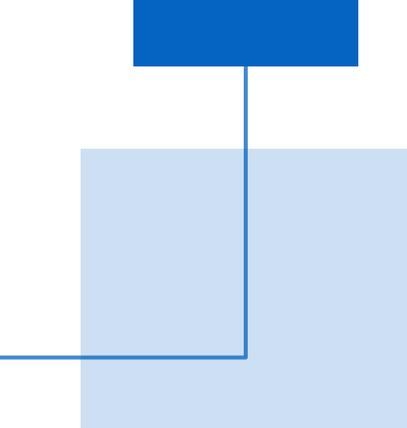


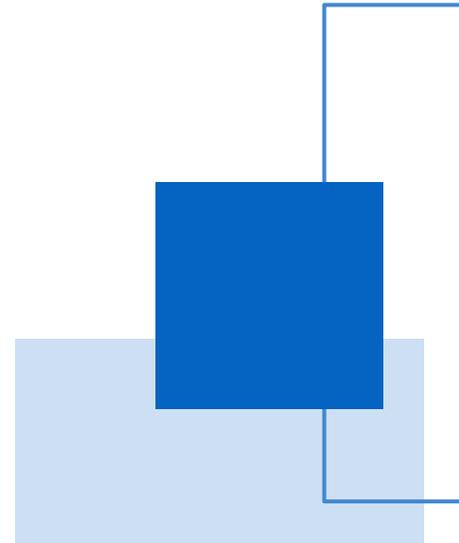
游戏项目实践 实践课06-02

- 3D游戏场景搭建2 及 光照



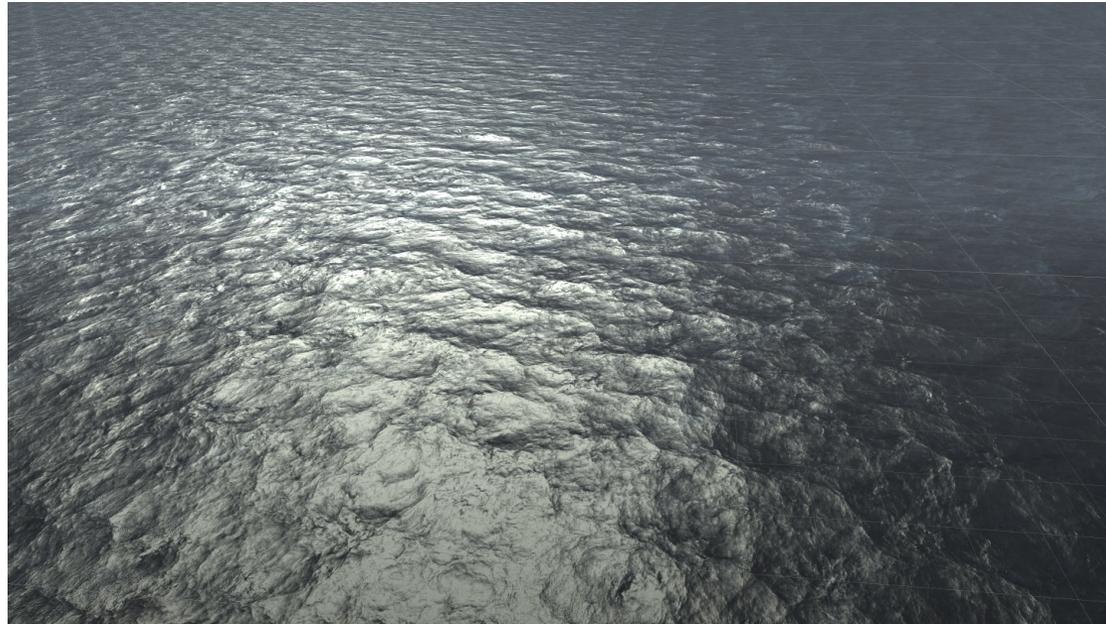
1

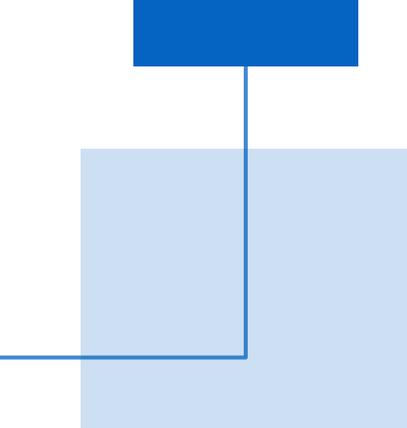
构建水体



练习1-1:

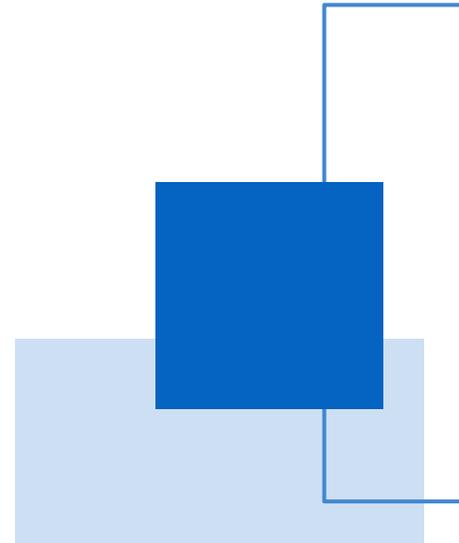
1. 创建一个Plane，修改Scale为100， 1， 100
2. 导入06-Water.unitypackage
3. 挂载材质Water Type 1.mat到Plane
4. 挂载Water.cs脚本到Plane
5. 运行观察结果
6. 尝试修改Water.cs的参数及摄像机位置，观察结果结果





2

物体漫游

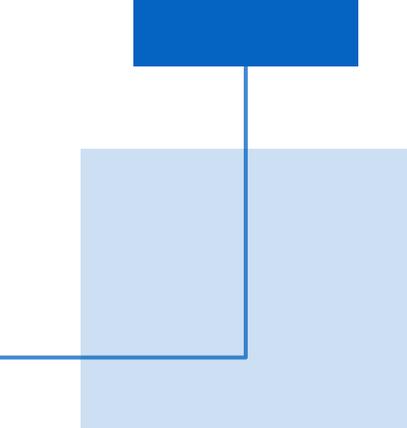


练习2-1:

1. 导入Ship.unitypackage或Boat.unitypackage
2. 创建一个船物体
3. 为该对象挂载一个Camera，删除原有Camera
4. 创建代码，实现WSAD操作船在水面移动
5. 修改Camera的角度及位置，要求Camera斜视船体

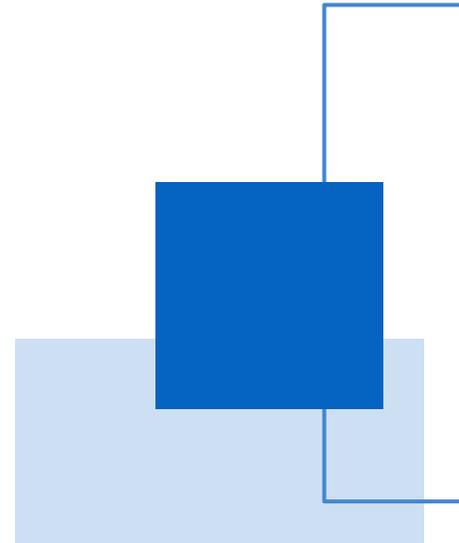
```
if (Input.GetKey(KeyCode.W)){  
  
}
```





3

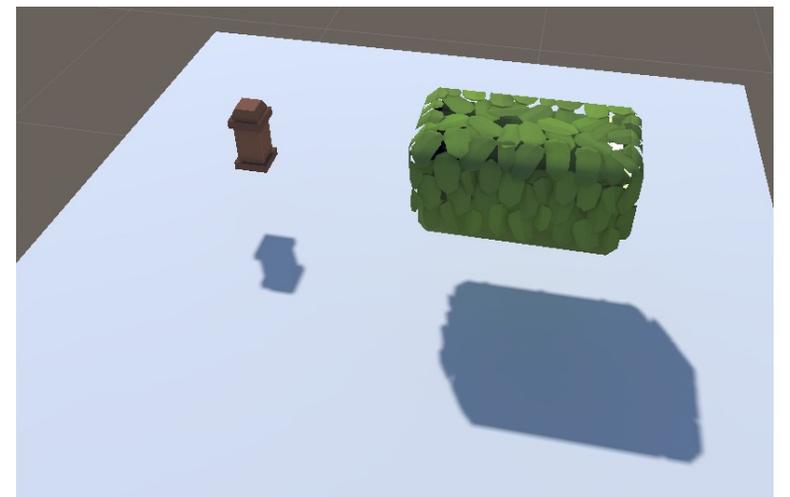
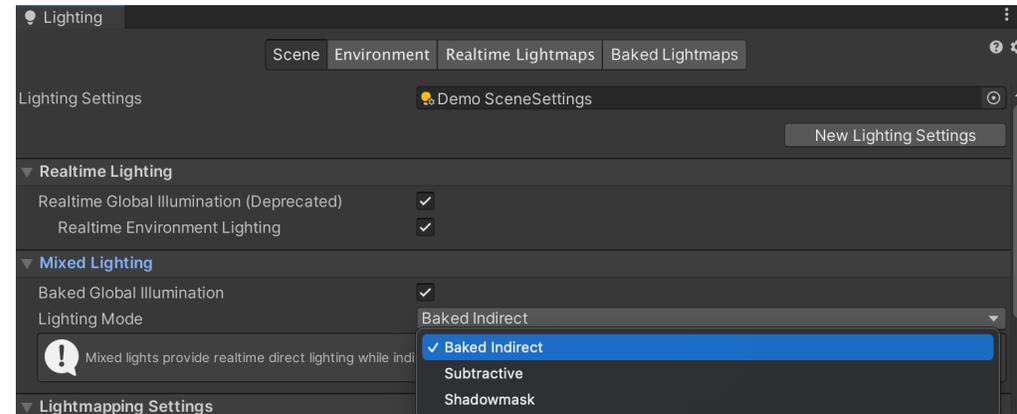
烘焙



练习3-1:

1. 导入06-House.unitypackage
2. Directional Light的Mode属性改成: Baked
3. 创建一个地形或Plane, 并将其设置为静态
4. 添加物体, 并将物体设置为静态
5. 选择Window->Rendering->Scene->Mixed Lighting, 设置为Baked Indirect, 不勾选底部的Auto Generate
6. 选择Window->Rendering->Environment
7. 设置Bounces为2-5 (越大越慢)
8. 点击Generate Lighting, 结束后查看Baked Lightmaps, 并观察场景中的烘焙结果

注意: 烘焙过程将占用系统计算资源





4

开关灯

练习4-1: 通过键盘按键实现开关灯（点光源）的效果

代码仅供参考，
不用完全按照
代码进行实现。

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

public class MyLight : MonoBehaviour
{
    public Light light;

    // Start is called before the first frame update
    void Start()
    {

    }

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

    }

    public void TurnOn()
    {
        light.gameObject.SetActive(true);
    }

    public void TurnOff()
    {
        light.gameObject.SetActive(false);
    }
}
```

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

public class Game : MonoBehaviour
{
    public GameObject[] myCubes;
    bool bLighting = false;
    int activedLightCnt = 0;

    // Start is called before the first frame update
    void Start()
    {

    }

    // Update is called once per frame
    void Update()
    {
        if (Input.GetKey(KeyCode.M))
        {
            if (!bLighting)
            {
                for (int i = 0; i < myCubes.Length; i++)
                {
                    myCubes[i].GetComponent<MyLight>().TurnOn();
                    bLighting = true;
                }
            }
        }

        if(Input.GetKey(KeyCode.N))
        {
            for (int i = 0; i < myCubes.Length; i++)
            {
                myCubes[i].GetComponent<MyLight>().TurnOff();
                bLighting = false;
            }
        }
    }
}
```

| Q&A