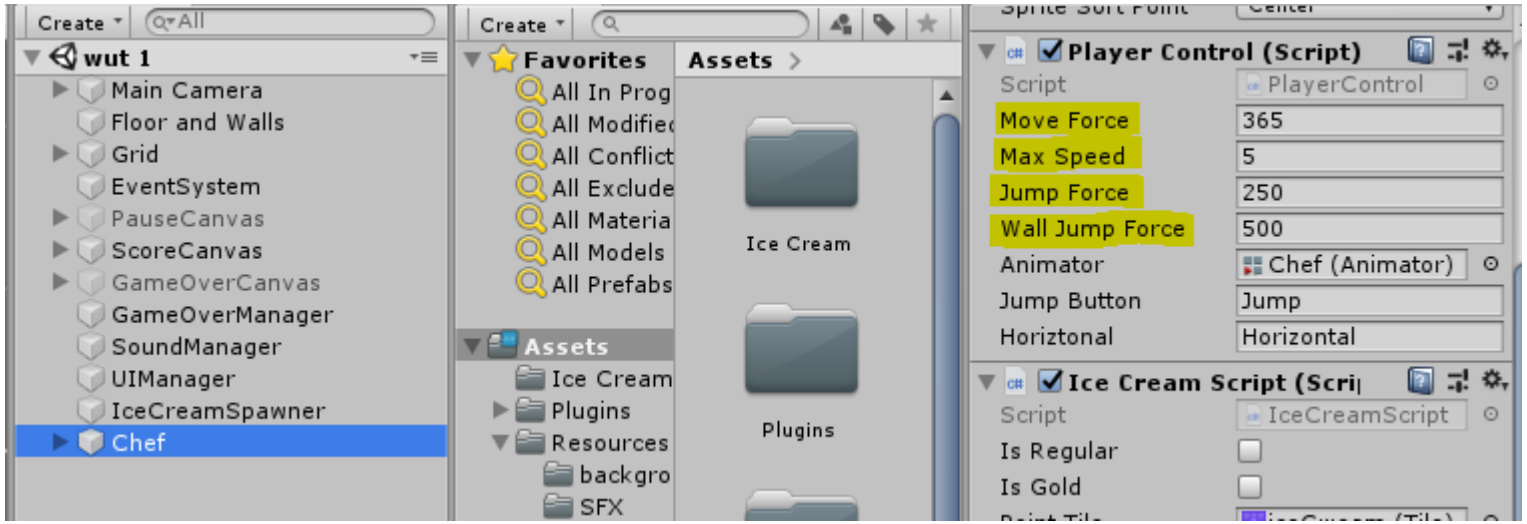
Increased or decreased by modifying The highlighted values.

- You can start by changing the

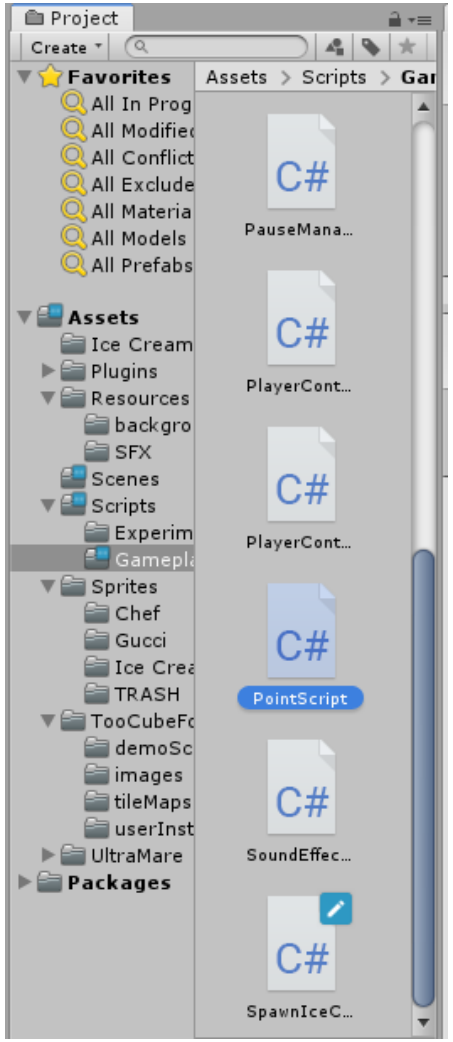
Move Force to a high value like 900, which will make them move very fast.

- You can change some of the other

Values to see what other changes will Happen.



PointScript Modification



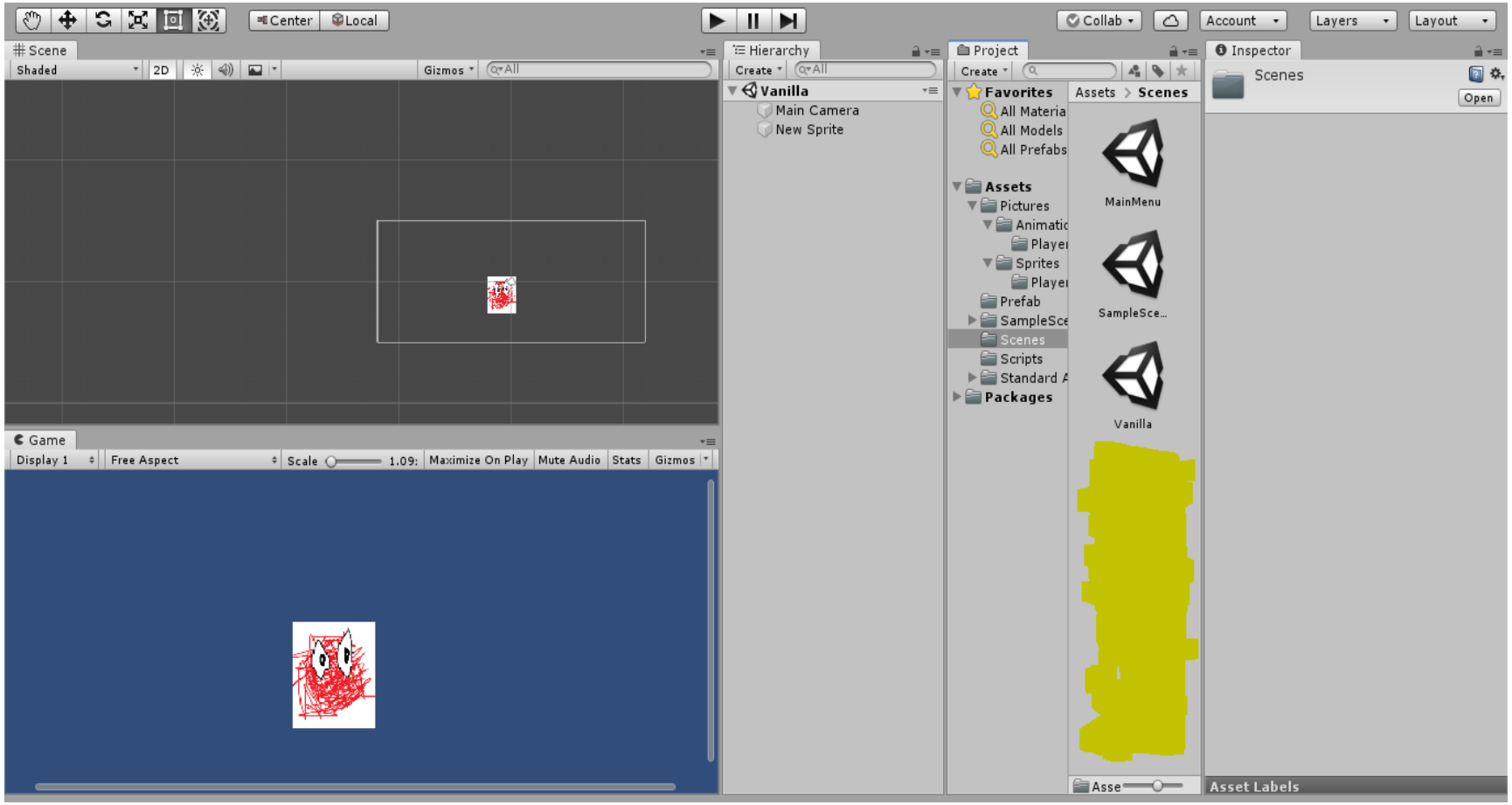
PointScript.cs | ICSV2.cs | DestroyerScript.cs | SpawnIceCream.cs | HighScoreScri

Assembly-CSharp | PointScript

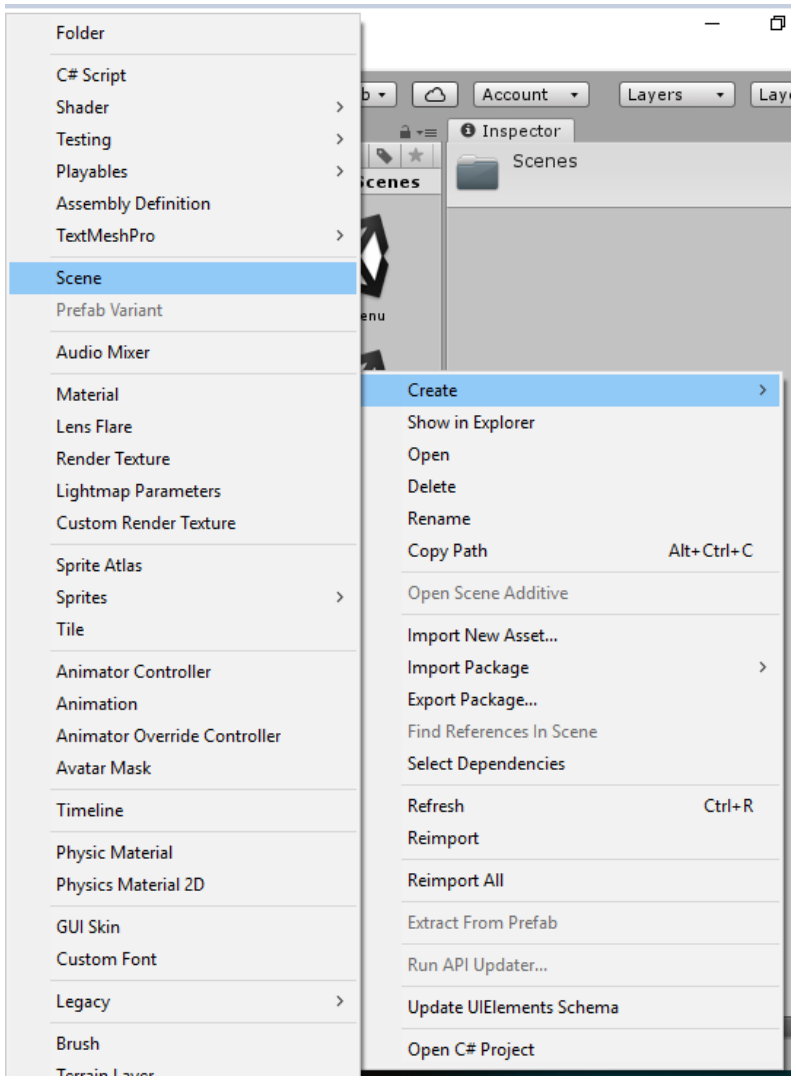
```
46                  }
47                  score.text = "High Score: " + points;
48                  points = 0;
49              }
50          }
51
52          void Update()
53          {
54              IceCreamScript ics = new IceCreamScript();
55              HighScoreScript hss = new HighScoreScript();
56              minY = maxY - 3;
57              print(PlayerPrefs.GetInt("Gold"));
58              gameOver = PlayerPrefs.GetString("GameOver");
59              iceCreamCount = PlayerPrefs.GetInt("IceCream");
60              goldCount = PlayerPrefs.GetInt("Gold");
61              int iceCreamPoints = iceCreamCount * 350 + goldCount * 3000;
62              totalPoints = points + iceCreamPoints;
63              if (isScore)
64              {
65                  score.text = "Score: " + totalPoints;
66              }
```

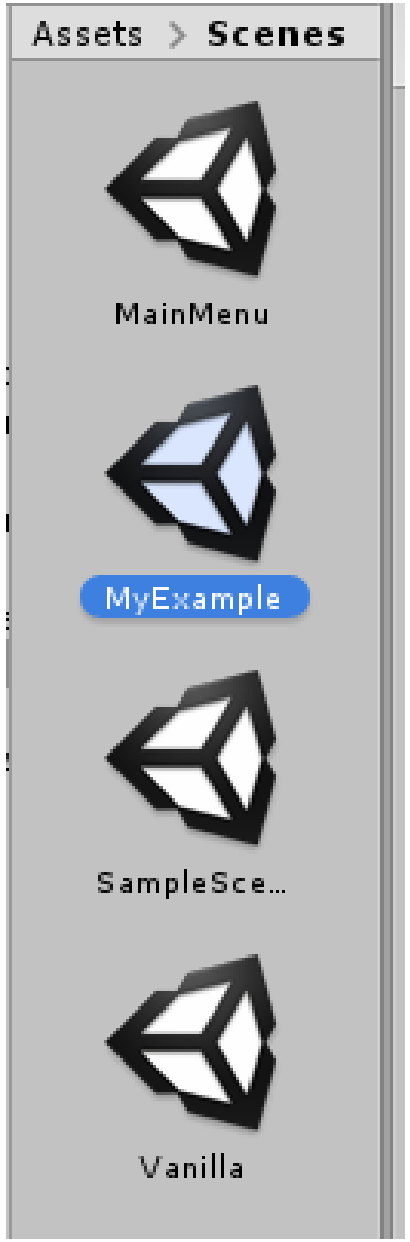
Coding

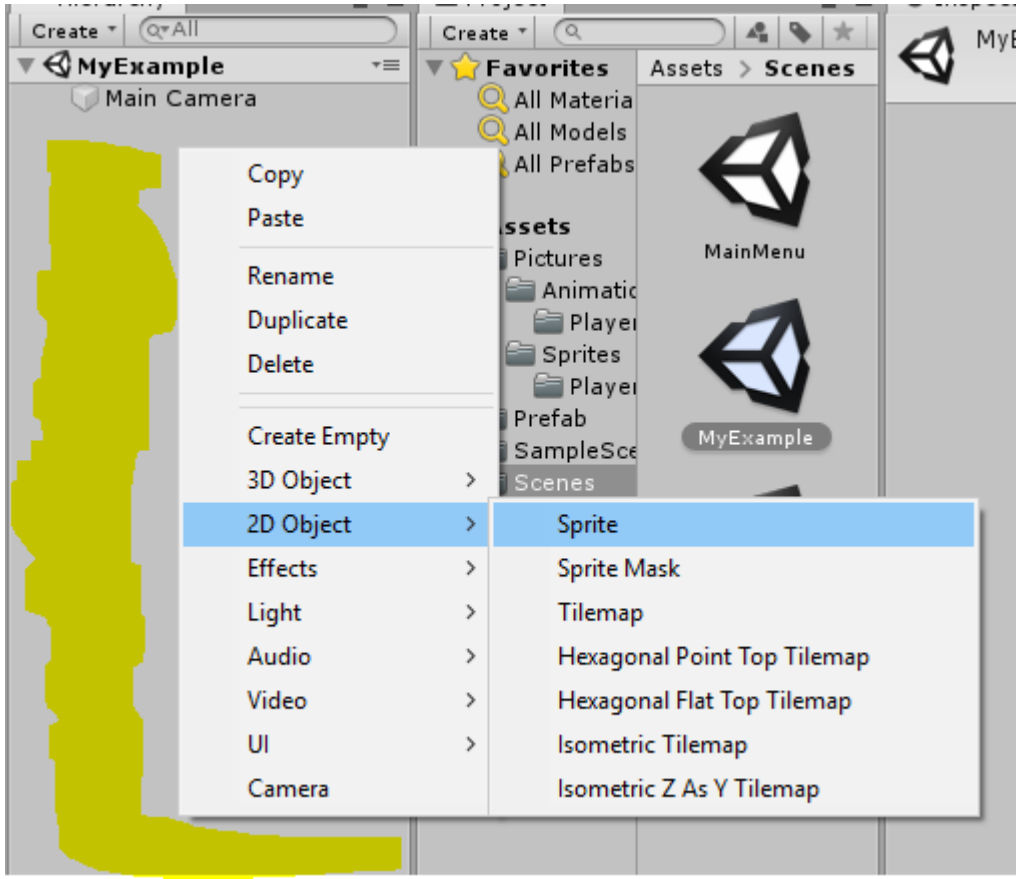
Right click in the Highlighted area.



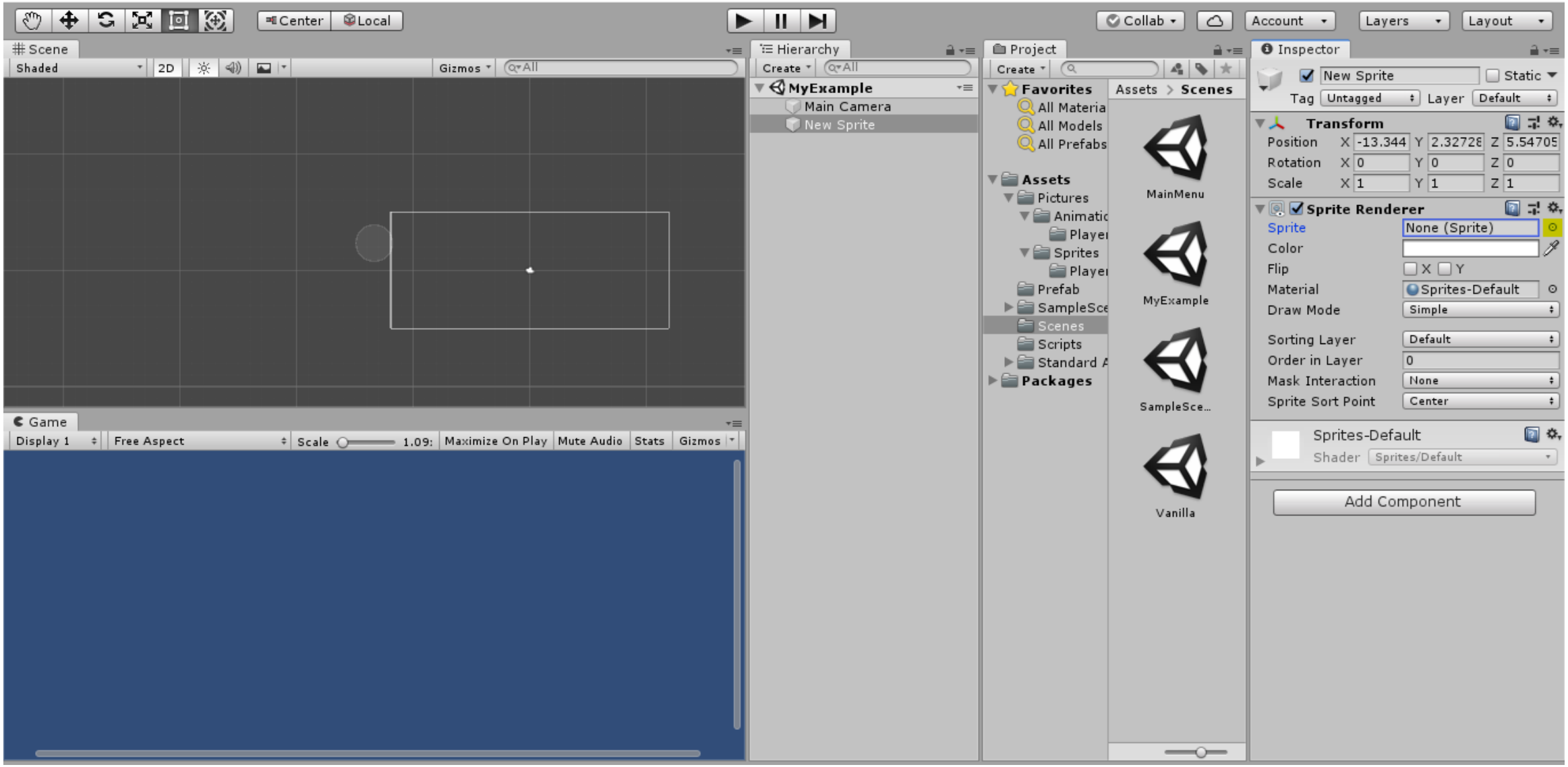
Coding Cont


Folder
C# Script
Shader
Testing
Playables
Assembly Definition
TextMeshPro
Scene
Prefab Variant
Audio Mixer
Material
Lens Flare
Render Texture
Lightmap Parameters
Custom Render Texture
Sprite Atlas
Sprites
Tile
Animator Controller
Animation
Animator Override Controller
Avatar Mask
Timeline
Physic Material
Physics Material 2D
GUI Skin
Custom Font
Legacy
Brush
Account
Layers
Inspector
Scenes
Create
Show in Explorer
Open
Delete
Rename
Copy Path Alt+Ctrl+C
Open Scene Additive
Import New Asset...
Import Package
Export Package...
Find References In Scene
Select Dependencies
Refresh Ctrl+R
Reimport
Reimport All
Extract From Prefab
Run API Updater...
Update UIElements Schema
Open C# Project

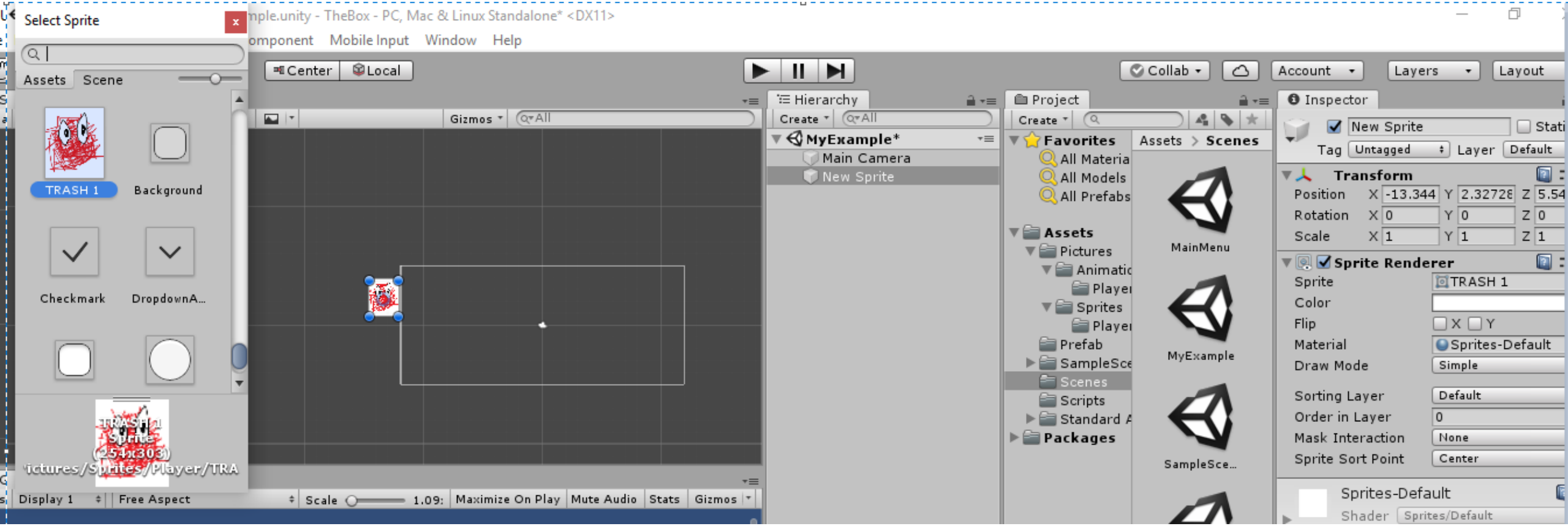

Assets > Scenes
MainMenu
MyExample
SampleSce...
Vanilla


Create
MyExample
Main Camera
Favorites
All Materia
All Models
All Prefabs
Assets > Scenes
Pictures
Prefab
Scenes
MainMenu
MyExample
Copy
Paste
Rename
Duplicate
Delete
Create Empty
3D Object
2D Object
Effects
Light
Audio
Video
UI
Camera
Sprite
Sprite Mask
Tilemap
Hexagonal Point Top Tilemap
Hexagonal Flat Top Tilemap
Isometric Tilemap
Isometric Z As Y Tilemap

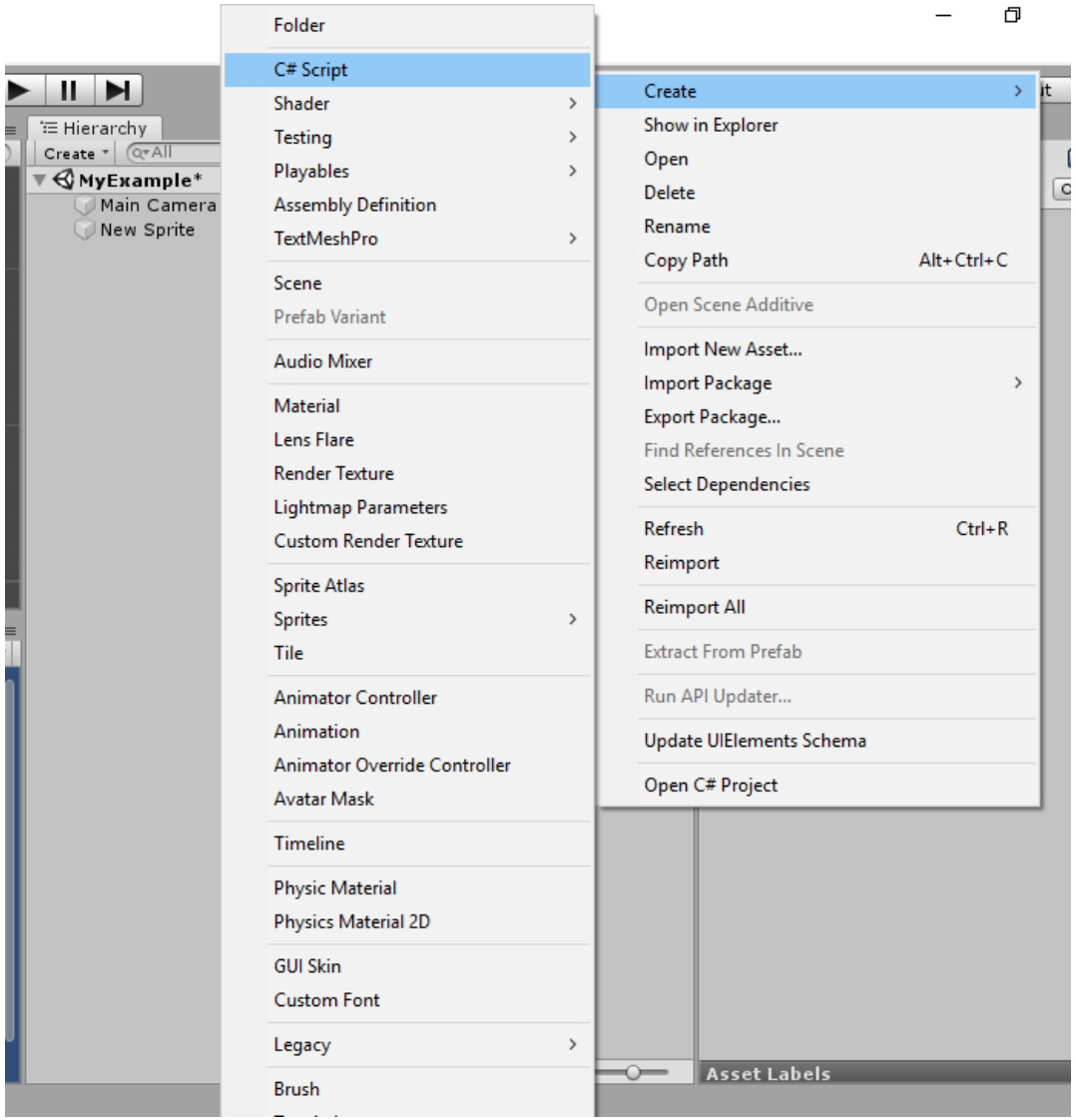
Coding: Adding a Sprite

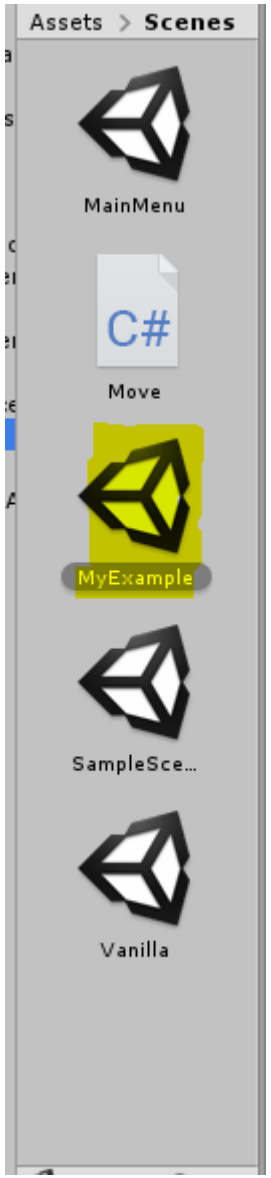


Coding: Select a Sprite

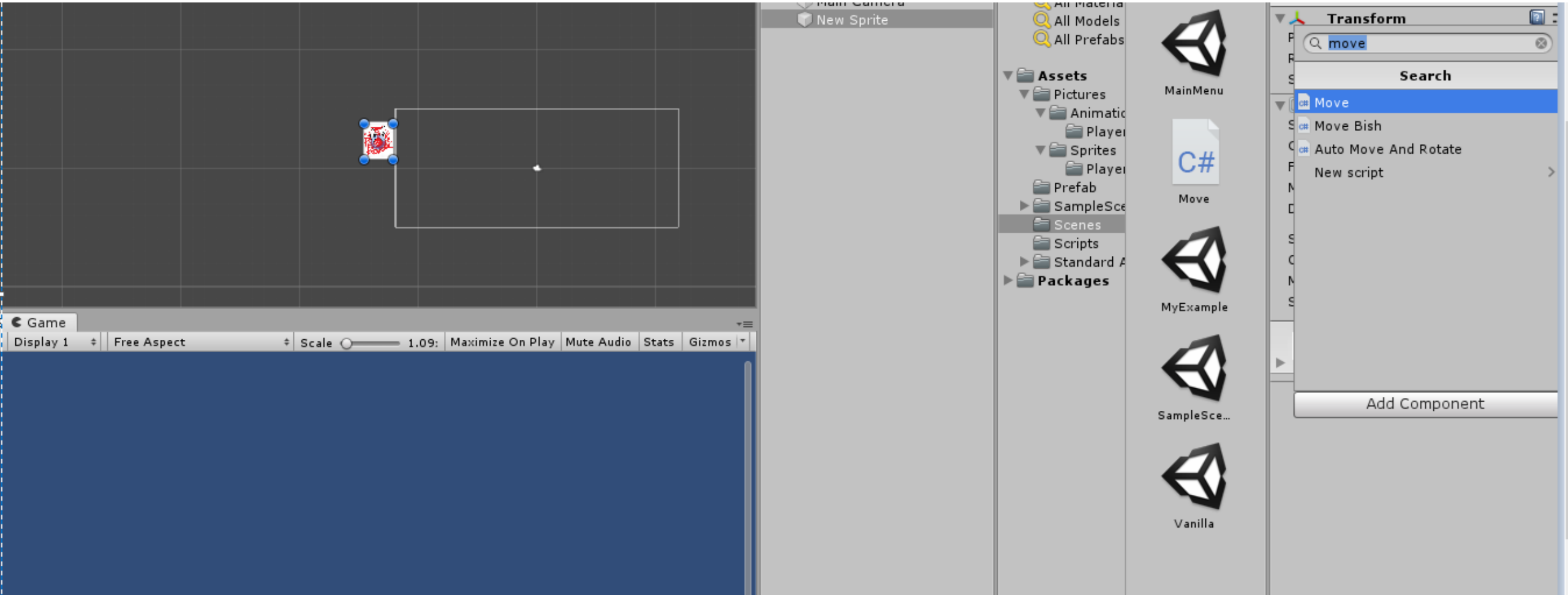


Coding: Adding a Script



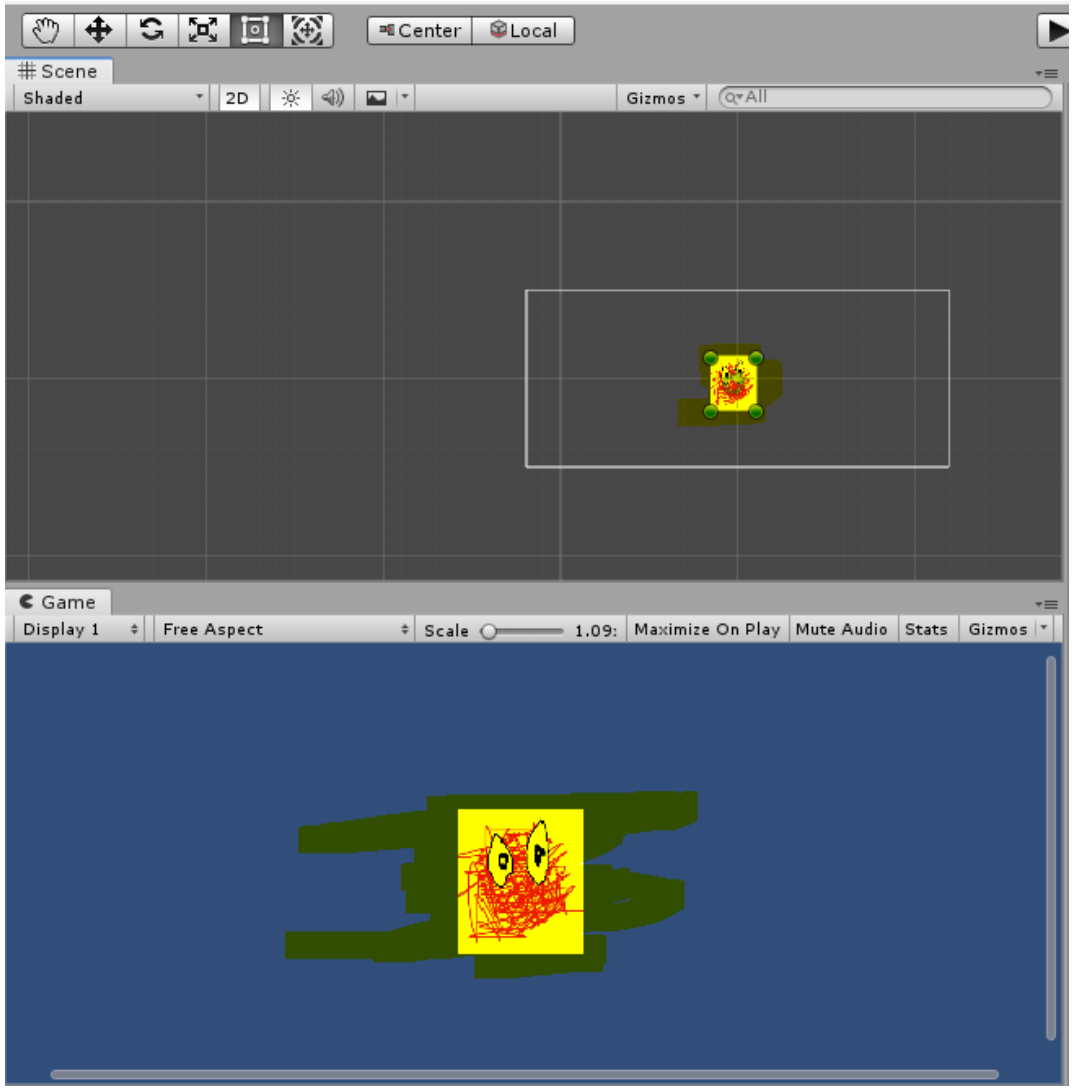


Coding: Adding in the Script to an Object

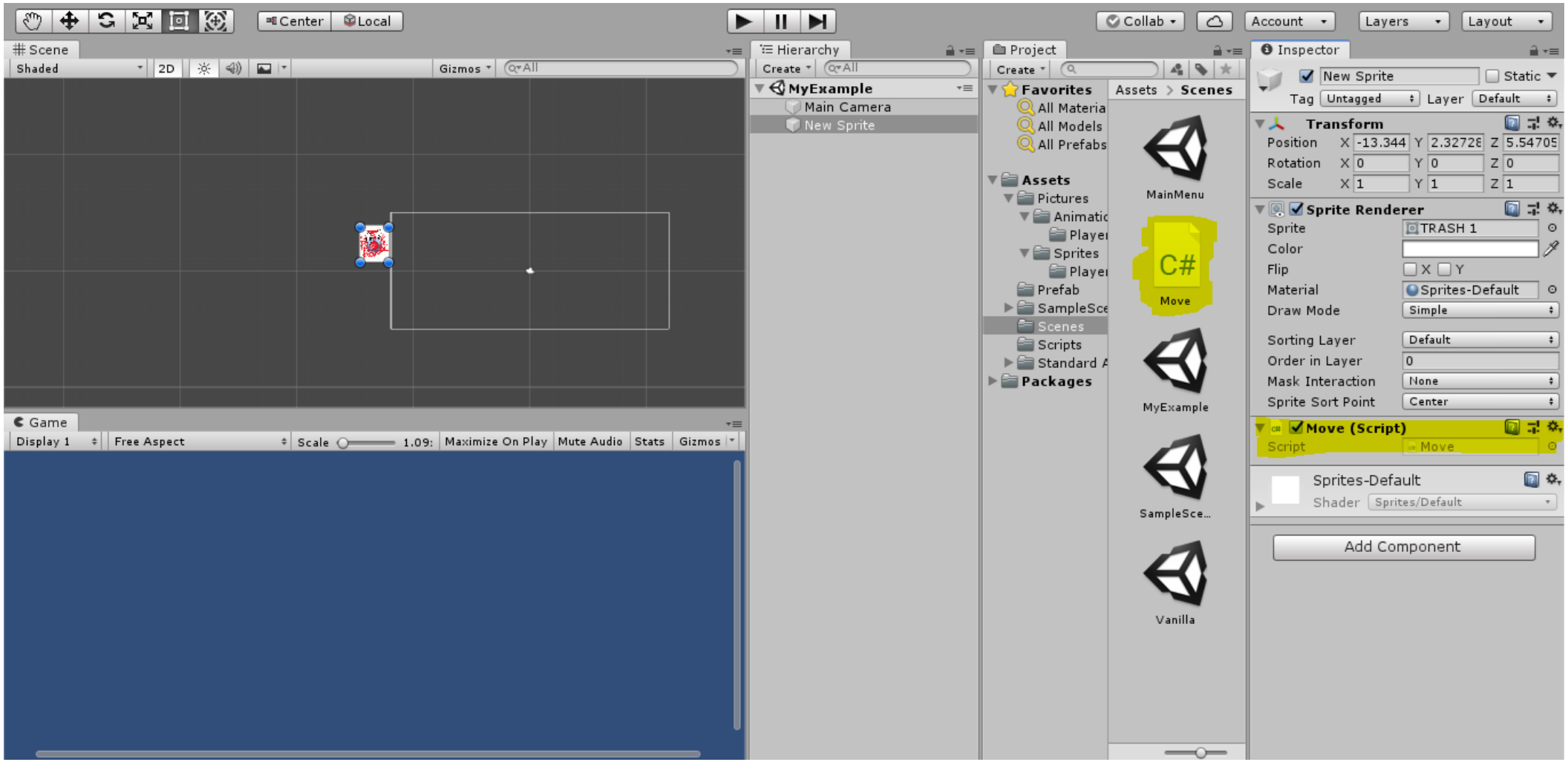


Coding: Displaced Object

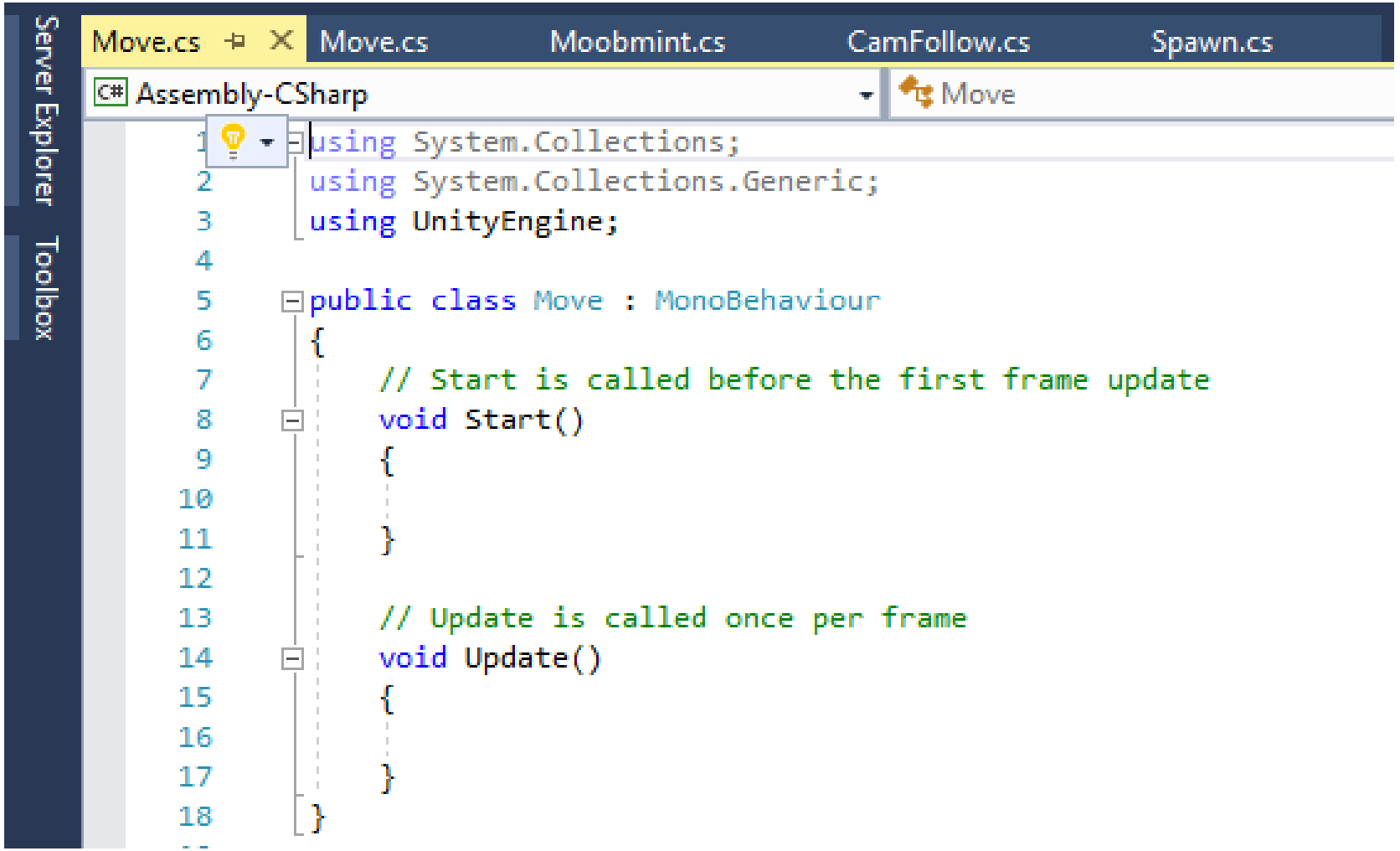
Make sure your object is in the camera view. If not, then move it into the camera view.



Coding: Adding the Script to an Object



Coding: Visual Studio



Coding: Adding Code

Move.cs | Moobmint.cs | CamFollow.cs | Spawn.cs

Assembly-CSharp | Move

```
1   using System.Collections;
2   using System.Collections.Generic;
3   using UnityEngine;
4
5   public class Move : MonoBehaviour
6   {
7       // Start is called before the first frame update
8       void Start()
9       {
10
11      }
12
13      // Update is called once per frame
14      void Update()
15      {
16          float horizontal = Input.GetAxis("Horizontal");
17          float vertical = Input.GetAxis("Vertical");
18          Vector2 position = transform.position;
19          position.x = position.x + 0.1f * horizontal;
20          position.y = position.y + 0.1f * vertical;
21          transform.position = position;
22      }
23  }
```

```
float horizontal = Input.GetAxis("Horizontal");
float vertical = Input.GetAxis("Vertical");
Vector2 position = transform.position;
position.x = position.x + 0.1f * horizontal;
position.y = position.y + 0.1f * vertical;
transform.position = position;
```

Coding: Adding Code Cont

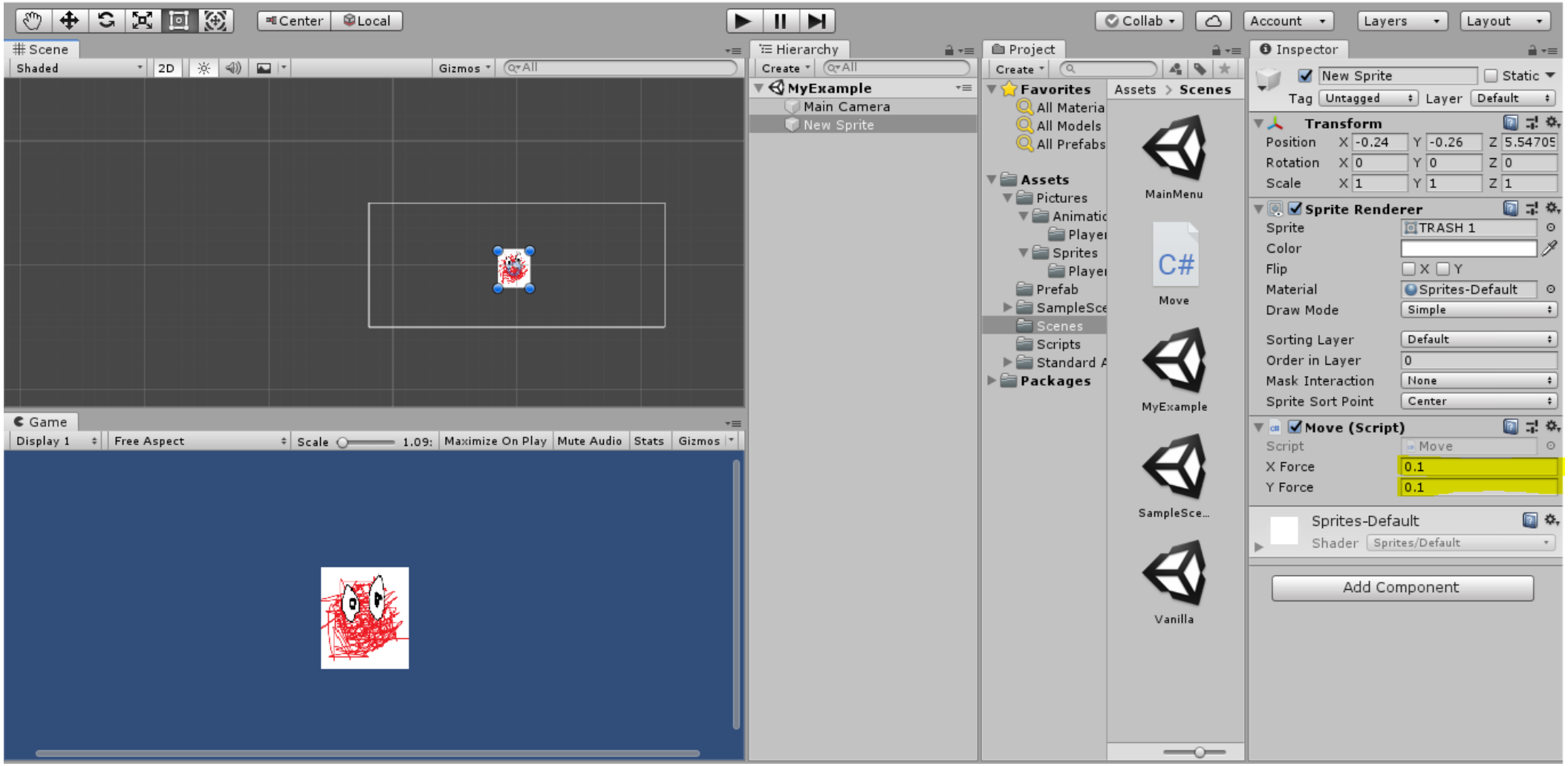
Move.cs | Moobmint.cs | CamFollow.cs | Spawn.cs

Assembly-CSharp | Move

```
1   using System.Collections;
2   using System.Collections.Generic;
3   using UnityEngine;
4
5   public class Move : MonoBehaviour
6   {
7       public float xForce = 0.1f;
8       public float yForce = 0.1f;
9       // Start is called before the first frame update
10      void Start()
11      {
12
13      }
14
15      // Update is called once per frame
16      void Update()
17      {
18          float horizontal = Input.GetAxis("Horizontal");
19          float vertical = Input.GetAxis("Vertical");
20          Vector2 position = transform.position;
21          position.x = position.x + xForce * horizontal;
22          position.y = position.y + yForce * vertical;
23          transform.position = position;
24      }
25  }
26
```

```
public class Move : MonoBehaviour
{
    public float xForce = 0.1f;
    public float yForce = 0.1f;
    // Start is called before the first frame update
    void Update()
    {
        float horizontal = Input.GetAxis("Horizontal");
        float vertical = Input.GetAxis("Vertical");
        Vector2 position = transform.position;
        position.x = position.x + xForce * horizontal;
        position.y = position.y + yForce * vertical;
        transform.position = position;
    }
```

Coding: Modifiable Values



Questions and Answers

Post-Activity Survey

https://tinyurl.com/y36kpaop

Brittany, Edgar, Taisann