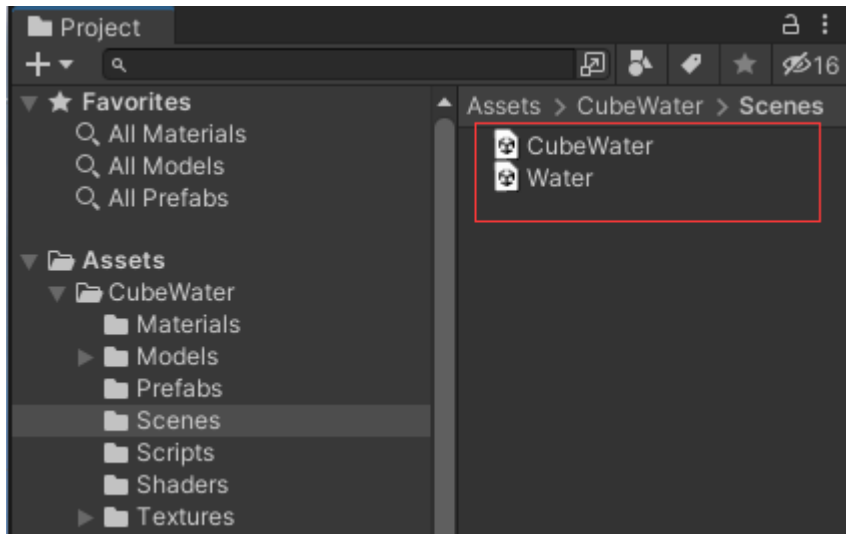


## I. View the CubeWater effect

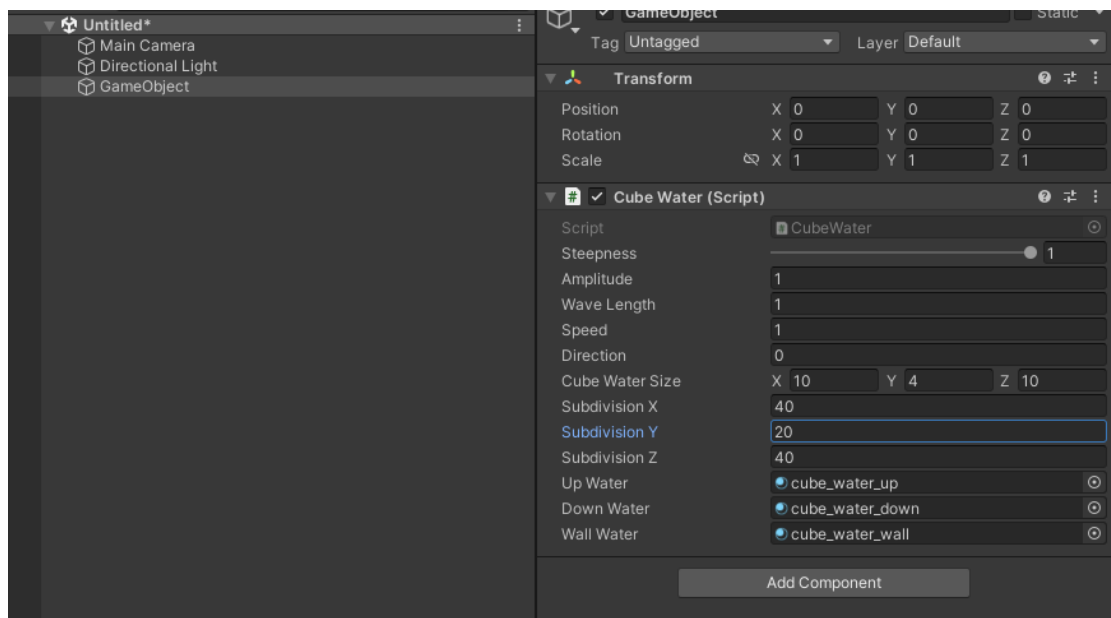


Import the package, find the path “CubeWater/Scenes/”, open the example scene “CubeWater.unity” and “Water.unity”.

## II. The use of CubeWater

1、Create an empty scene, then create a gameobject, add the component CubeWater to it. The CubeWater monobehavior define the size of cube water and the parameter of the water. It would auto create a cube model, a renderer component and set the material.

As shown below:



2、Set the parameters

Steepness: the steepness of the waves.

Amplitude: the amplitude of the waves.

Wave Length: the length of the waves.

Speed: the move speed of the waves.

Direction: the move direction of the waves.

Cube Water Size: the size of the cube water.

SubdivisionX : the subdivision of the cube water mesh in the X axis.

SubdivisionY: the subdivision of the cube water mesh in the Y axis.

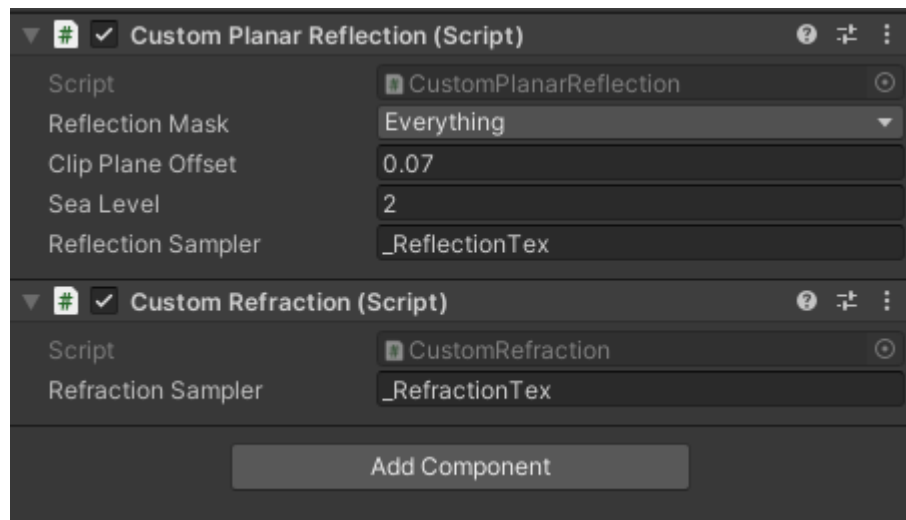
SubdivisionZ: the subdivision of the cube water mesh in the Z axis.

Up Water: set the CubeWater/Materials/cube\_water\_up to it.

Down Water: set the CubeWater/Material/cube\_water\_down to it.

Wall Water: set the CubeWater/Material/cube\_water\_wall to it.

3、Find the main camera, add CustomPlanarReflection and CustomRefraction component to the main camera。



Reflection Mask: the culling mask of reflection camera.

Clip Plane Offset: keep default。

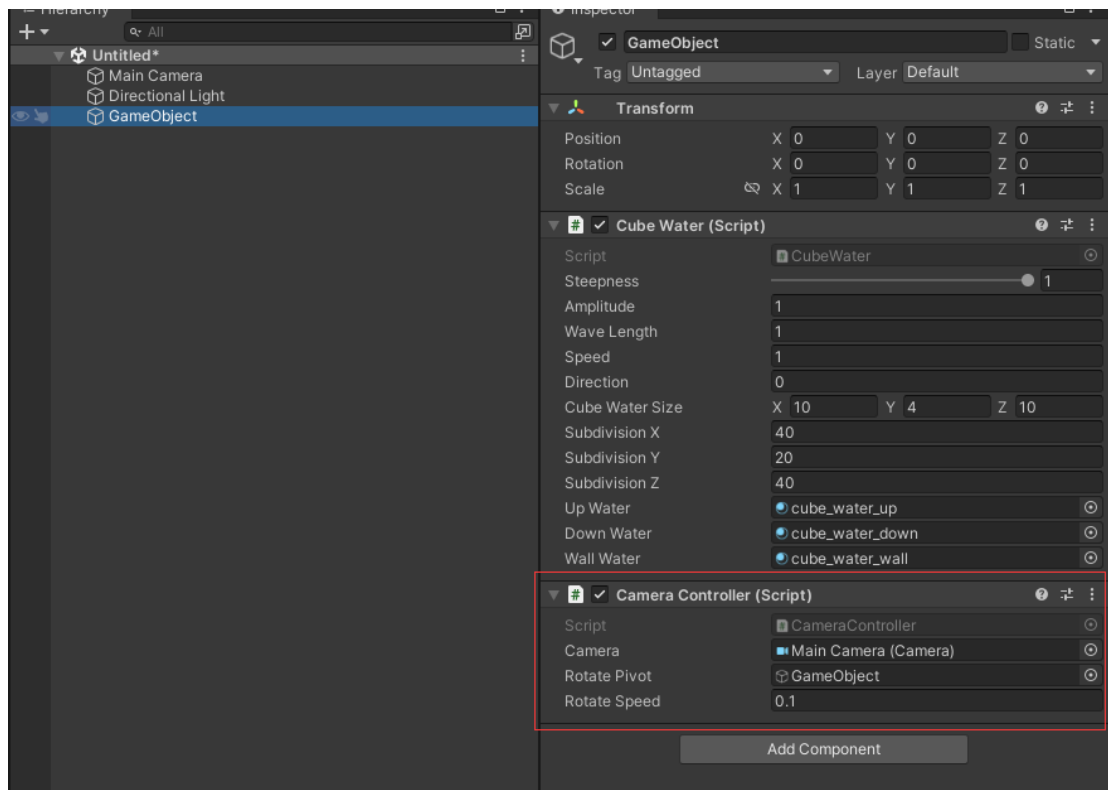
Sea Level: the height of water。

Reflection Sampler: the reflection sampler name, keep default。

Refraction Sampler: the refraction sampler name, keep default。

4、Add CameraControl component to the gameobject。

As shown below:



CameraControl script used to control the rotation of camera。

parameter:

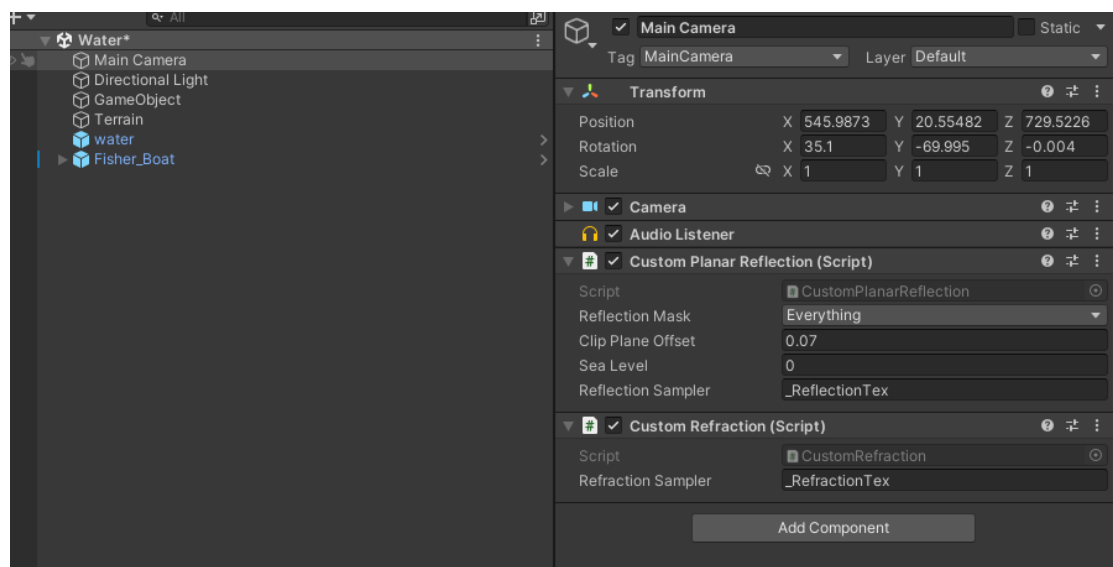
Camera: the target camera

RotatePivot: the rotation pivot.

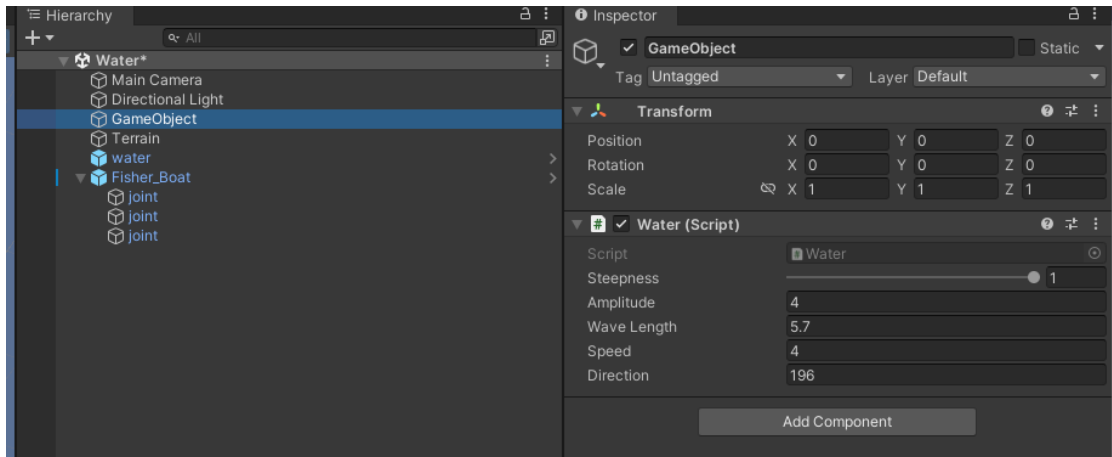
RotateSpeed: how fast the camera rotate

### III. The use of general water

- 1、Put the CubeWater/Prefabs/water into the scene。
- 2、Add CustomPlanarReflection and CustomRefraction component to the main camera.



3、 Create a empty gameobject, add the Water component to it。



Steepness: the steepness of the waves.

Amplitude: Amplitude: the amplitude of the waves.

Wave Length: the length of the waves.

Speed: the move speed of the waves.

Direction: the move direction of the waves.

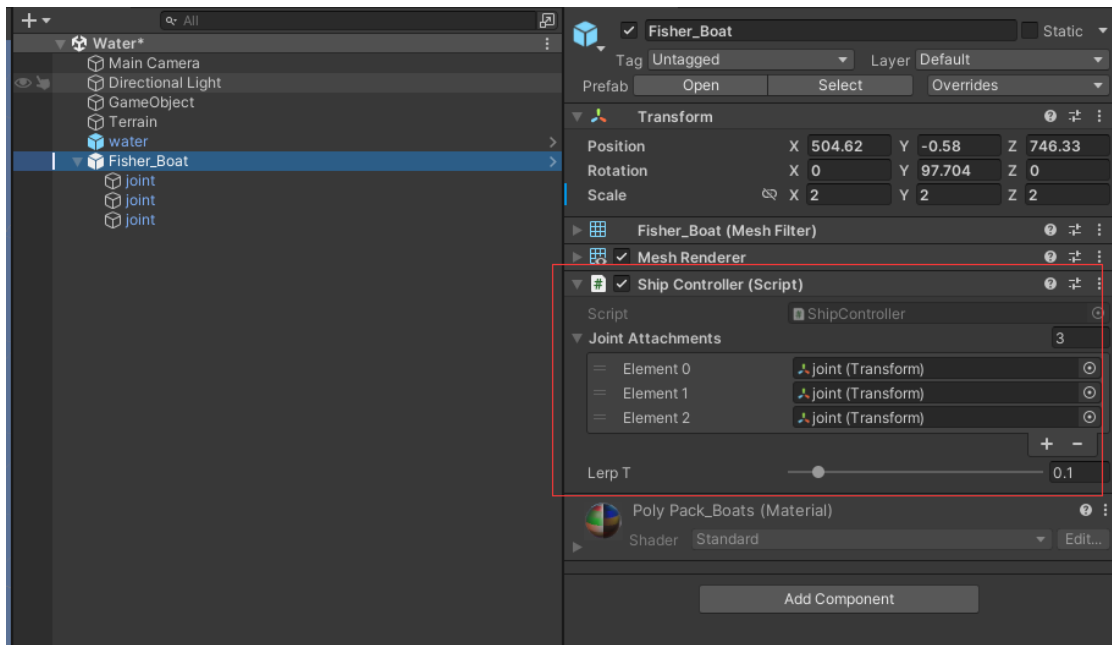
## IV. The swing effect of the boat

1、 Add ShipController component to the boat gameobject.

2、 Create three empty gameobject under the boat.

3、 Set the three gameobject on the right position, assigned them to the variable JointAttachments.

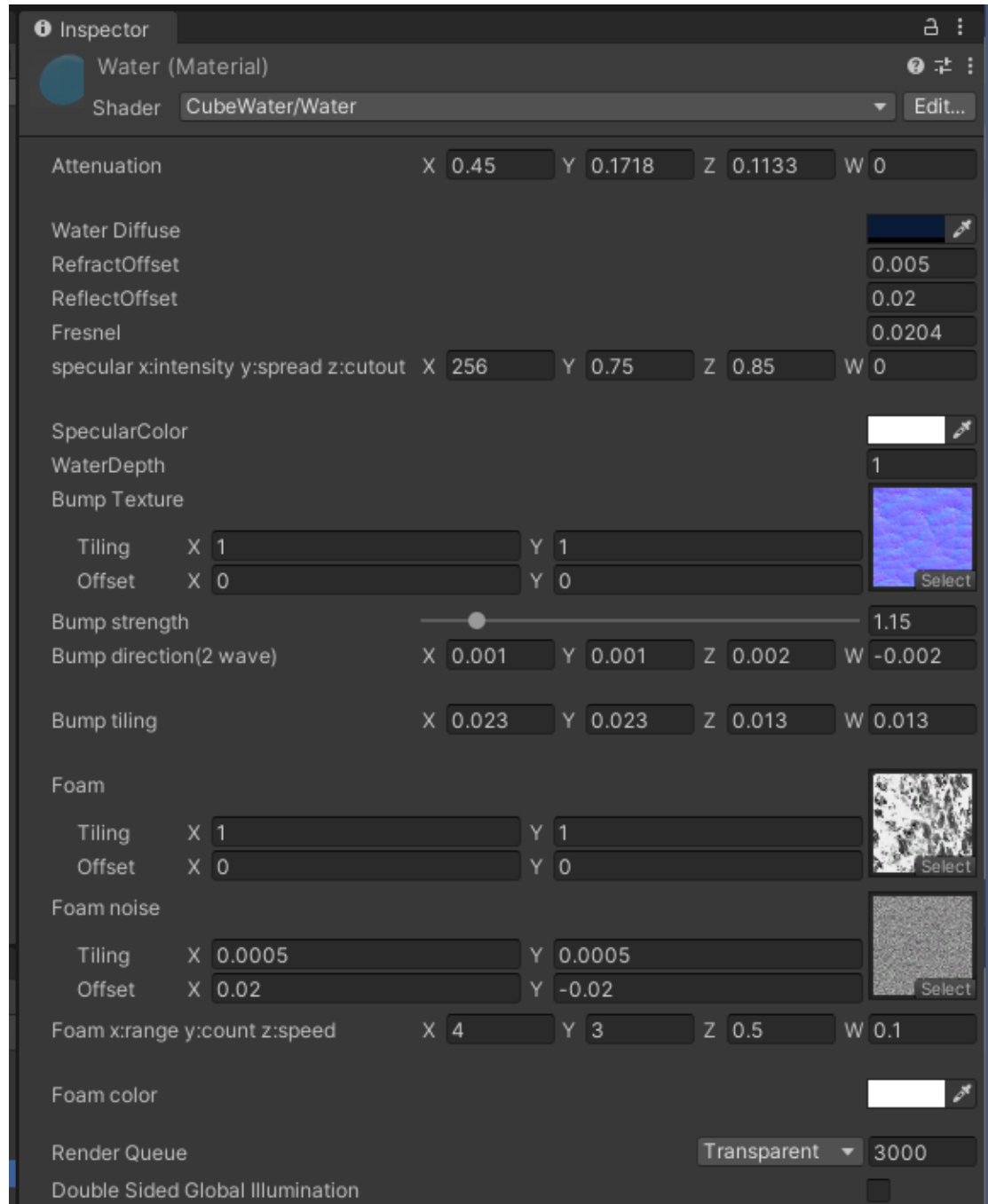
As shown below:



4、 Make sure there is a Water or CubeWater component in the scene.

## V. Shader Discription

### 1、 Water Shader



Attenuation: light attenuation in the water. Change this would change the water scattering color.

Water Diffuse: the base color of water

RefractOffset: water refraction offset

ReflectOffset: water reflection offset

Fresnel: Fresnel of water, default value is 0.0204.

Specular: x: specular intensity; y:specular spread range; z:specular cutout

Specular Color: specular color.

WaterDepth: the higher the value, the darker of the water color.

Bump Texture: normal map of water.

Bump Strength: strength of the normal map

Bump Direction: move direction of the normal map.

Bump Tiling: the tiling of the normal map.

Foam: foam texture

Foam Noise: noise texture

Foam param: x: foam range; y:foam count; z:speed of foam

Foam Color: foam base color.

## **VI. URP Version**

Create a urp projection, import CubeWater\_URP package.

Open CubeWater/Scenes/CubeWater.scene and run unity.