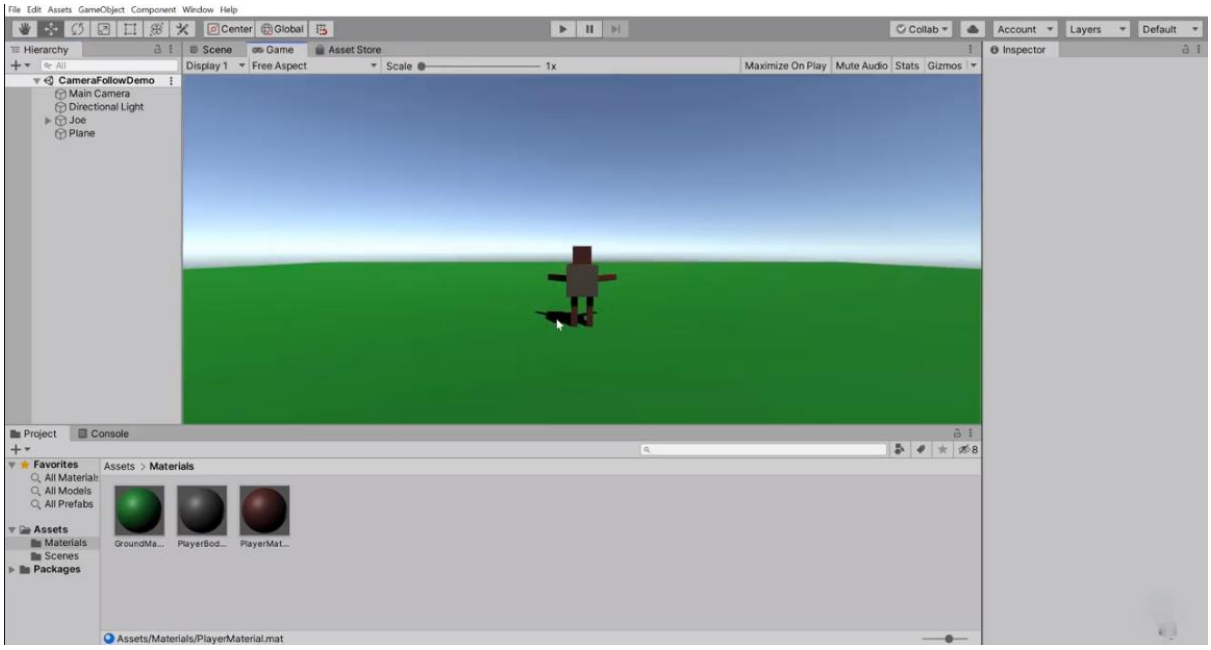
CAMERA FOLLOWING AN OBJECTS MOVEMENT

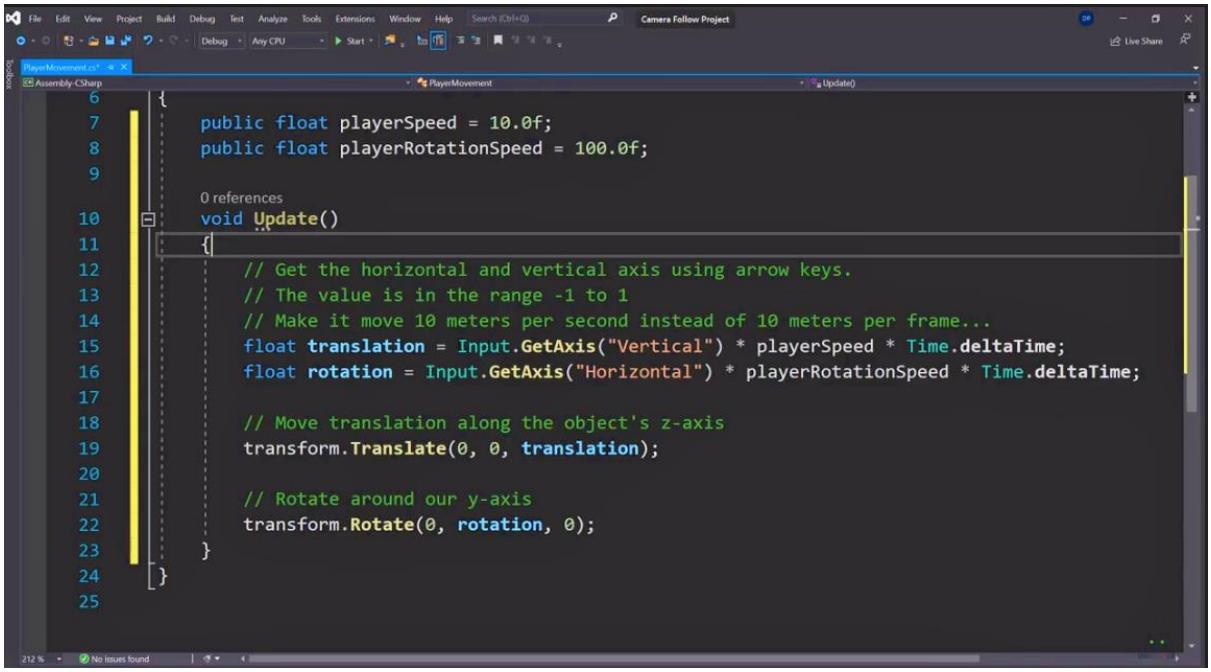
Akshat Singh-20BCG10037

Nehal Pal-20BCG10070

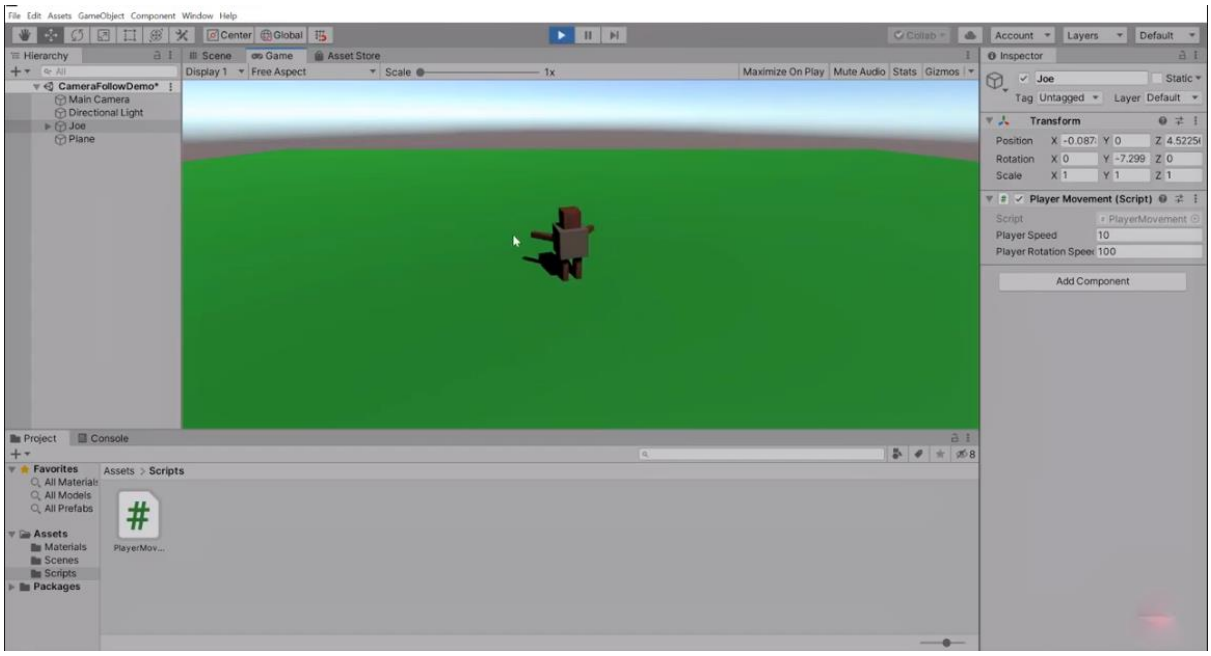
Creating an object and Plane surface.



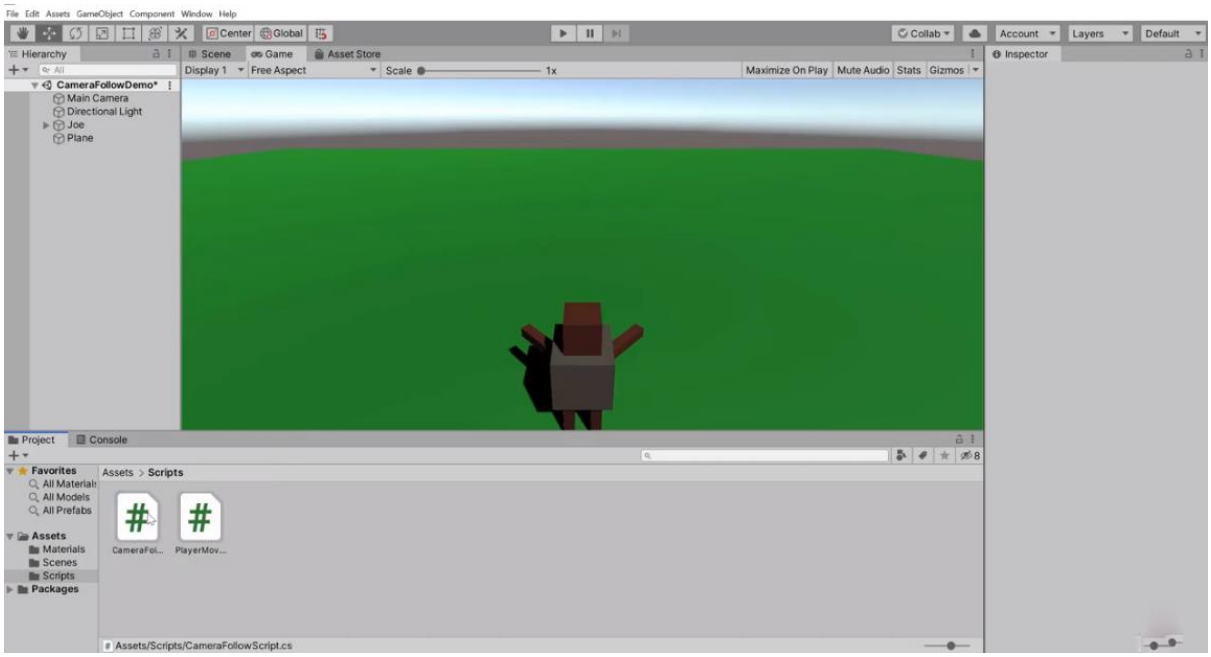
Codes for moving the object on the Plane created



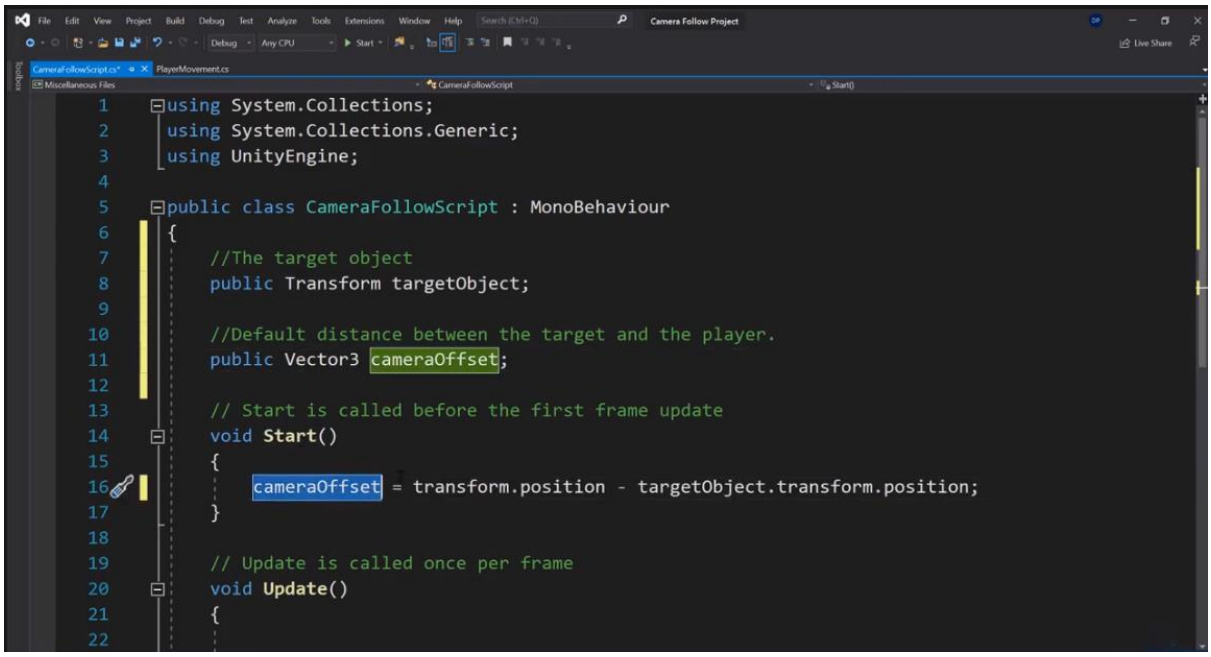
Testing the object movement by looking at the X, Y, Z axis as the initial were (0,0,0)



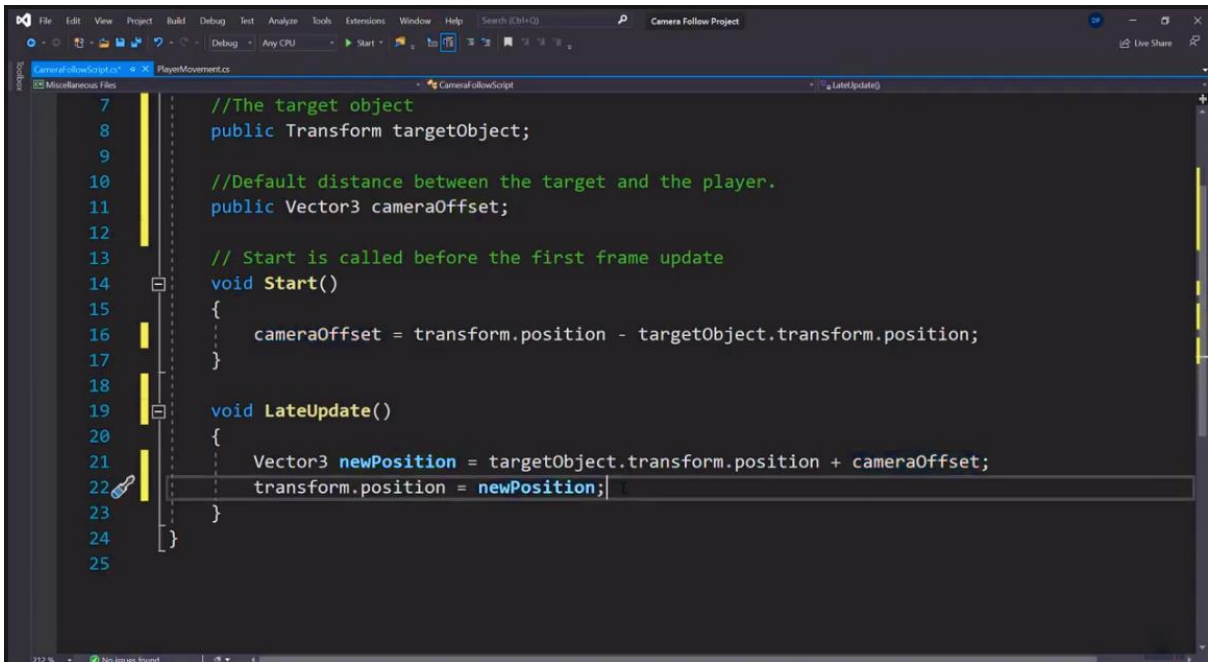
Adding a script for Camera



Script for camera

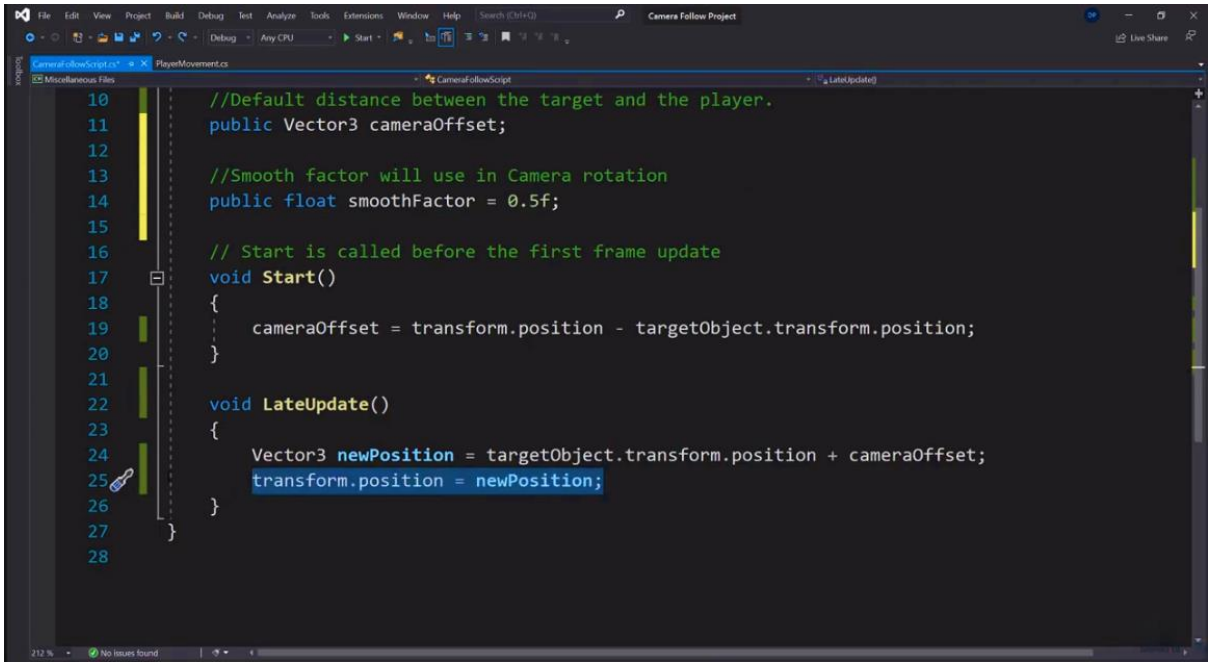


```
using System.Collections;
using System.Collections.Generic;
using UnityEngine;

public class CameraFollowScript : MonoBehaviour
{
    //The target object
    public Transform targetObject;

    //Default distance between the target and the player.
    public Vector3 cameraOffset;

    // Start is called before the first frame update
    void Start()
    {
        cameraOffset = transform.position - targetObject.transform.position;
    }

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



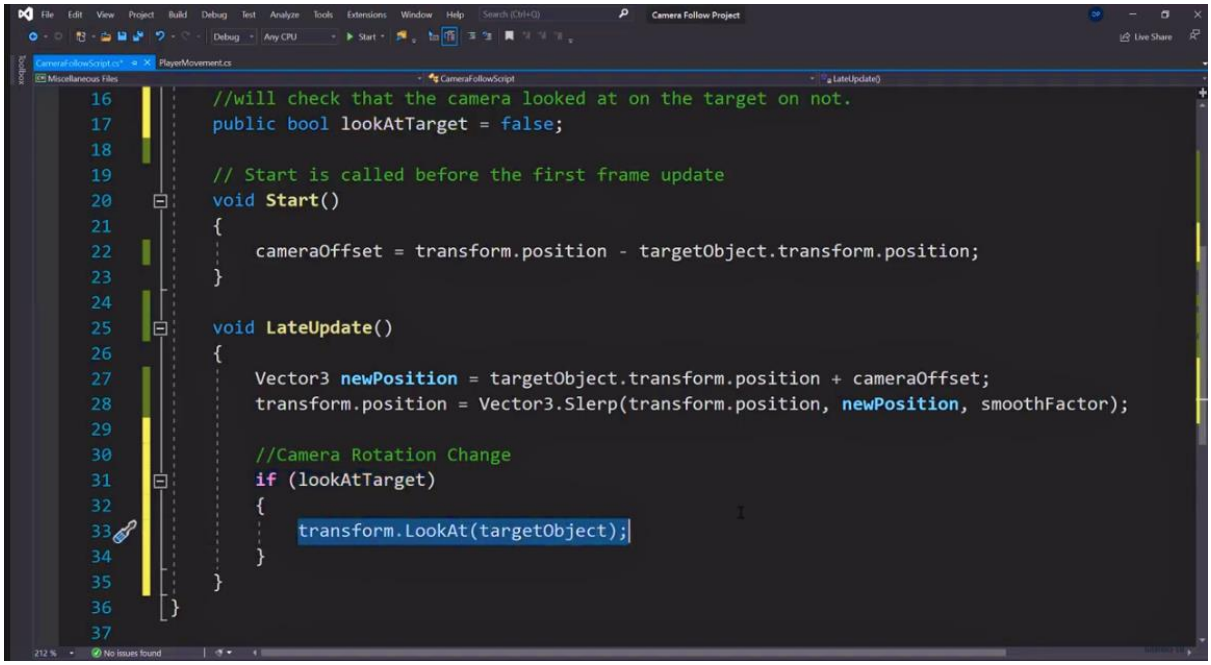
```
    //The target object
    public Transform targetObject;

    //Default distance between the target and the player.
    public Vector3 cameraOffset;

    // Start is called before the first frame update
    void Start()
    {
        cameraOffset = transform.position - targetObject.transform.position;
    }

    void LateUpdate()
    {
        Vector3 newPosition = targetObject.transform.position + cameraOffset;
        transform.position = newPosition;
    }
}
```

Adding a smooth factor



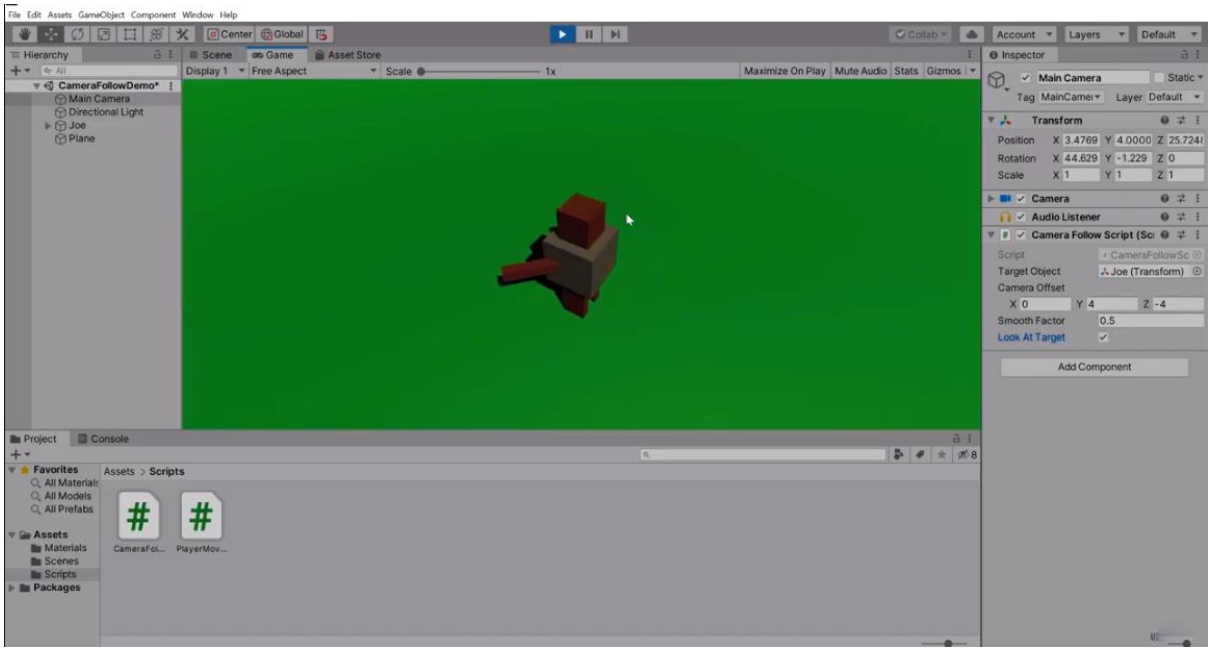
```
10      //Default distance between the target and the player.
11      public Vector3 cameraOffset;
12
13      //Smooth factor will use in Camera rotation
14      public float smoothFactor = 0.5f;
15
16      // Start is called before the first frame update
17      void Start()
18      {
19          cameraOffset = transform.position - targetObject.transform.position;
20      }
21
22      void LateUpdate()
23      {
24          Vector3 newPosition = targetObject.transform.position + cameraOffset;
25          transform.position = newPosition;
26      }
27  }
28
```

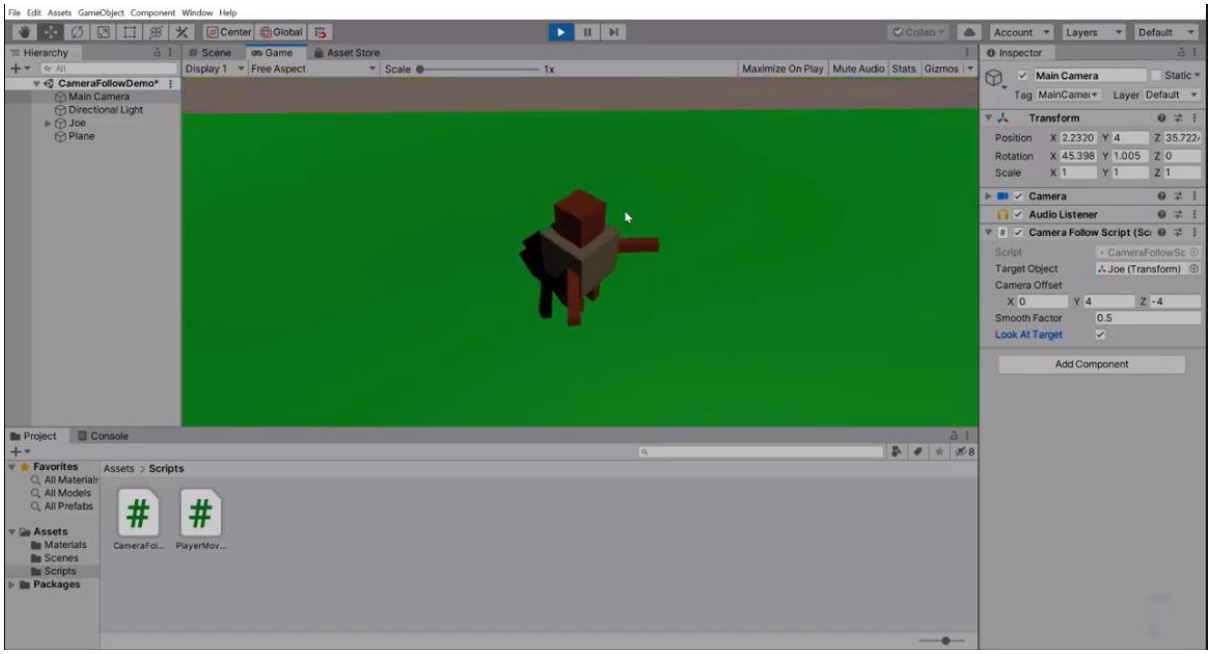
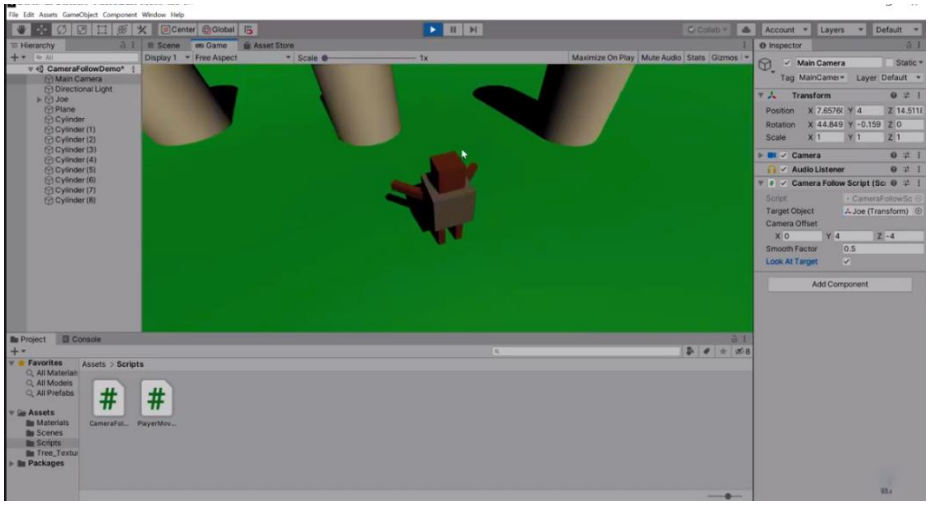
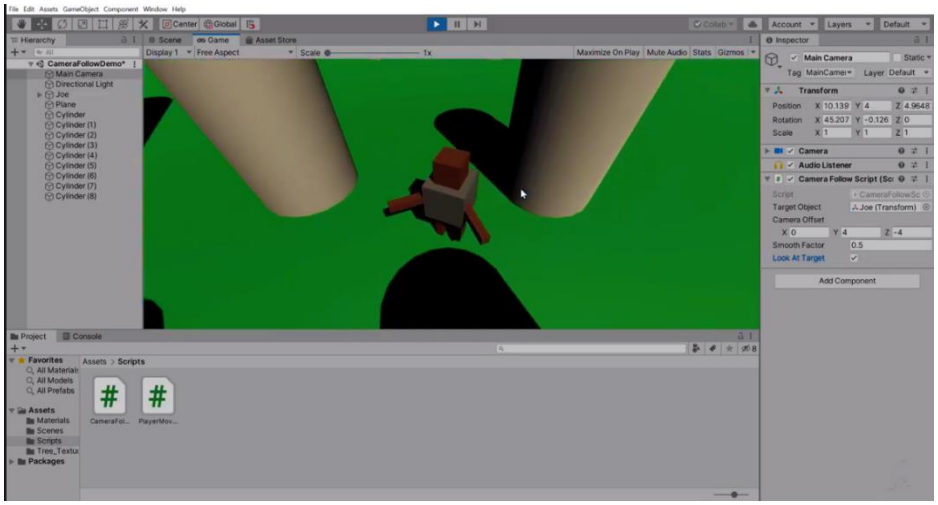
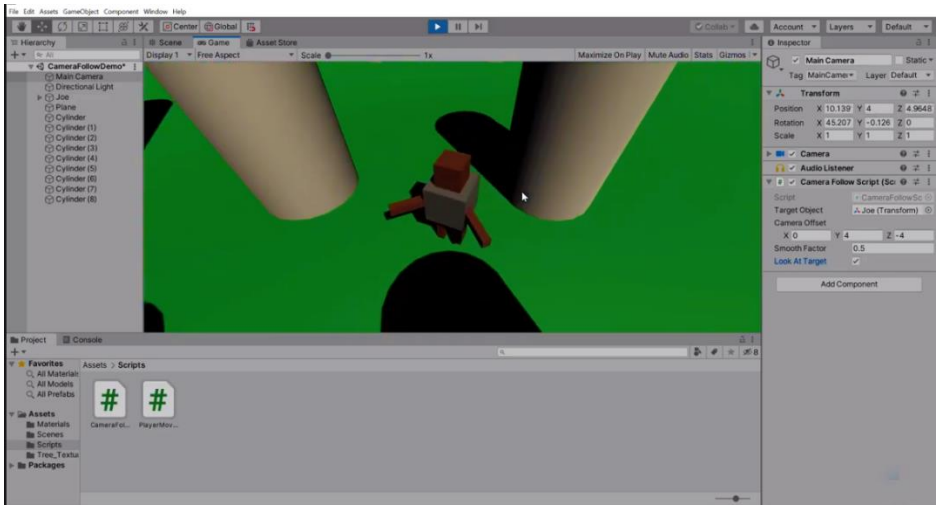
Adding a look at target object to minimise the jitter



```
16      //Will check that the camera looked at on the target on not.
17      public bool lookAtTarget = false;
18
19      // Start is called before the first frame update
20      void Start()
21      {
22          cameraOffset = transform.position - targetObject.transform.position;
23      }
24
25      void LateUpdate()
26      {
27          Vector3 newPosition = targetObject.transform.position + cameraOffset;
28          transform.position = Vector3.Slerp(transform.position, newPosition, smoothFactor);
29
30          //Camera Rotation Change
31          if (lookAtTarget)
32          {
33              transform.LookAt(targetObject);
34          }
35      }
36  }
37
```

After adding the scripts: - movement of the object and the camera following the object.





Movement after adding some obstacles