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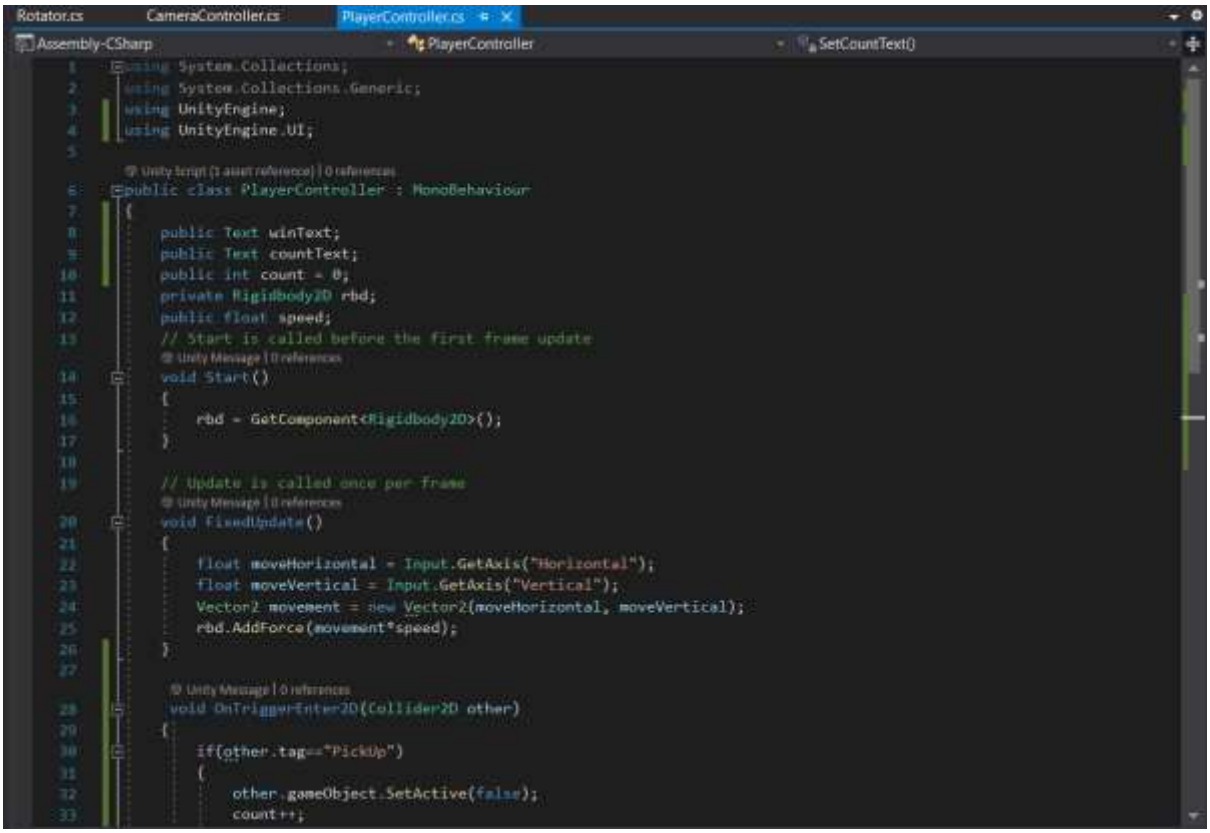
Practical no	Aim	Date
1	Write a python program to perform translation operation on rectangle by taking initial coordinates from user.	
2	Write a python program to perform scaling operation on triangle by taking initial coordinates from user.	
3	Write a python program to perform reflection operation on polygon by taking initial coordinates from user.	
4	Write a python program to rotate right angle triangle by 45 degree by taking initial coordinates from user.	
5	Write a python program to perform shearing on rectangle in positive direction of x-axis by taking initial coordinates from user.	
6	Write a python program to create below shape and perform reflection about parallel to y-axis, followed by translation and scaling operation on it.	
7	Implement space invader game in python using pygame module.	
8	Implement Snake game in python using pygame module.	
9	Implement 2D UFO game using unity.	
10	Implement 3D roll ball game using unity.	

Practical No9:

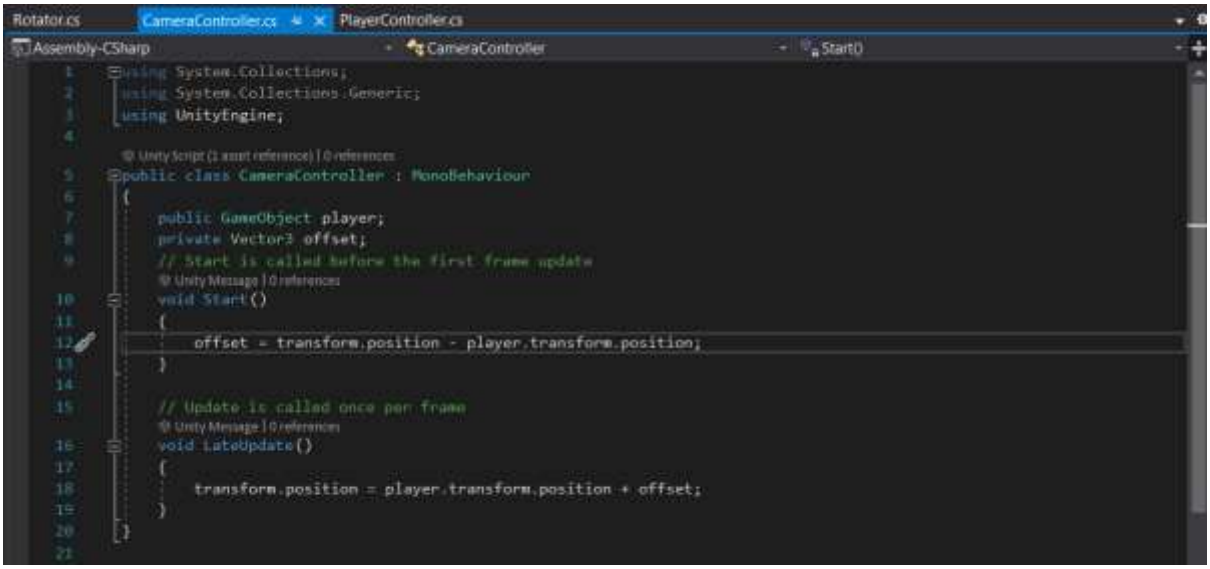
Aim: Implement 2D UFO game using unity

Code:

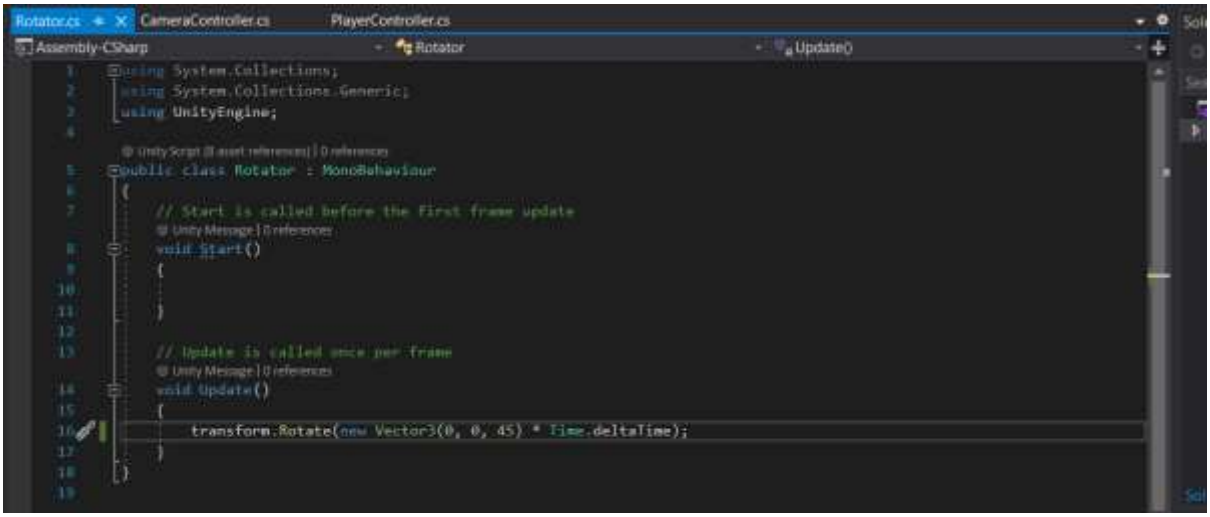
PlayerController.cs



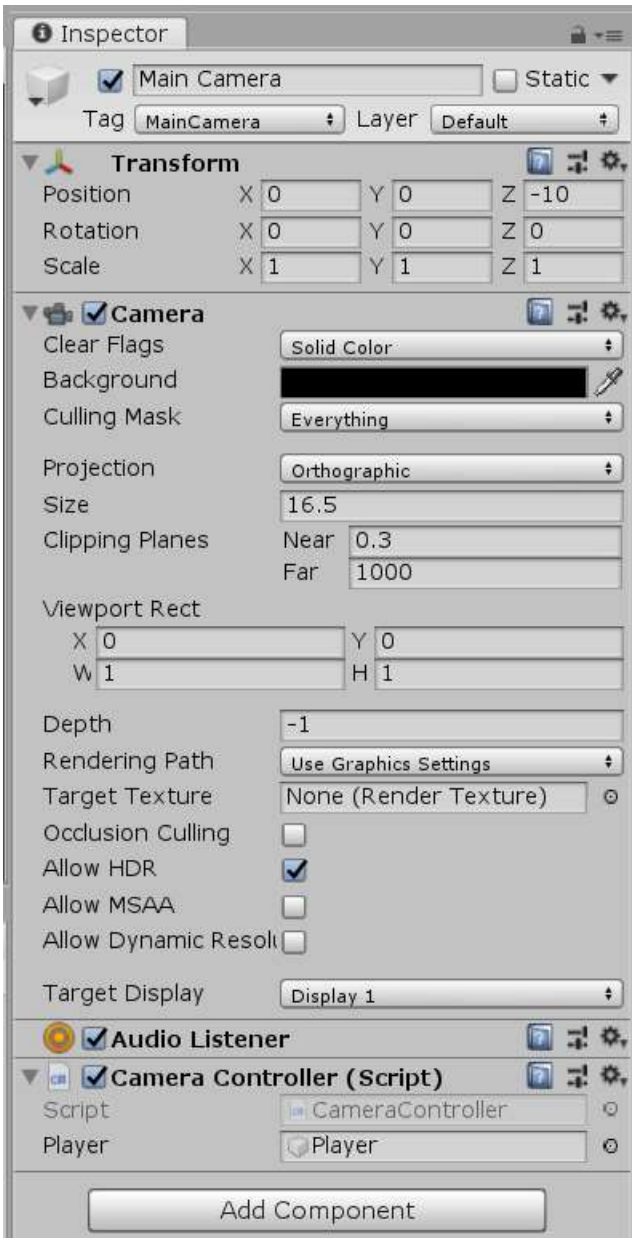
CameraController.cs



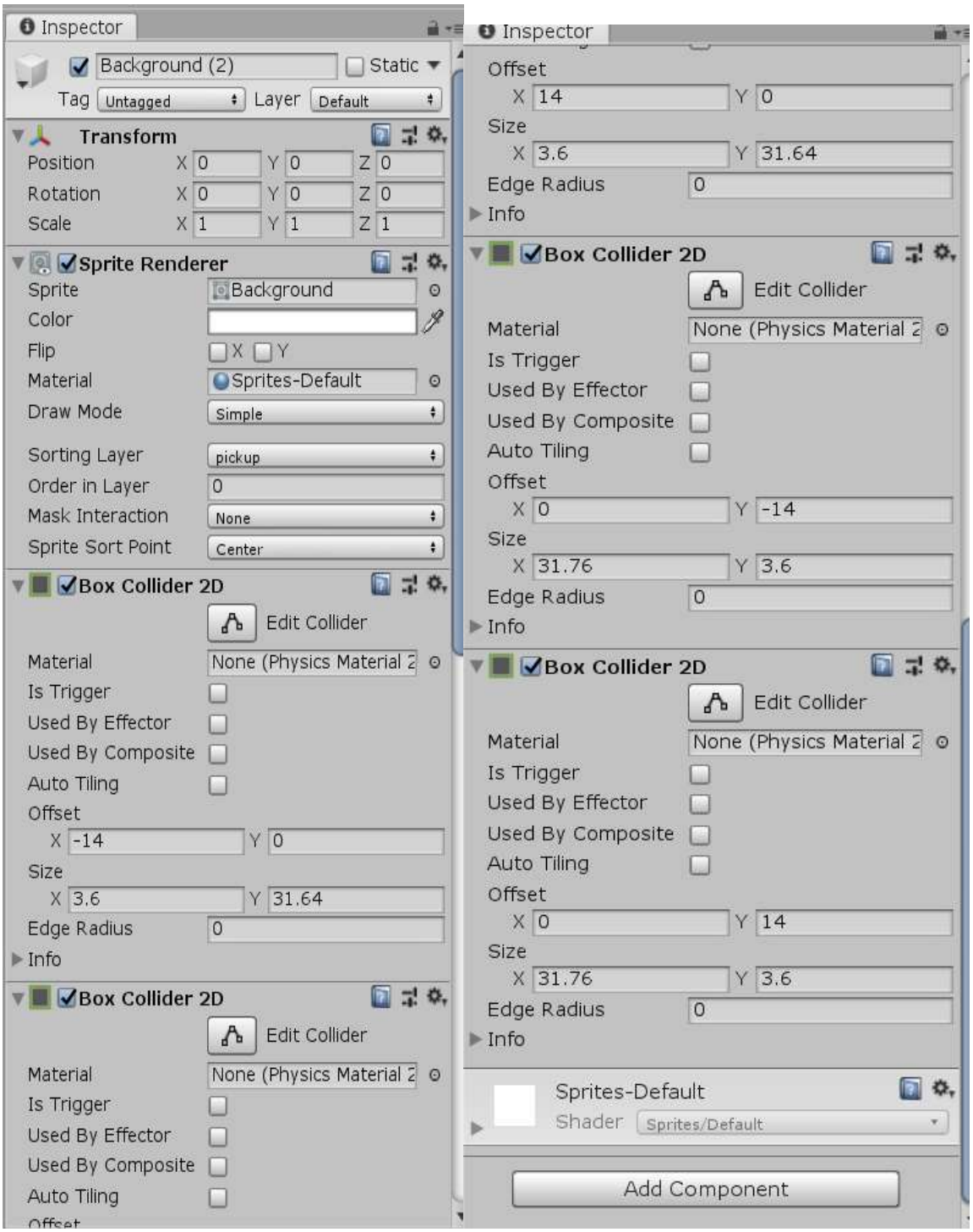
Rotator.cs



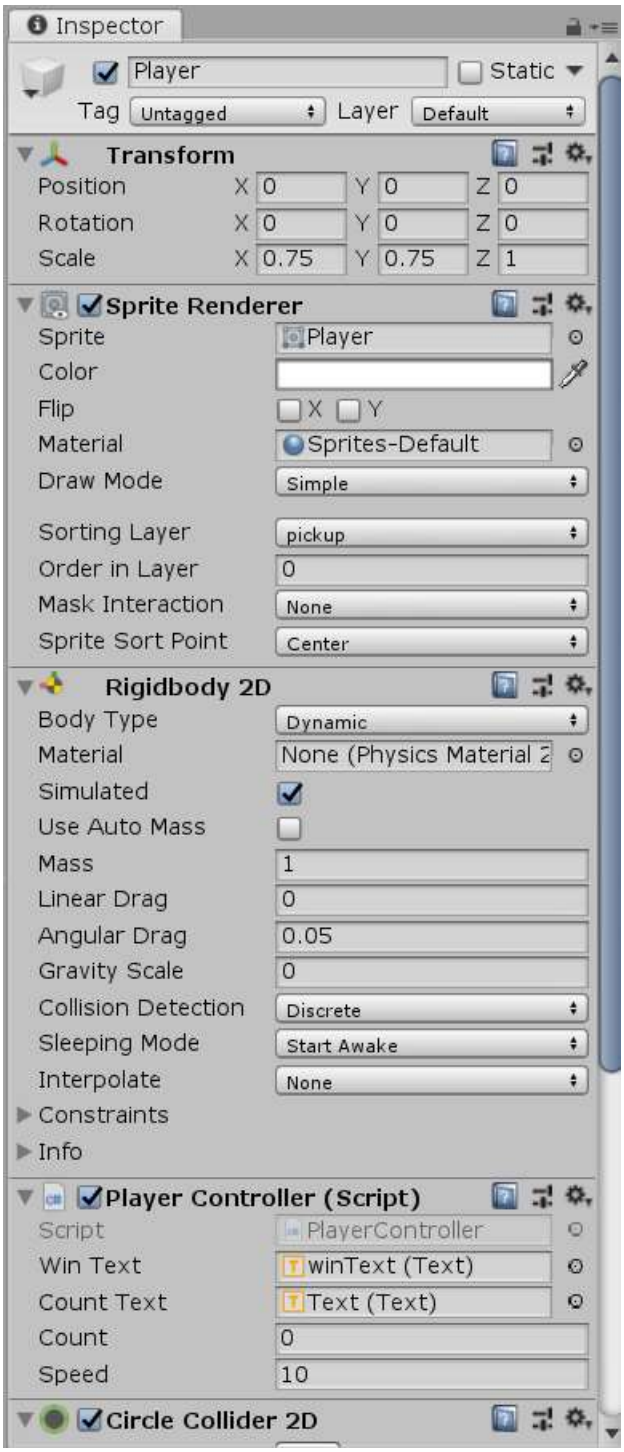
Main Camera Inspector



Background Inspector


Inspector
Background (2)
Static
Tag Untagged
Layer Default
Transform
Position X 0 Y 0 Z 0
Rotation X 0 Y 0 Z 0
Scale X 1 Y 1 Z 1
Sprite Renderer
Sprite Background
Color
Flip X Y
Material Sprites-Default
Draw Mode Simple
Sorting Layer pickup
Order in Layer 0
Mask Interaction None
Sprite Sort Point Center
Box Collider 2D
Edit Collider
Material None (Physics Material 2
Is Trigger
Used By Effector
Used By Composite
Auto Tiling
Offset X -14 Y 0
Size X 3.6 Y 31.64
Edge Radius 0
Info
Box Collider 2D
Edit Collider
Material None (Physics Material 2
Is Trigger
Used By Effector
Used By Composite
Auto Tiling
Offset
Inspector
Offset X 14 Y 0
Size X 3.6 Y 31.64
Edge Radius 0
Info
Box Collider 2D
Edit Collider
Material None (Physics Material 2
Is Trigger
Used By Effector
Used By Composite
Auto Tiling
Offset X 0 Y -14
Size X 31.76 Y 3.6
Edge Radius 0
Info
Box Collider 2D
Edit Collider
Material None (Physics Material 2
Is Trigger
Used By Effector
Used By Composite
Auto Tiling
Offset X 0 Y 14
Size X 31.76 Y 3.6
Edge Radius 0
Info
Sprites-Default
Shader Sprites/Default
Add Component

Player Inspector



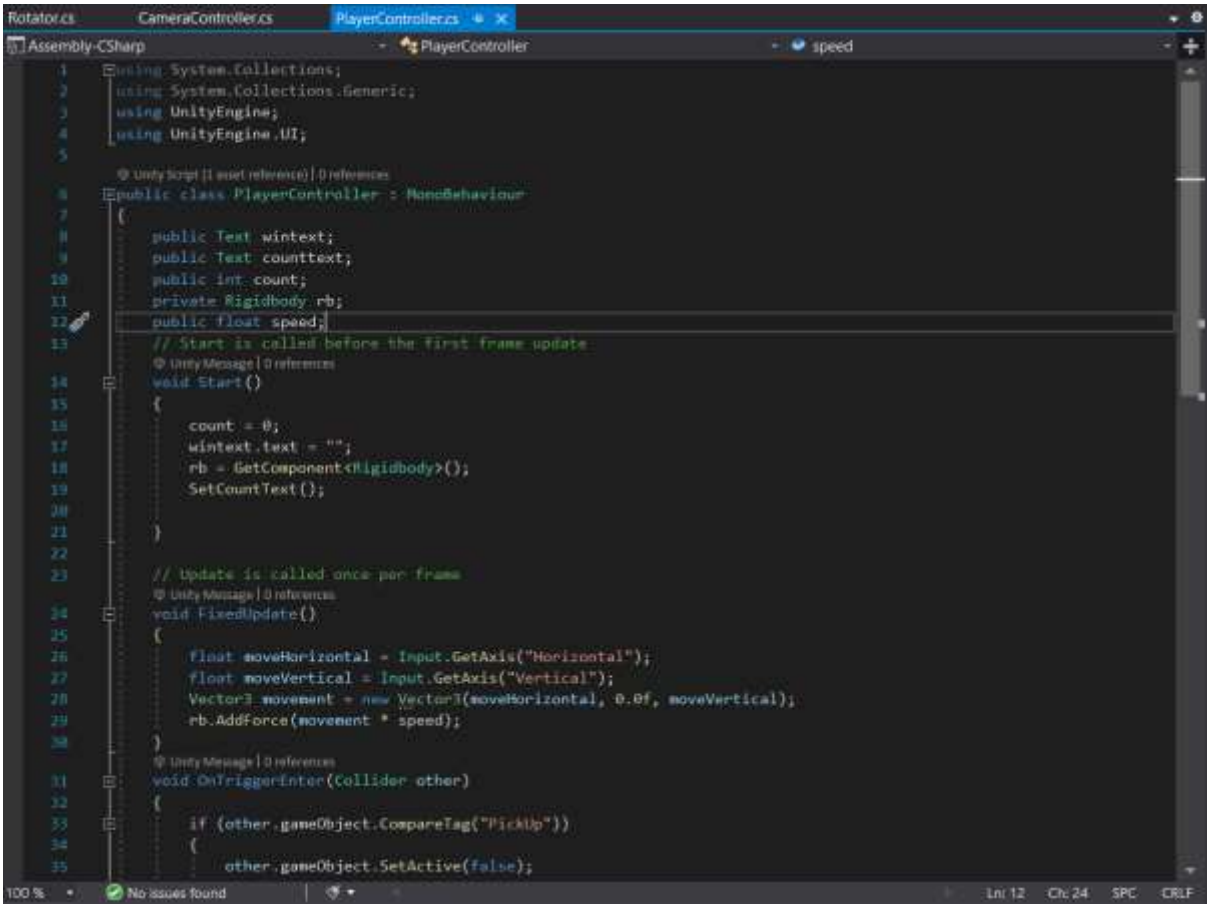
Output:

Practical No10:

Aim: Implement 3D roll ball game using unity.

Code:

PlayerController.cs



```
            count = count + 1;
            SetCountText();
        }
    }
    2 references
    void SetCountText()
    {
        counttext.text = "Score:" + count.ToString();
        if (count >= 8)
        {
            wintext.text = "You Win!";
        }
    }
}
```

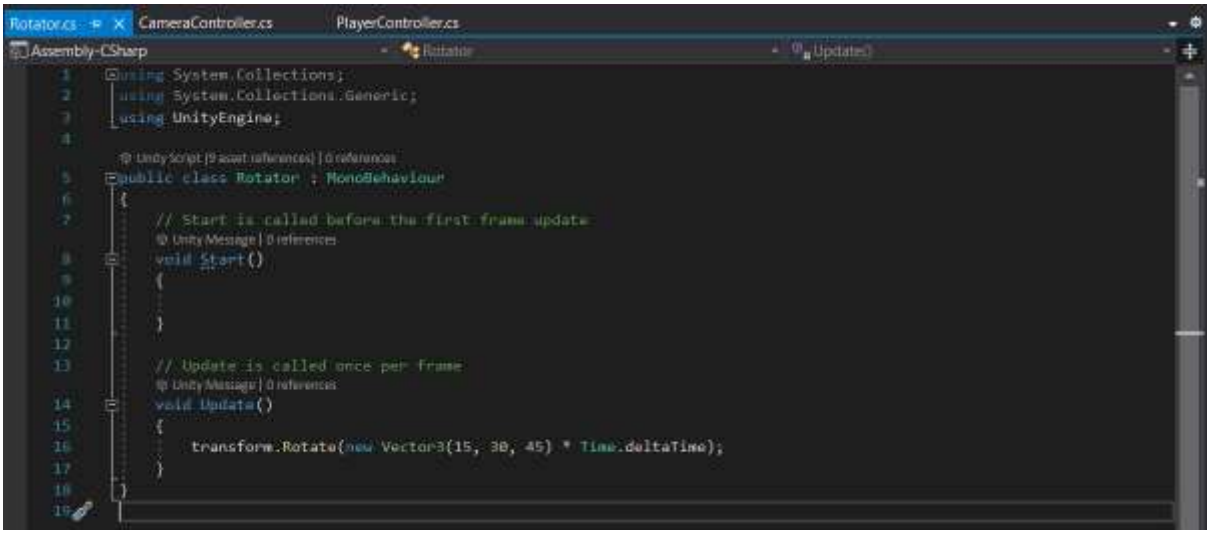
CameraController.cs

Rotator.cs | CameraController.cs | PlayerController.cs

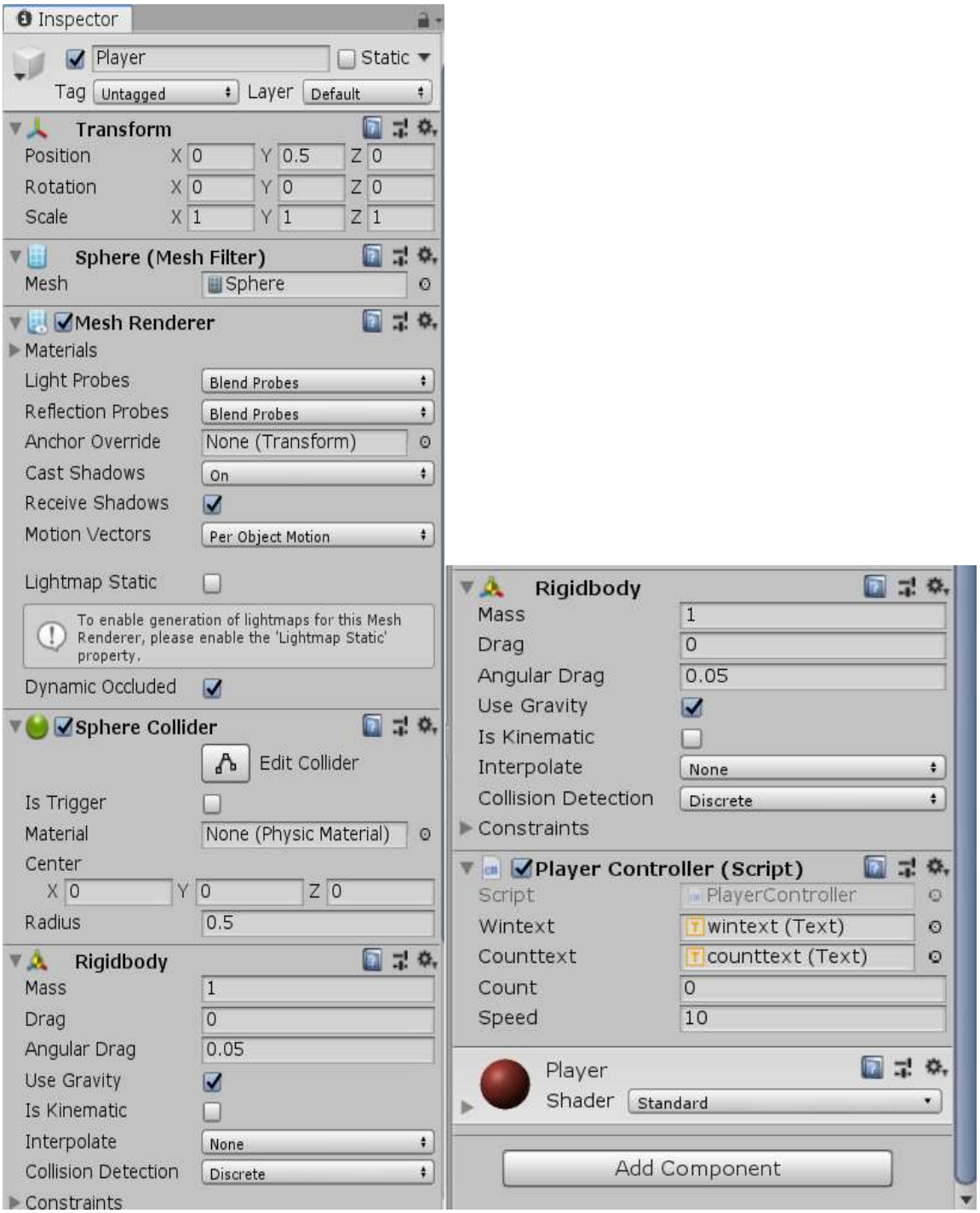
Assembly-CSharp | CameraController | Start()

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

Unity Script (1 asset reference) | 0 references
public class CameraController : MonoBehaviour
{
    private Vector3 offset;
    public GameObject player;
    // Start is called before the first frame update
    Unity Message | 0 references
    void Start()
    {
        offset = transform.position - player.transform.position;
    }

    // Update is called once per frame
    Unity Message | 0 references
    void LateUpdate()
    {
        transform.position = player.transform.position + offset;
    }
}
```

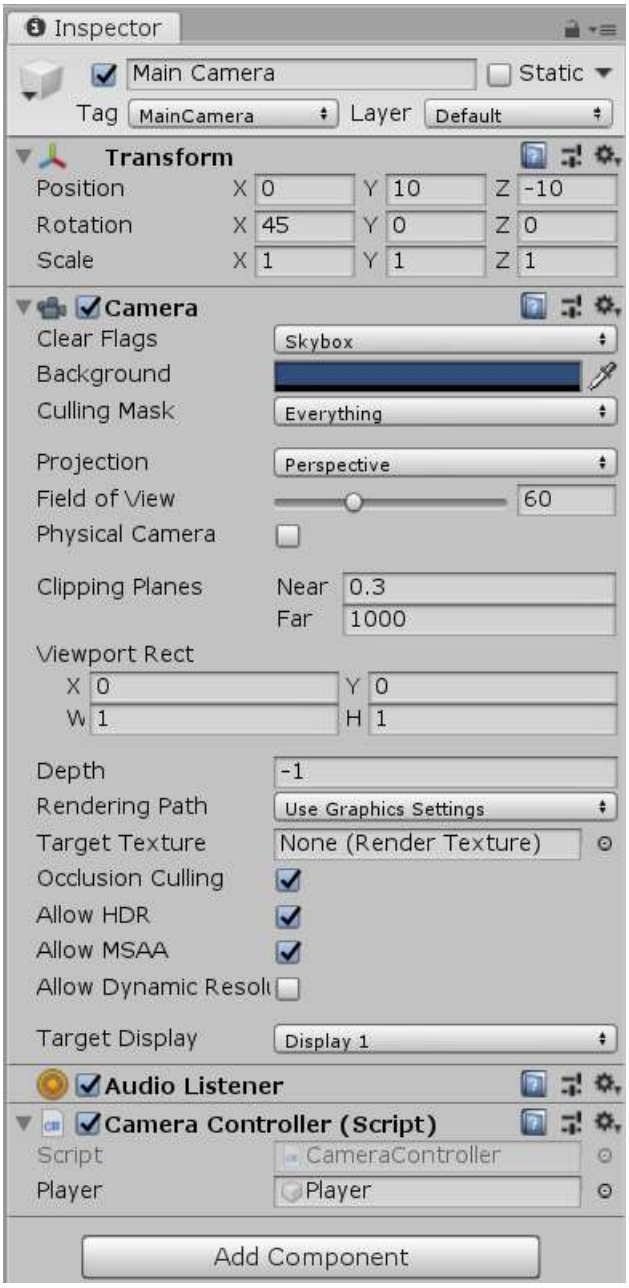
Rotator.cs



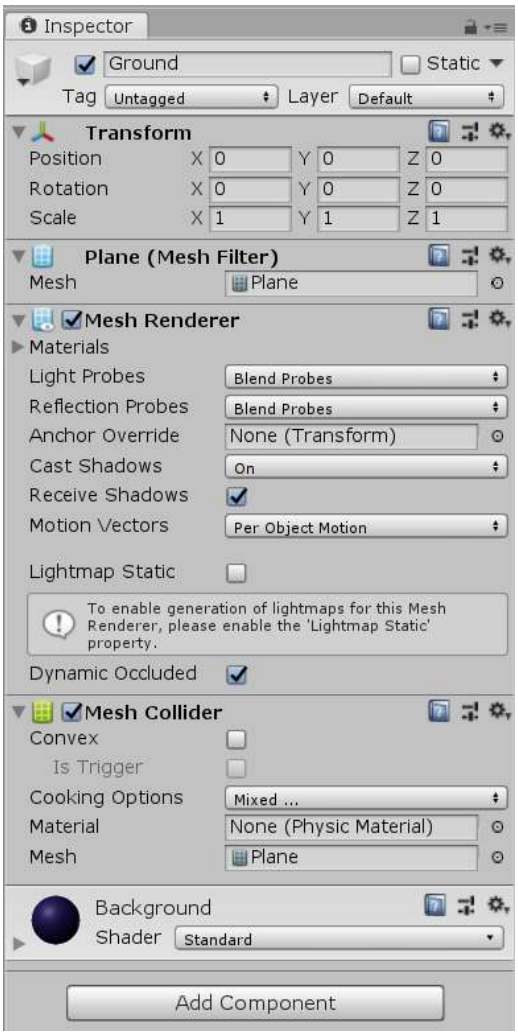
Player Inspector


Inspector
Player
Static
Tag Untagged
Layer Default
Transform
Position X 0 Y 0.5 Z 0
Rotation X 0 Y 0 Z 0
Scale X 1 Y 1 Z 1
Sphere (Mesh Filter)
Mesh Sphere
Mesh Renderer
Materials
Light Probes Blend Probes
Reflection Probes Blend Probes
Anchor Override None (Transform)
Cast Shadows On
Receive Shadows
Motion Vectors Per Object Motion
Lightmap Static
To enable generation of lightmaps for this Mesh Renderer, please enable the 'Lightmap Static' property.
Dynamic Occluded
Sphere Collider
Edit Collider
Is Trigger
Material None (Physic Material)
Center
X 0 Y 0 Z 0
Radius 0.5
Rigidbody
Mass 1
Drag 0
Angular Drag 0.05
Use Gravity
Is Kinematic
Interpolate None
Collision Detection Discrete
Constraints
Rigidbody
Mass 1
Drag 0
Angular Drag 0.05
Use Gravity
Is Kinematic
Interpolate None
Collision Detection Discrete
Constraints
Player Controller (Script)
Script PlayerController
Wintext wintext (Text)
Counttext counttext (Text)
Count 0
Speed 10
Player
Shader Standard
Add Component

Main Camera Inspector



Ground Inspector



Output: