

Simple Camera

Description:

Is a camera control plug-in, Perfect for beginners, Includes mobile and PC support, which can rotate, zoom, pan, rise, fall and follow the target. After selecting the target, the camera will automatically center the target, and can also focus on the target based on the set weight to watch the target in close range. You can limit the moving area of the camera and reset the camera position: **it is very suitable for factory roaming from the third perspective**, and it can be viewed from any Angle in the Game view during Demo, similar to the camera function in the Scene window

Features:

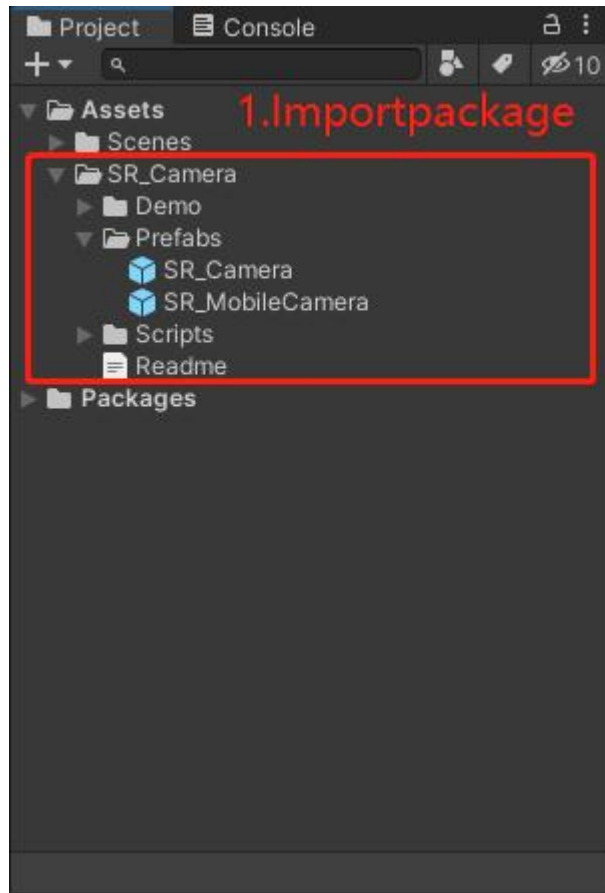
- The camera is automatically centered when the target is selected
- Rotate around the target as it is selected
- Limit the camera's overlooking Angle and range or (Use Fixed Angle)
- Camera Pan, Limit the camera's movement area (Multiple modes of translation: mouse, KeyBoard, Screen)
- Camera Zoom/Height, Mouse or keyboard zoom, Vertical rise and fall
- Focus target, Press F to focus the target, And there are focused event callbacks
- Click or double - click the selected object (To choose from)
- Whether to detect the UI. The camera control function is not triggered when the UI is on
- You can configure individual object parameters, such as distance adjustment when selected, speed of rotation around the current object, zoom speed, focus weight, Can also be configured to select objects when the camera You can also customize the orientation of the camera when the object is selected etc

Usage:

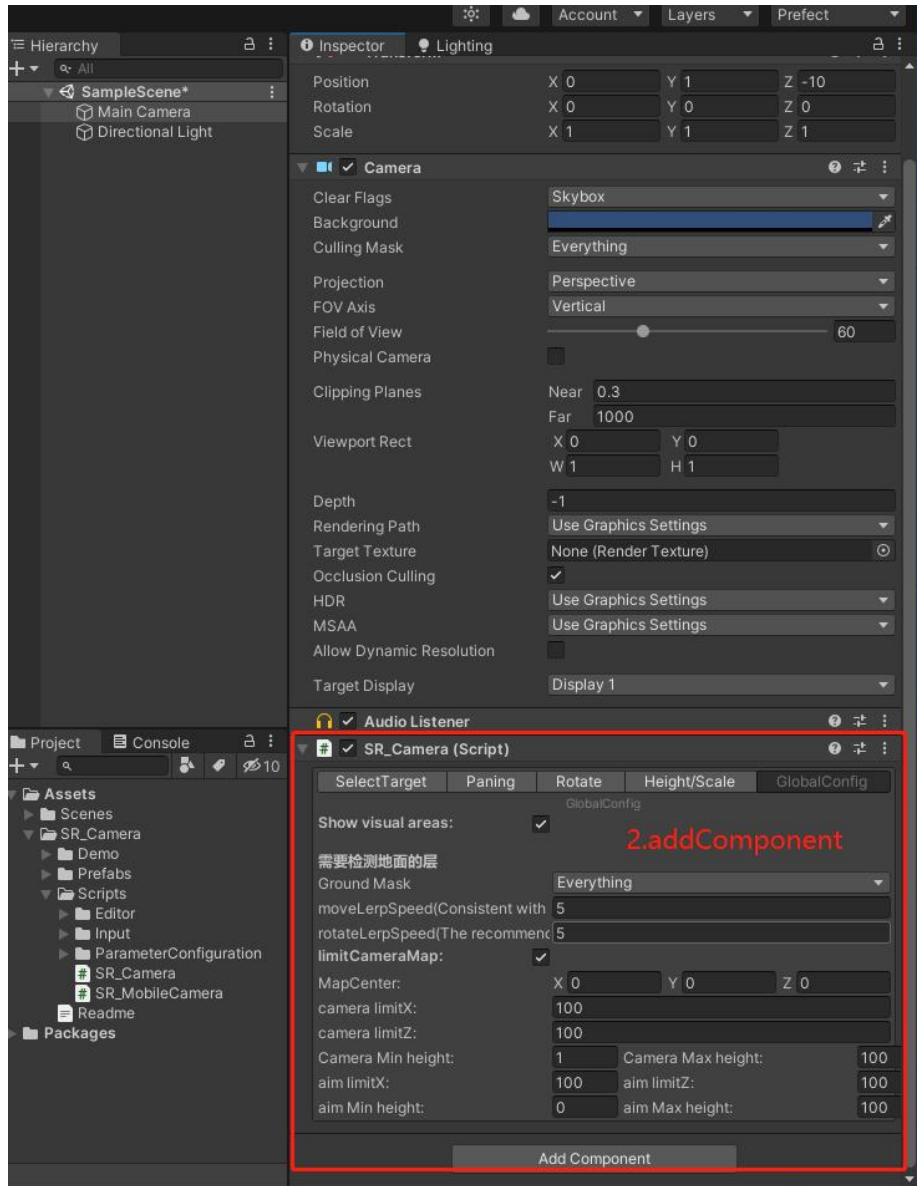
1.Import the UnityPackage,Open SR_Camera/Prafabs(You can also drag Prefab into the scene to configure the parameters directly)

SR_Camera.Prefab -----PC

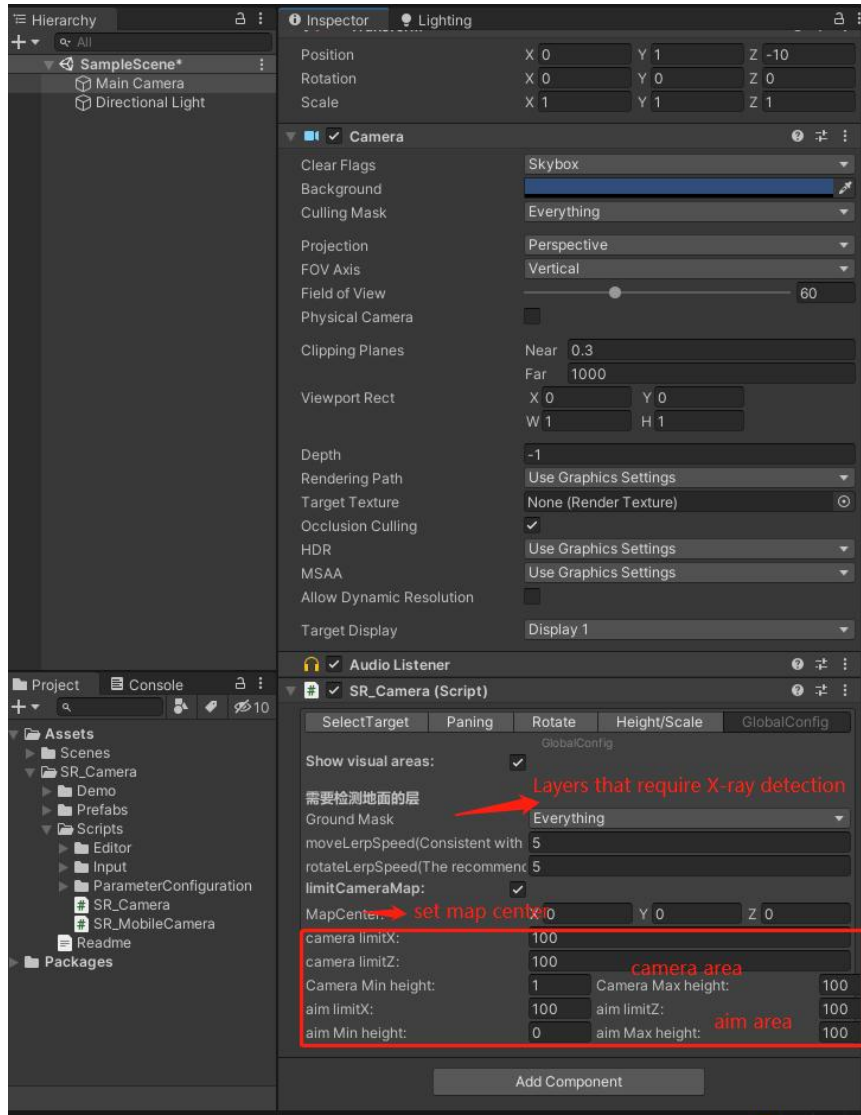
SR_MobileCamera.Prefab-----Mobile



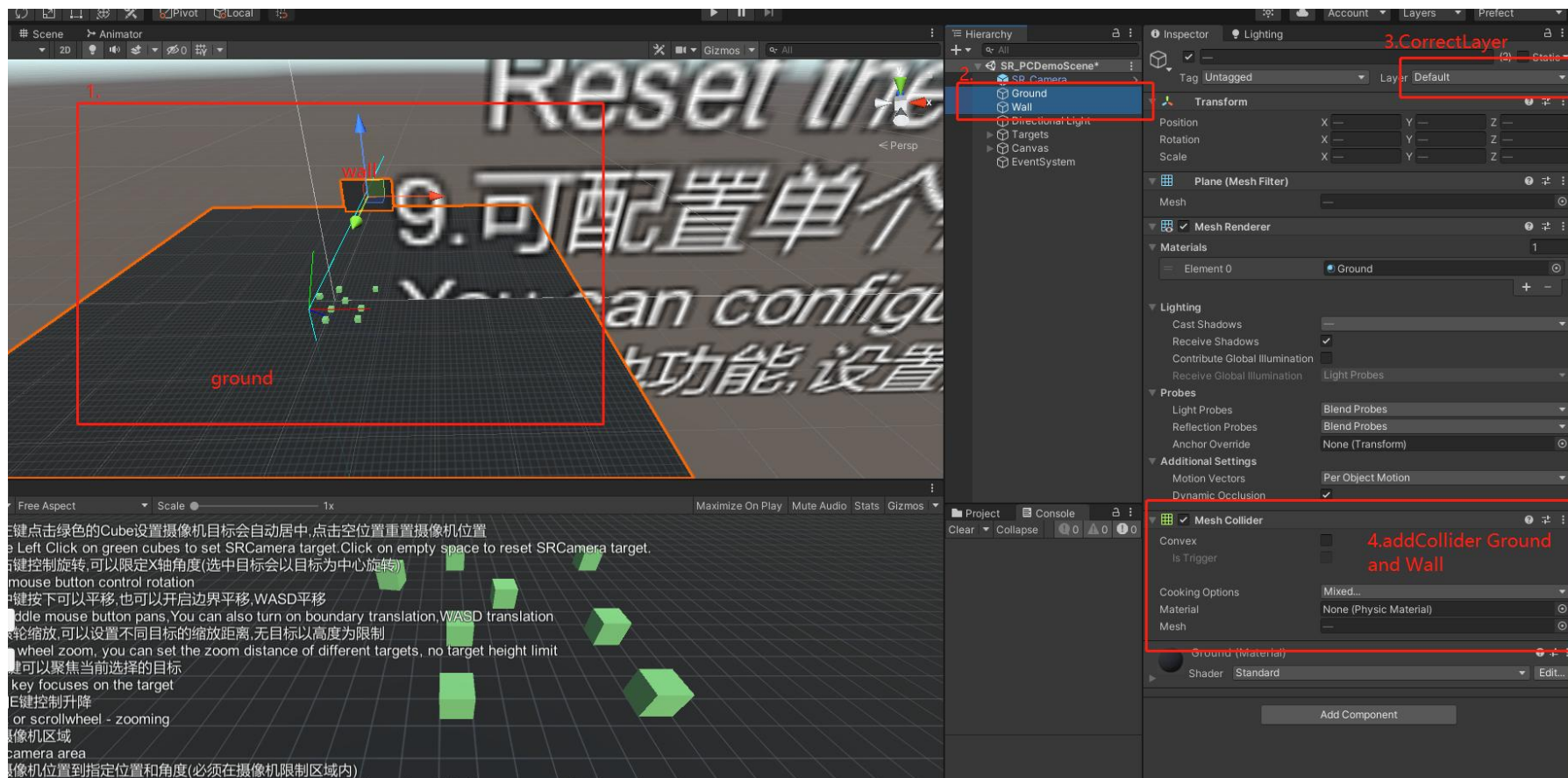
2.If you don't want to use prefab you can give it to the Main camera:Add Component **SR_Camera** Script



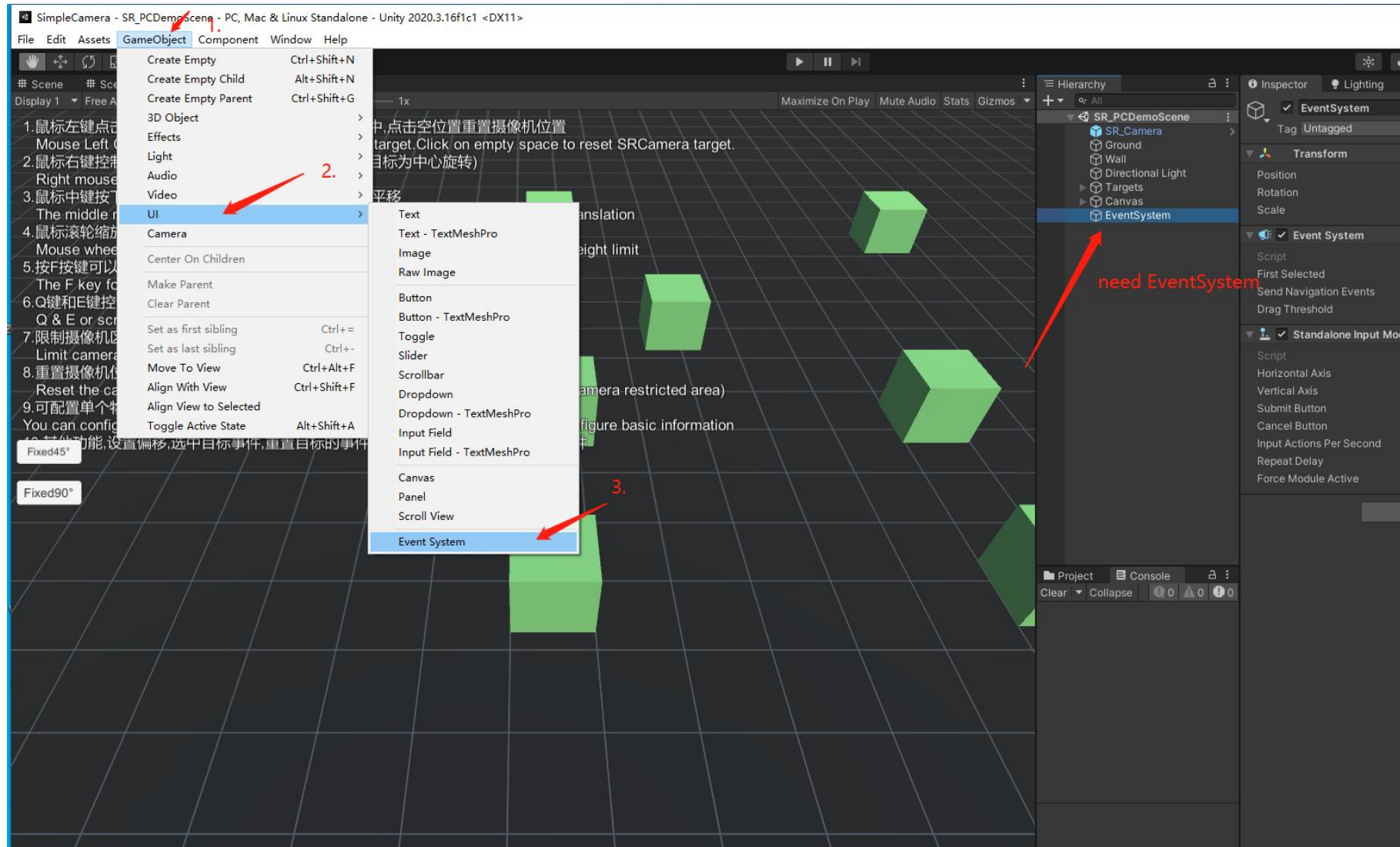
3. Click GlobalConfig: Configure the layer that detects the ground, Set the Map center location and Camera range Height, Sets the area and scope of the virtual target point



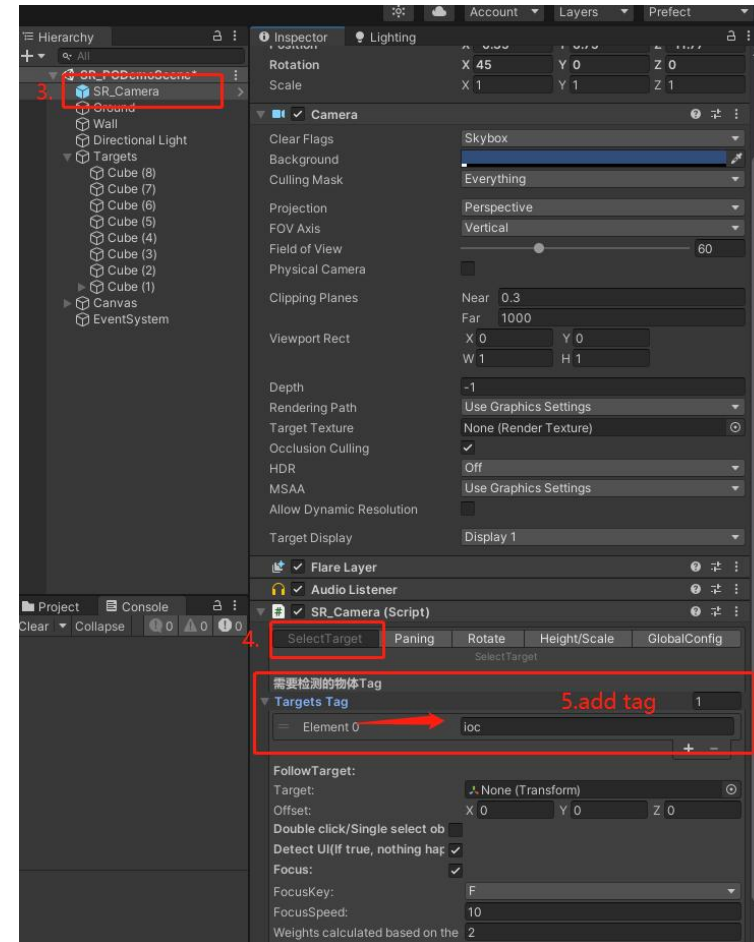
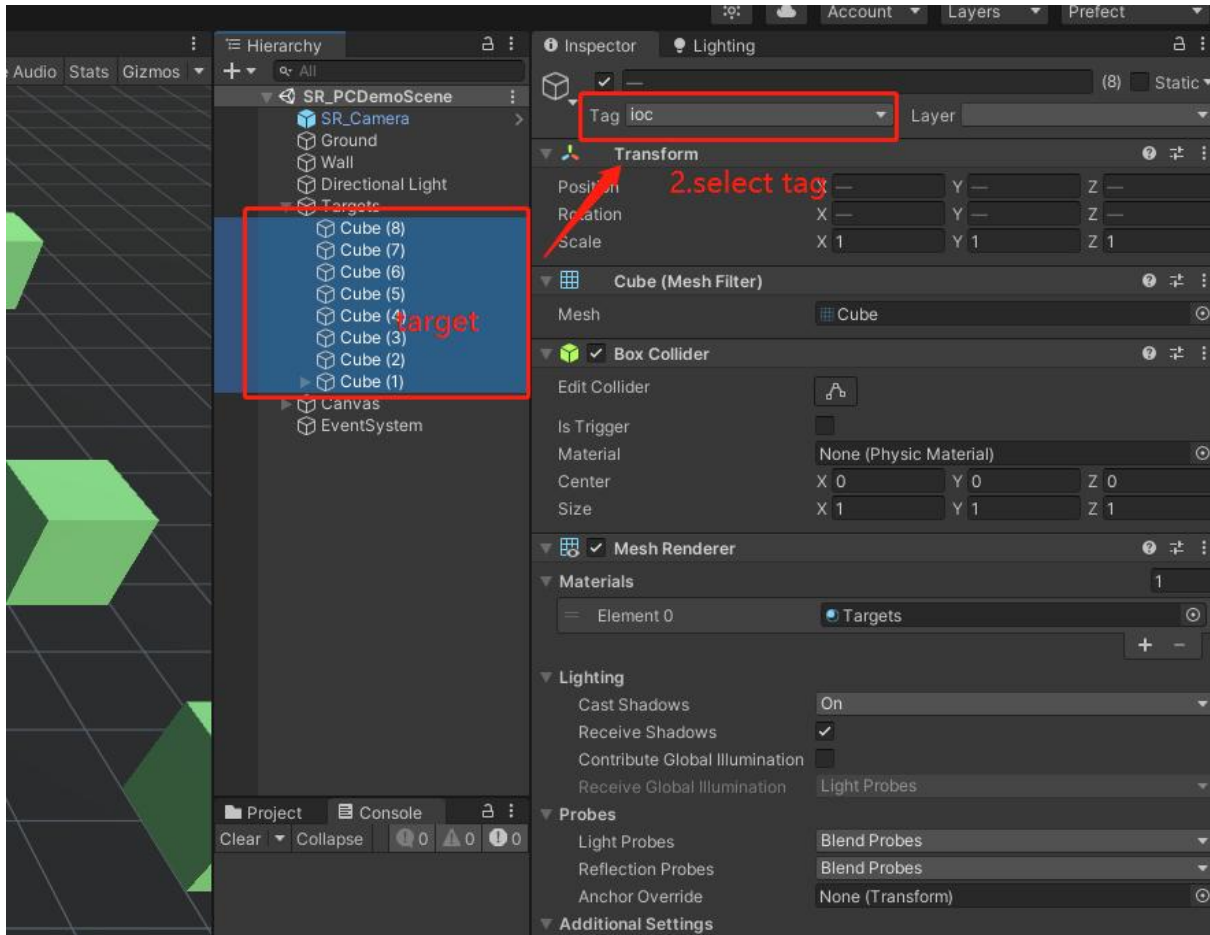
4. **Notice:** When the camera has no target, it calculates the target point through ray detection and rotates around the virtual target point. Therefore, the ground and wall that need ray detection need to add collider, and set Layer correctly



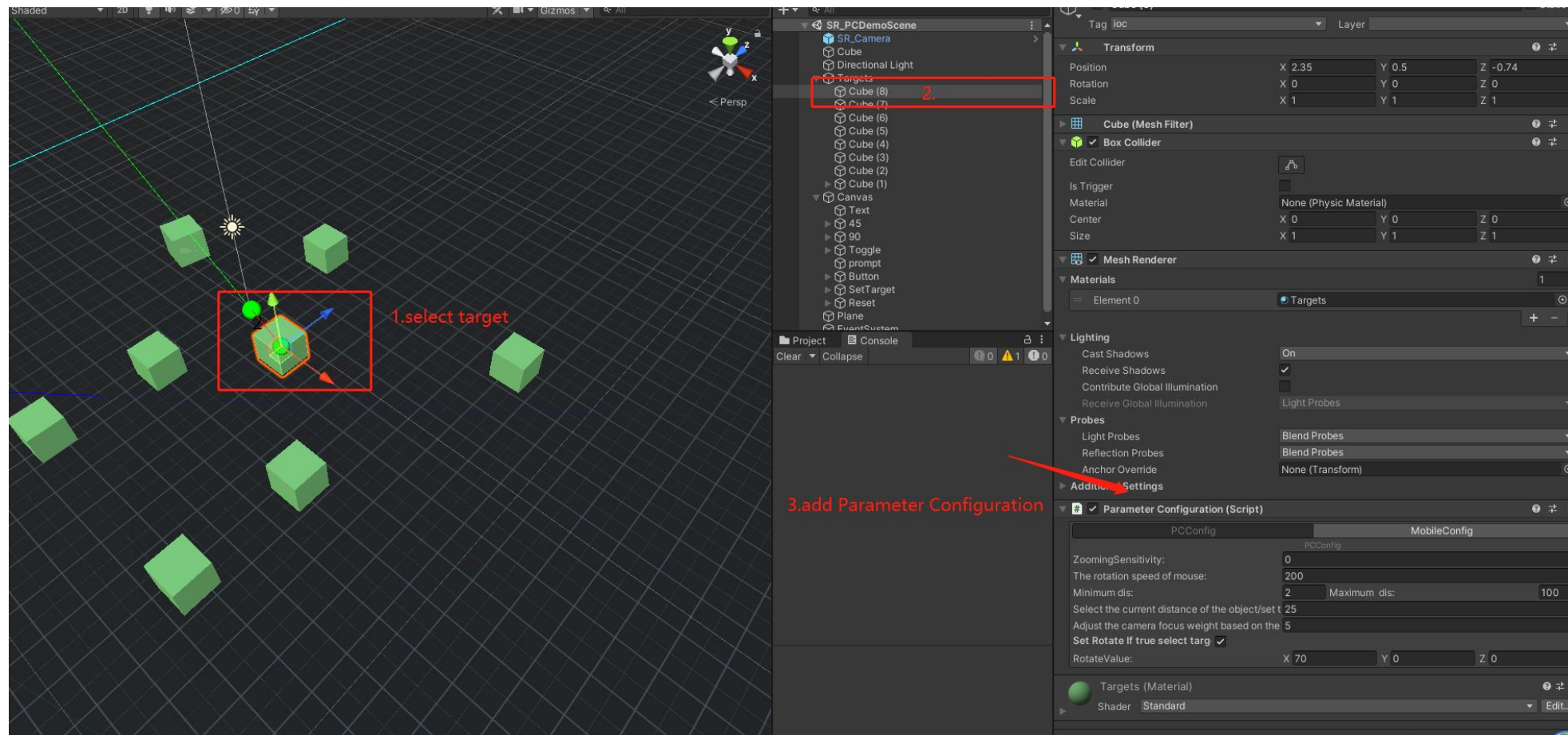
5. **Notice:** If there is no **EventSystem** in your scene, Scene need to add EventySystem, which is used to check whether the mouse is on the UI event(Editor selection:GameObject-->UI-->EventSystem)



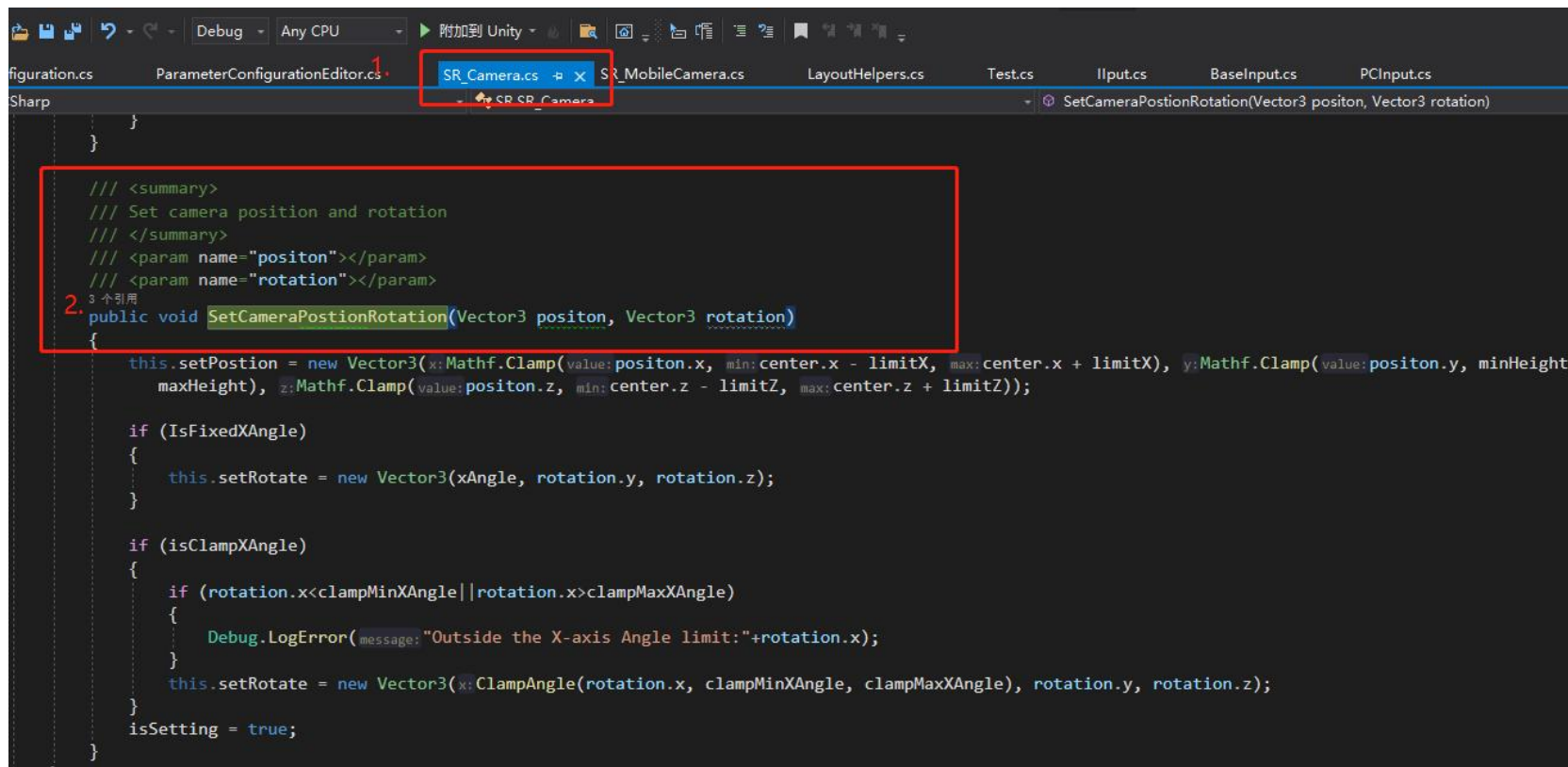
6.Sets the Tag of the optional object,Configure the Tag in the SR Camera script,The camera will only interact with the set Tag object



7.(Optional)If you want to configure the different effects of the selection of objects, such as how far away from the selection of objects, which Angle, focus weight, rotation speed, zoom speed
You need to add the **ParameterConfiguration** script to the selected object ,
This configuration script is available for both PC and mobile



8.(Optional)If you want to directly set camera position and rotation,You can do this by calling the SR Camera method **SetCameraPostionRotation**, And pass the parameters position and rotation,This is provided that the position and rotation are limited to the configured range and Angle



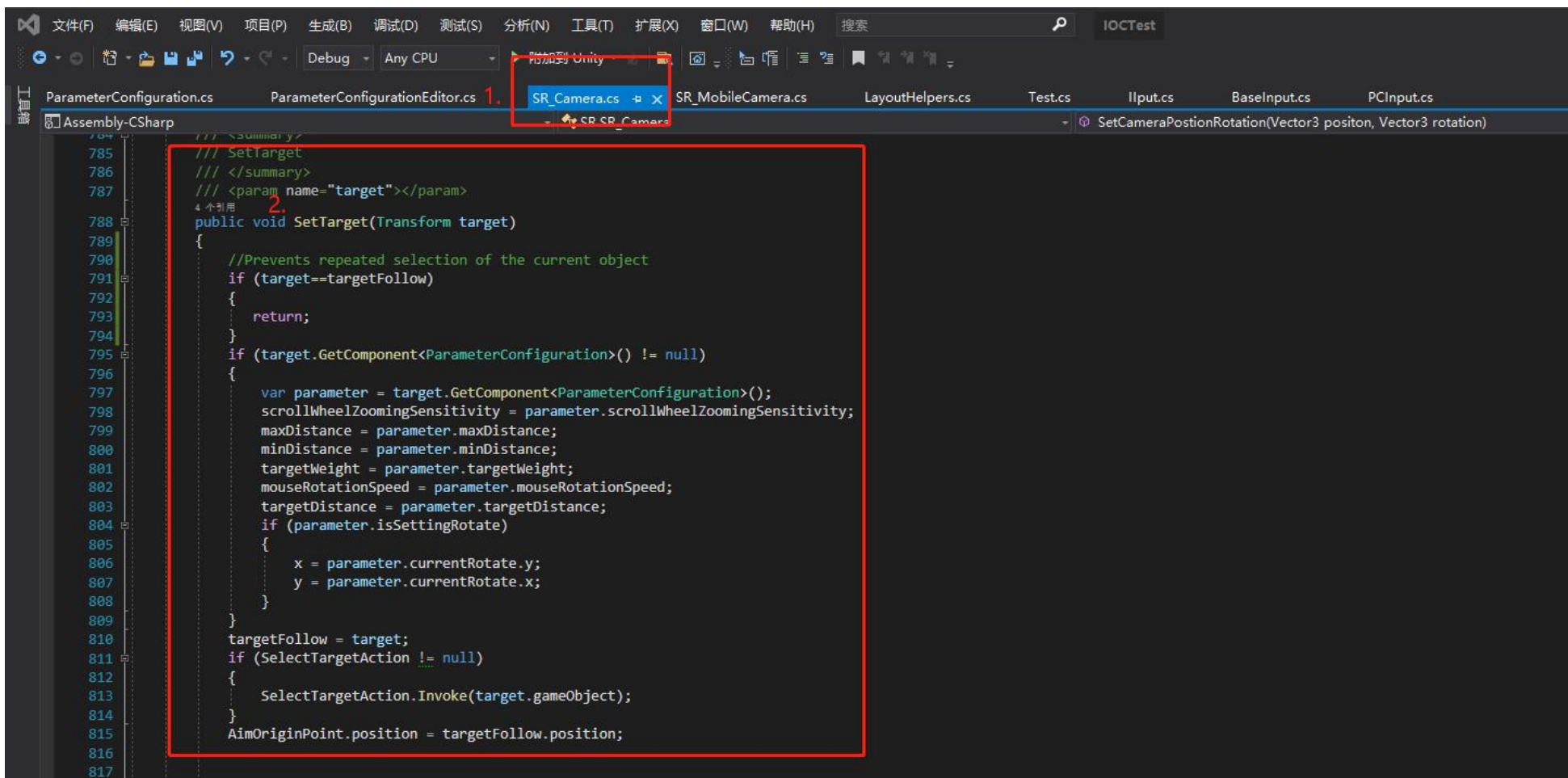
```
SR_Camera.cs
ParameterConfigurationEditor.cs
SR_Camera.cs
SR_MobileCamera.cs
LayoutHelpers.cs
Test.cs
Input.cs
BaseInput.cs
PCInput.cs
Sharp

// <summary>
// Set camera position and rotation
// </summary>
// <param name="positon"></param>
// <param name="rotation"></param>
2. public void SetCameraPostionRotation(Vector3 positon, Vector3 rotation)
{
    this.setPostion = new Vector3(x:Mathf.Clamp(value:positon.x, min:center.x - limitX, max:center.x + limitX), y:Mathf.Clamp(value:positon.y, minHeight
    maxHeight), z:Mathf.Clamp(value:positon.z, min:center.z - limitZ, max:center.z + limitZ));

    if (IsFixedXAngle)
    {
        this.setRotate = new Vector3(xAngle, rotation.y, rotation.z);
    }

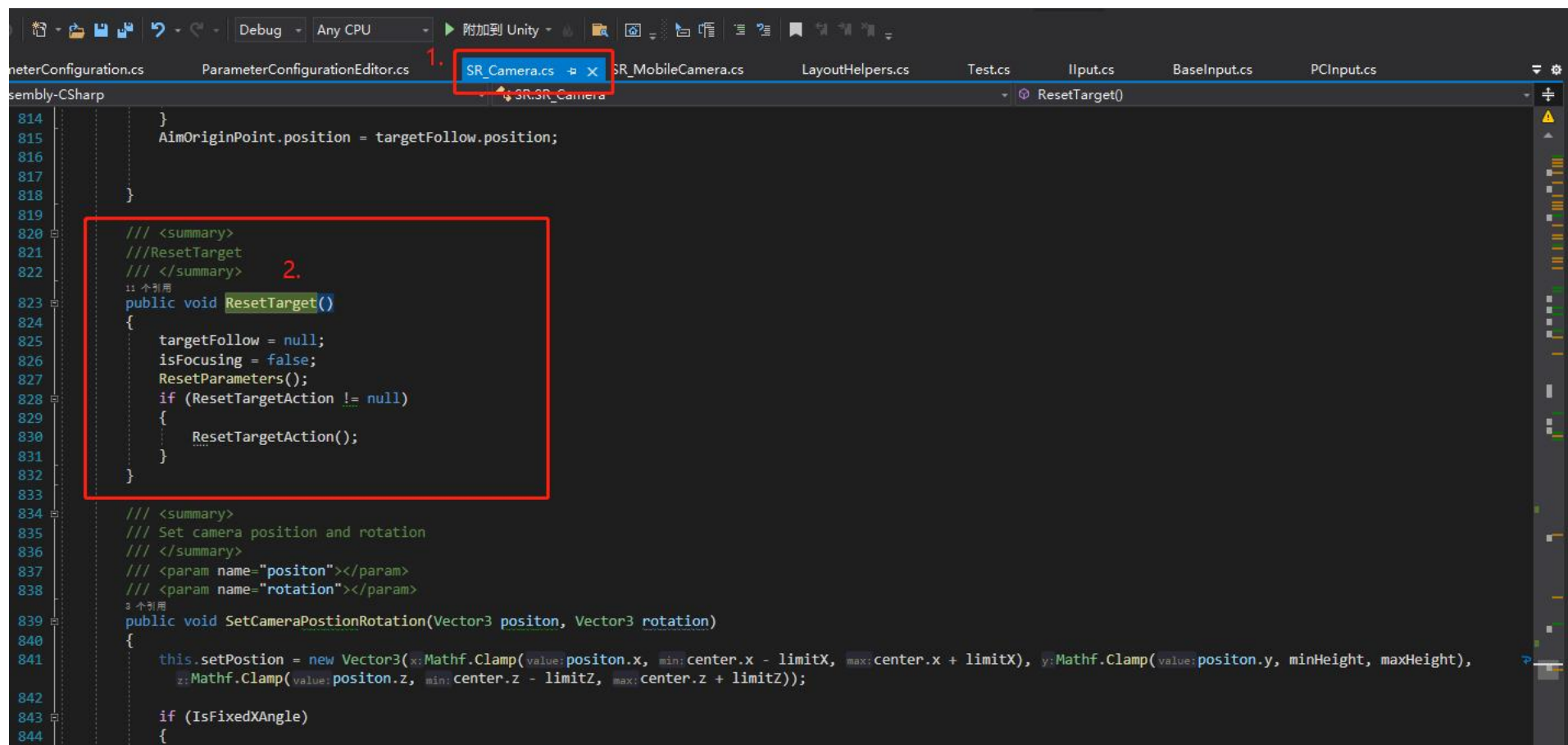
    if (isClampXAngle)
    {
        if (rotation.x<clampMinXAngle||rotation.x>clampMaxXAngle)
        {
            Debug.LogError(message:"Outside the X-axis Angle limit:"+rotation.x);
        }
        this.setRotate = new Vector3(x:ClampAngle(rotation.x, clampMinXAngle, clampMaxXAngle), rotation.y, rotation.z);
    }
    isSetting = true;
}
```

9.(Optional)If you want to pass an object directly for the camera to track, instead of clicking to trigger the camera to select it ,By calling **SR_Camera** Class **SetTarget(Transform Target)** method ,Transmit the target **Transform** you want to trace directly



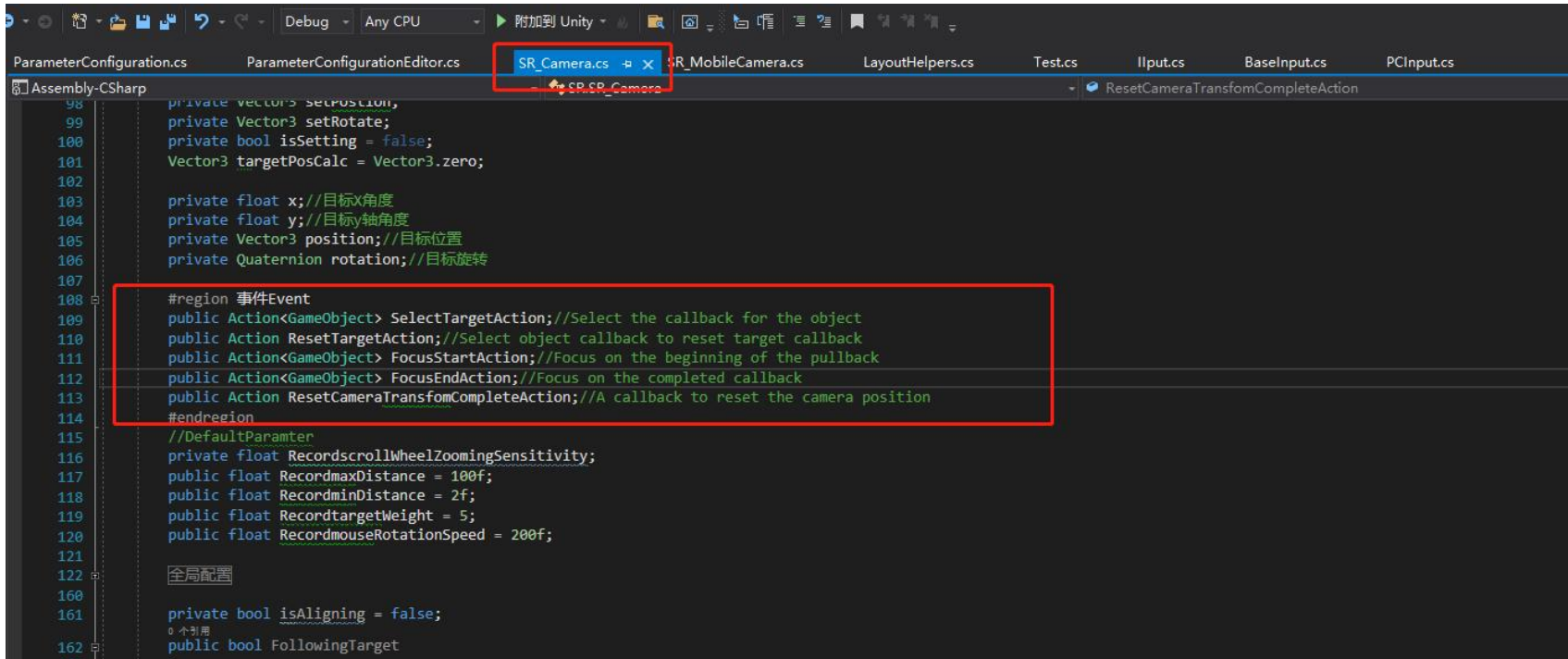
```
785 /// <summary>  
786 /// SetTarget  
787 /// </summary>  
788 /// <param name="target"></param>  
789 4 个引用  
790 public void SetTarget(Transform target)  
791 {  
792     //Prevents repeated selection of the current object  
793     if (target==targetFollow)  
794     {  
795         return;  
796     }  
797     if (target.GetComponent<ParameterConfiguration>() != null)  
798     {  
799         var parameter = target.GetComponent<ParameterConfiguration>();  
800         scrollWheelZoomingSensitivity = parameter.scrollWheelZoomingSensitivity;  
801         maxDistance = parameter.maxDistance;  
802         minDistance = parameter.minDistance;  
803         targetWeight = parameter.targetWeight;  
804         mouseRotationSpeed = parameter.mouseRotationSpeed;  
805         targetDistance = parameter.targetDistance;  
806         if (parameter.isSettingRotate)  
807         {  
808             x = parameter.currentRotate.y;  
809             y = parameter.currentRotate.x;  
810         }  
811     }  
812     targetFollow = target;  
813     if (SelectTargetAction != null)  
814     {  
815         SelectTargetAction.Invoke(target.gameObject);  
816     }  
817     AimOriginPoint.position = targetFollow.position;  
818 }
```

10.(Optional)If you don't want the camera to follow or focus on the current target, you can go up/down vertically by panning the camera ,Or click on a space on the ground,Or reset the target by calling SR_Camera's **ResetTarget** method (Note: Rotation and scaling do not lose target)



```
814 }
815 AimOriginPoint.position = targetFollow.position;
816
817 }
818
819
820 /// <summary>
821 /// ResetTarget
822 /// </summary>
823 public void ResetTarget()
824 {
825     targetFollow = null;
826     isFocusing = false;
827     ResetParameters();
828     if (ResetTargetAction != null)
829     {
830         ResetTargetAction();
831     }
832 }
833
834 /// <summary>
835 /// Set camera position and rotation
836 /// </summary>
837 /// <param name="position"></param>
838 /// <param name="rotation"></param>
839 public void SetCameraPositionRotation(Vector3 position, Vector3 rotation)
840 {
841     this.setPosition = new Vector3(Mathf.Clamp(value: position.x, min: center.x - limitX, max: center.x + limitX), y: Mathf.Clamp(value: position.y, min: minHeight, max: maxHeight),
842                                     z: Mathf.Clamp(value: position.z, min: center.z - limitZ, max: center.z + limitZ));
843
844     if (IsFixedXAngle)
845     {
```

ScriptReference



```
98 private Vector3 setPostion;
99 private Vector3 setRotate;
100 private bool isSetting = false;
101 Vector3 targetPosCalc = Vector3.zero;
102
103 private float x;//目标x角度
104 private float y;//目标y轴角度
105 private Vector3 position;//目标位置
106 private Quaternion rotation;//目标旋转
107
108 #region 事件Event
109 public Action<GameObject> SelectTargetAction;//Select the callback for the object
110 public Action ResetTargetAction;//Select object callback to reset target callback
111 public Action<GameObject> FocusStartAction;//Focus on the beginning of the pullback
112 public Action<GameObject> FocusEndAction;//Focus on the completed callback
113 public Action ResetCameraTransfomCompleteAction;//A callback to reset the camera position
114 #endregion
115 //DefaultParamter
116 private float RecordscrollWheelZoomingSensitivity;
117 public float RecordmaxDistance = 100f;
118 public float RecordminDistance = 2f;
119 public float RecordtargetWeight = 5;
120 public float RecordmouseRotationSpeed = 200f;
121
122 全局配置
123
124 private bool isAligning = false;
125
126 public bool FollowingTarget
```

- 1.**SelectTargetAction**: Emitted when an object is selected
- 2.**ResetTargetAction**: Emitted when a target is lost or reset
- 3.**FocusStartAction**:Focus on the beginning of the pullback
- 4.**FocusEndAction**:Focus on the completed callback
- 5.**ResetCameraTransfomCompleteAction**:Emitted when resetting camera position and rotation is complete(Make sure the location rotation is within the specified range, otherwise it will never be completed)

ScriptReference

1. **public void SetTarget(Transform target):**Pass a target directly to the camera and let the camera look at it
2. **SetCameraPostionRotation(Vector3 positon, Vector3 rotation,bool isForce=false):**Directly set the camera to a specified position and rotation direction,If isforce is true, there is no transition animation
(note:The camera will detect the ground and wall when it reaches the target point. If it faces the sky, the target point will appear in the middle of the distance between the camera and the farthest distance)
3. **SetAimAndCameraClamp(Vector3 centerPos, Vector3 aimBoxExtend, Vector3 cameraBoxExtend):**Actively set the movable range of the camera and the target point, which is mostly used to reset the area range when switching scenes
4. **SetAimAndCameraDistance(float minDis=1,float MaxDis=50):**Actively set the maximum and minimum distance between the camera and the target
5. **EnablePaning(bool enablekeybordInput=true,bool enableMouseInput=true,bool useScreenEdgeInput=true):**
Set the means to control the pan tab,Sometimes it's just translation, sometimes it's just rotation
6. **EnableRotate(bool enableMouseRotation=true):**Whether the rotation function is enabled,Sometimes it's just translation, sometimes it's just rotation

ScriptReference

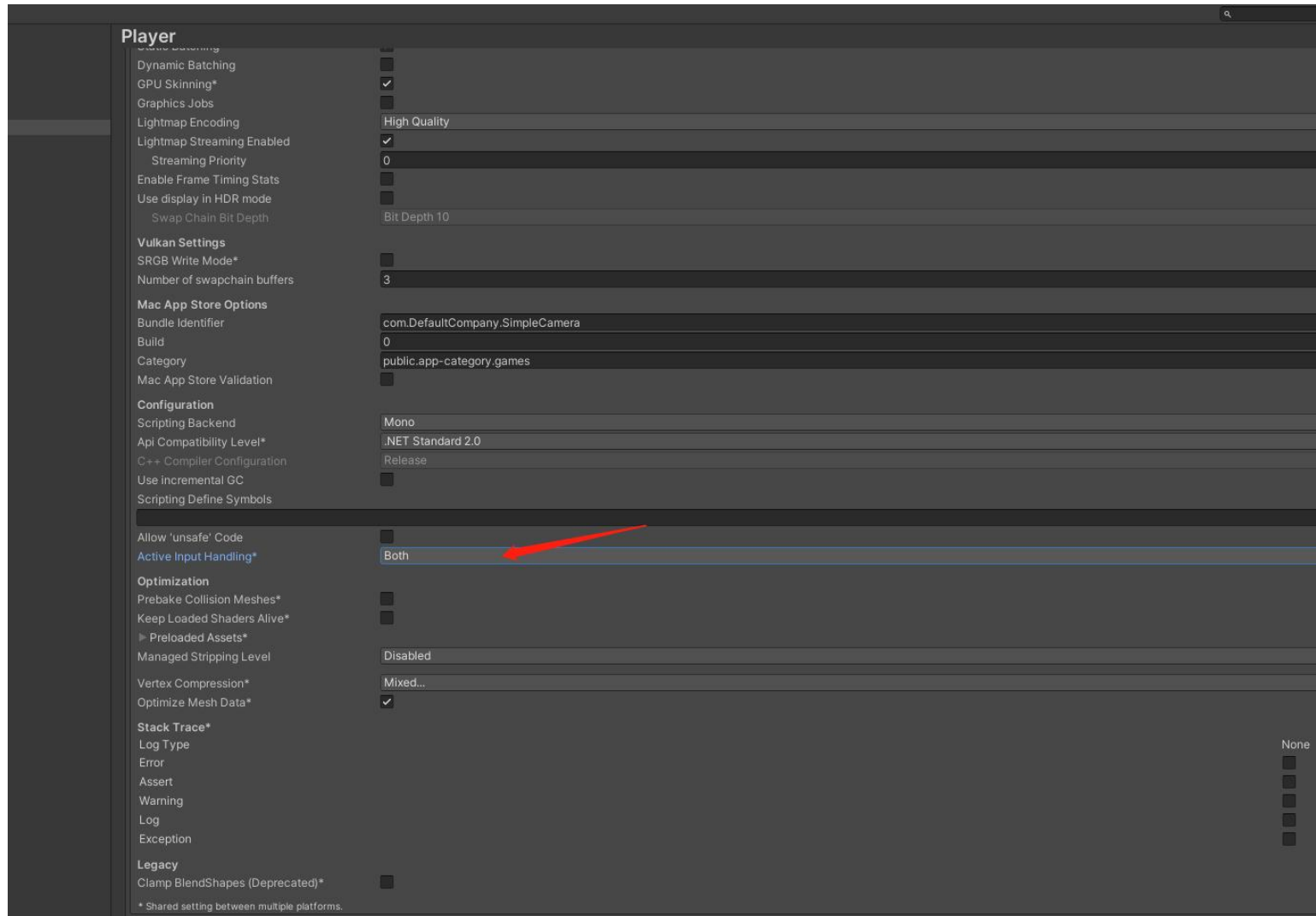
7. **EnableZoom(bool enableScrollwheelZooming=true, bool enableKeyboardZooming=true):** Whether the zoom function and the rise and fall function are enabled

8. **ResetTarget():**

Actively let the camera lose the target, reset the target, and the camera does not select any target or track the target

Tip

1.If you use a new version of the input system, you need to change the options here,You can select both,For compatibility with older versions of the input system



Support and Contact

If users need to access third-party devices: for example, joystick control camera, Kinect, leapmotion control, please leave a message, and a third-party access interface will be added in the next version

If you need help or have any suggestions, please send me a mail at

sunrui19950302@163.com

I will be glad to answer