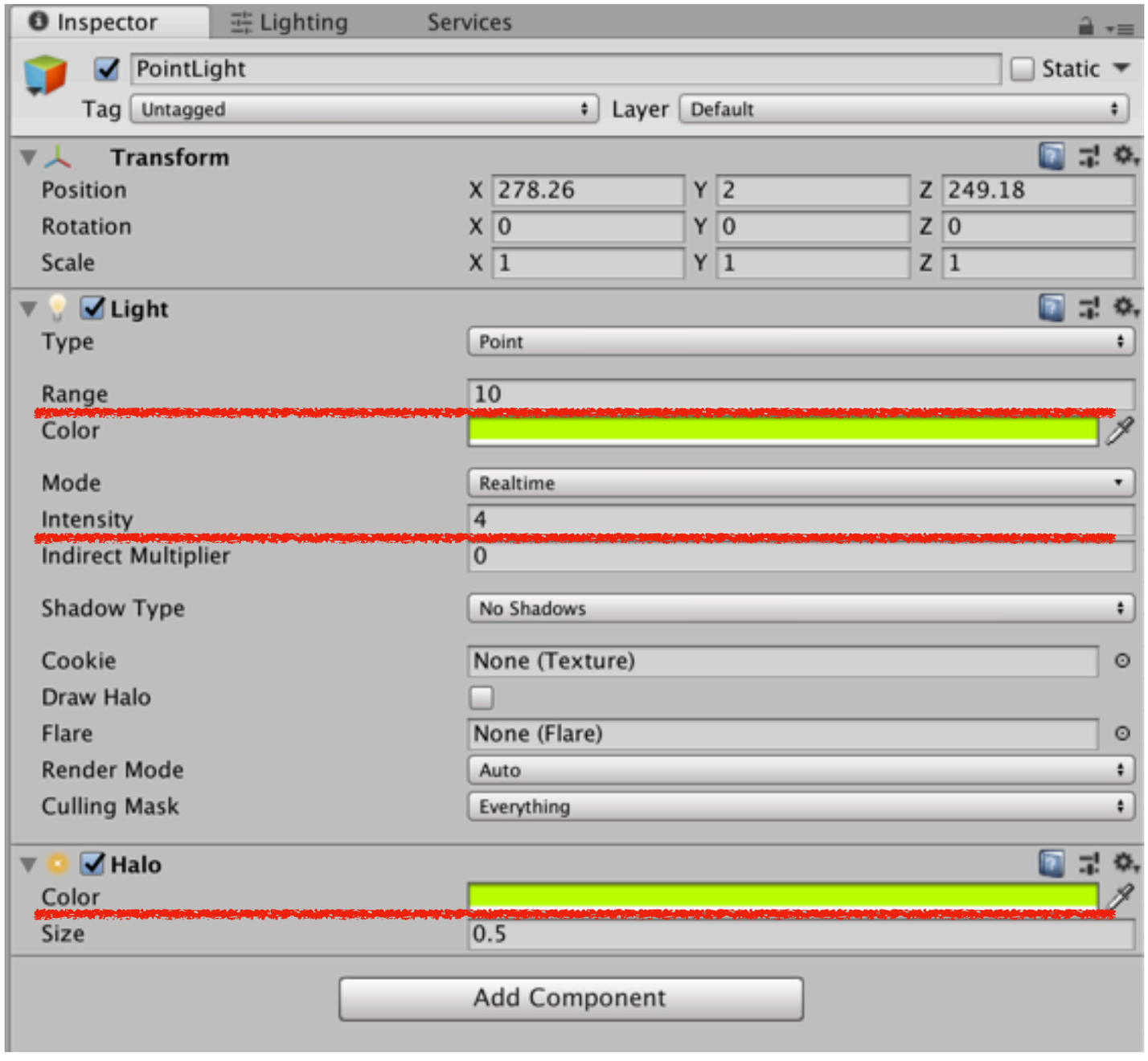
UnityStudy

영-영,PointlessSight

서유리

1. 녹색광선



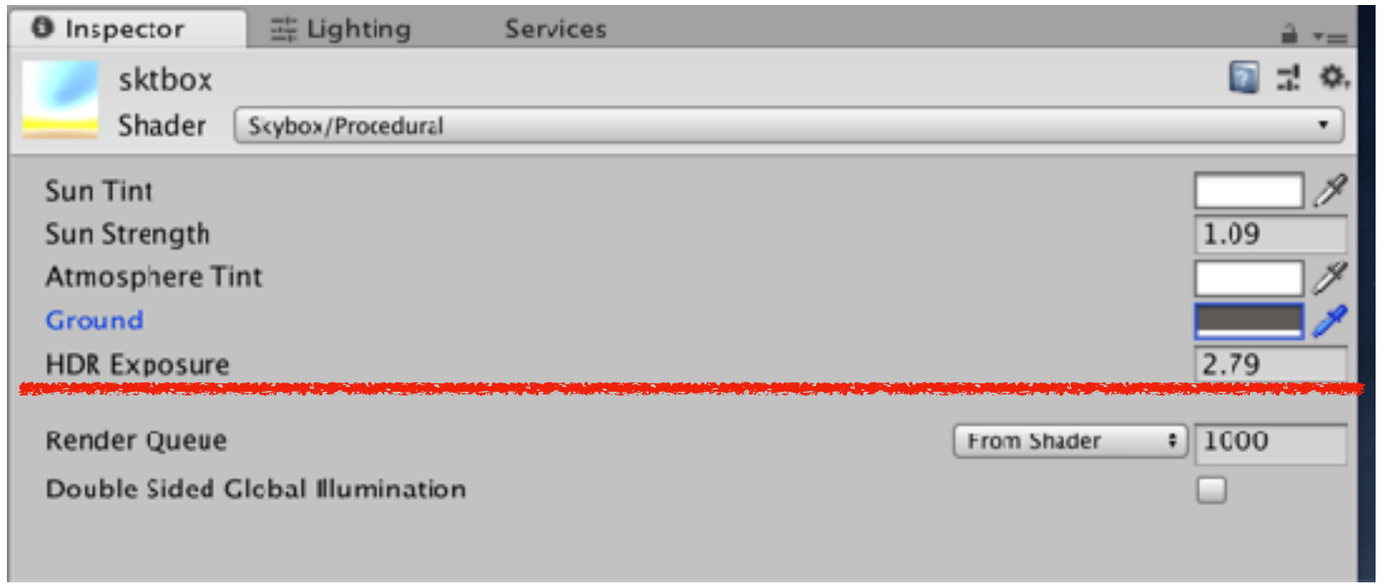
바닥에 얼마나 빛이 떨어지는지

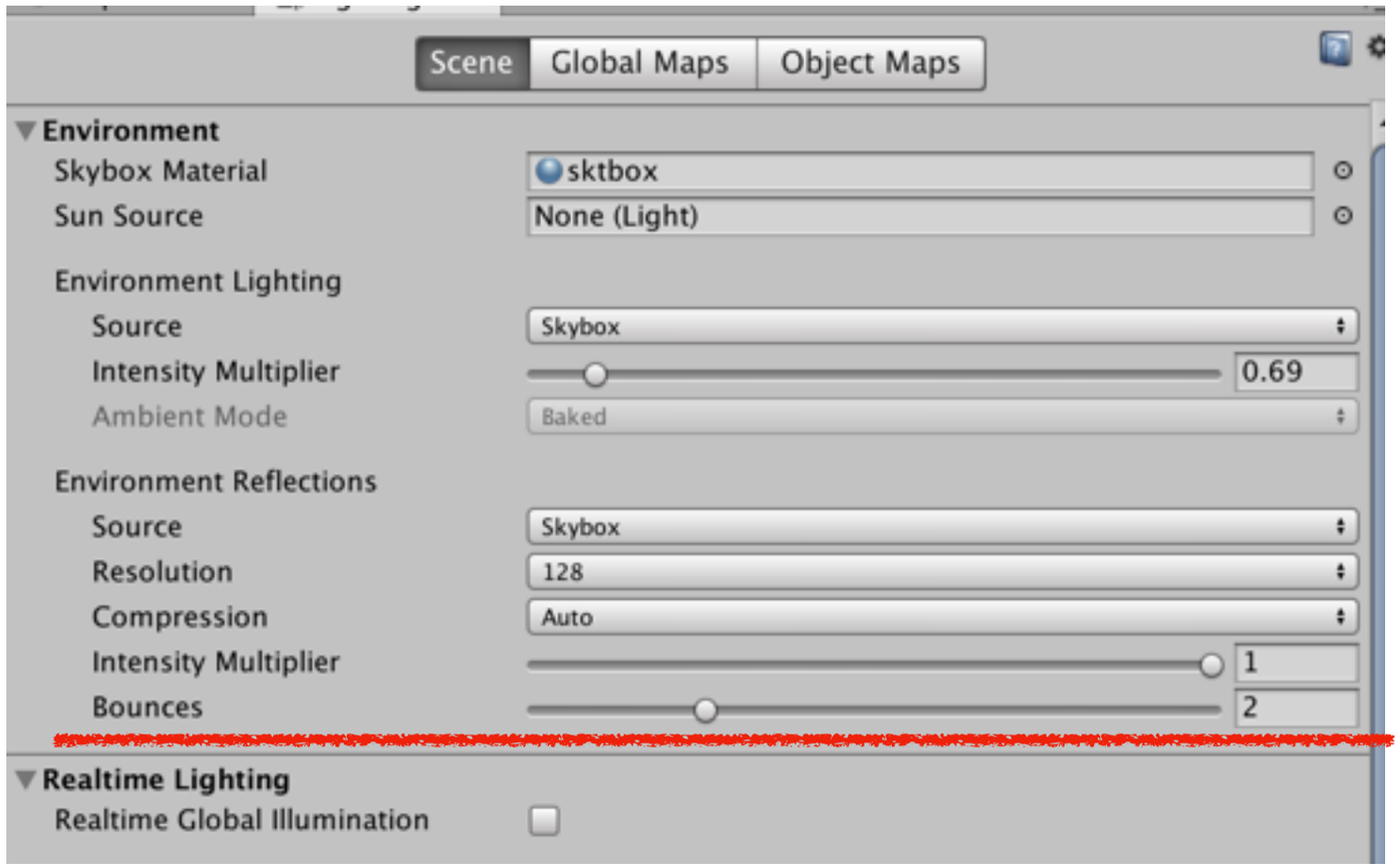
빛이 얼마나 진한지

이건 떠있는 빛의 크기

2-1. Day-night cycle(skybox:exposure를 이용한)

https://www.youtube.com/watch?v=D392TitSE4k





1) 스카이 박스 만들기

Create material -> name ‘skybox’ -> shader : skybox

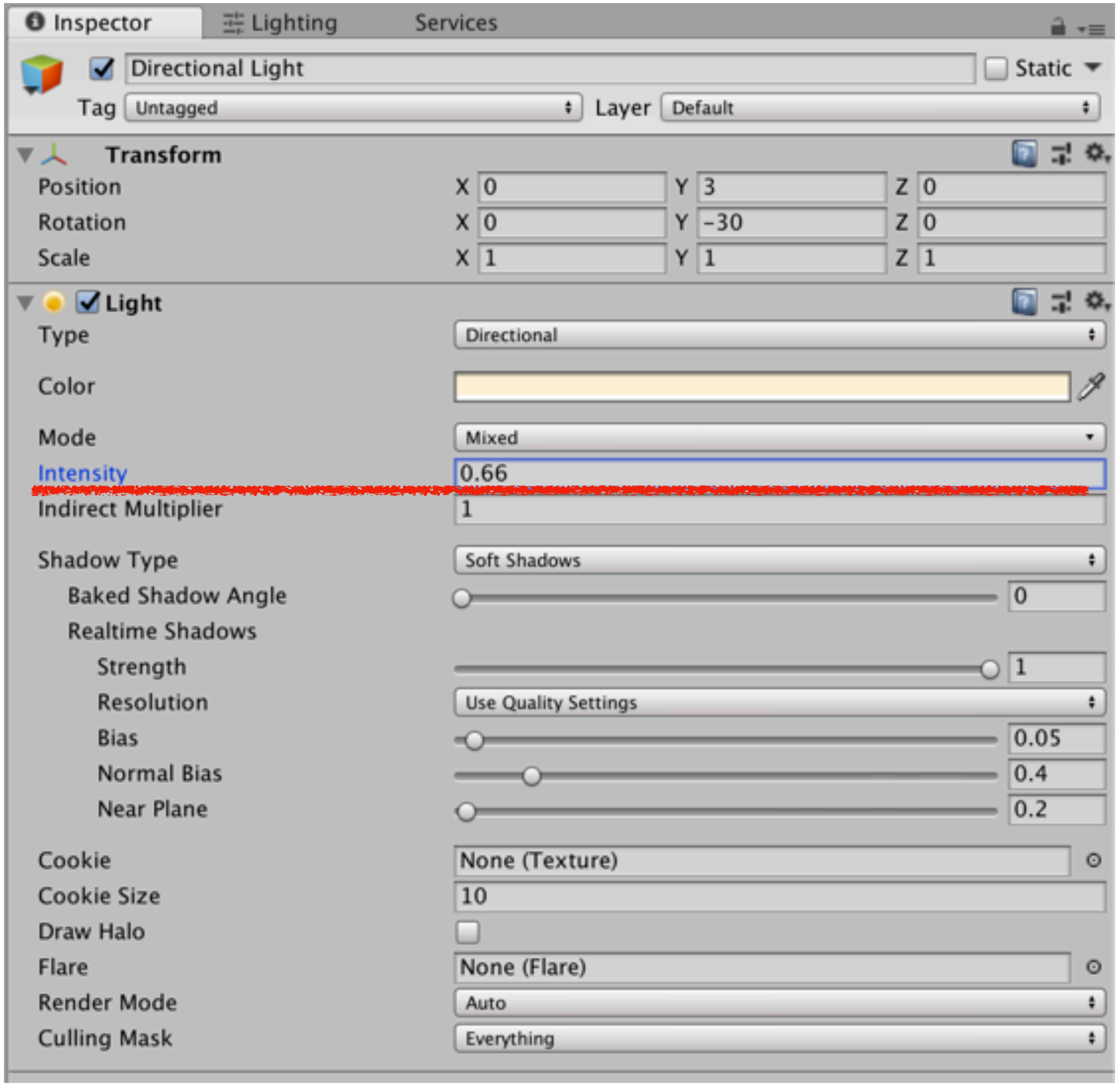
2) 스카이 박스를 scene화면에 넣는다

3) Directional Light를 끄고!
SkyBox(Inspector)에
Exposure->animation 적용
밤-아침을 만든다.

-> 디렉셔널 라이트를 달로 쓸수도 있겠네.

(*animation 단축키 : cmd+6)

물체에 빛이 얼마나 묻는지



이걸로 달빛이 얼마나 묻는지 체크

밤-> 별이 빛나는 밤 -> 동틀 무렵

-

1) 밤->동틀무렵 : skybox exposure animation
2) Directional light = 달빛(은 되는데, 달은 모르겠다)
3) 별 = particle box

2-2. Day-night cycle(Skybox blender shader를 만들어서)

https://www.youtube.com/watch?v=cdOhl2mSBdk&t=31s

1)스카이박스 블렌더 쉐이더 만들기

Create shader -> standard -> name 'SkyboxBlended.shader'-> copy and paste code

http://wiki.unity3d.com/index.php?title=SkyboxBlended#ShaderLab_-_SkyboxBlended.shader

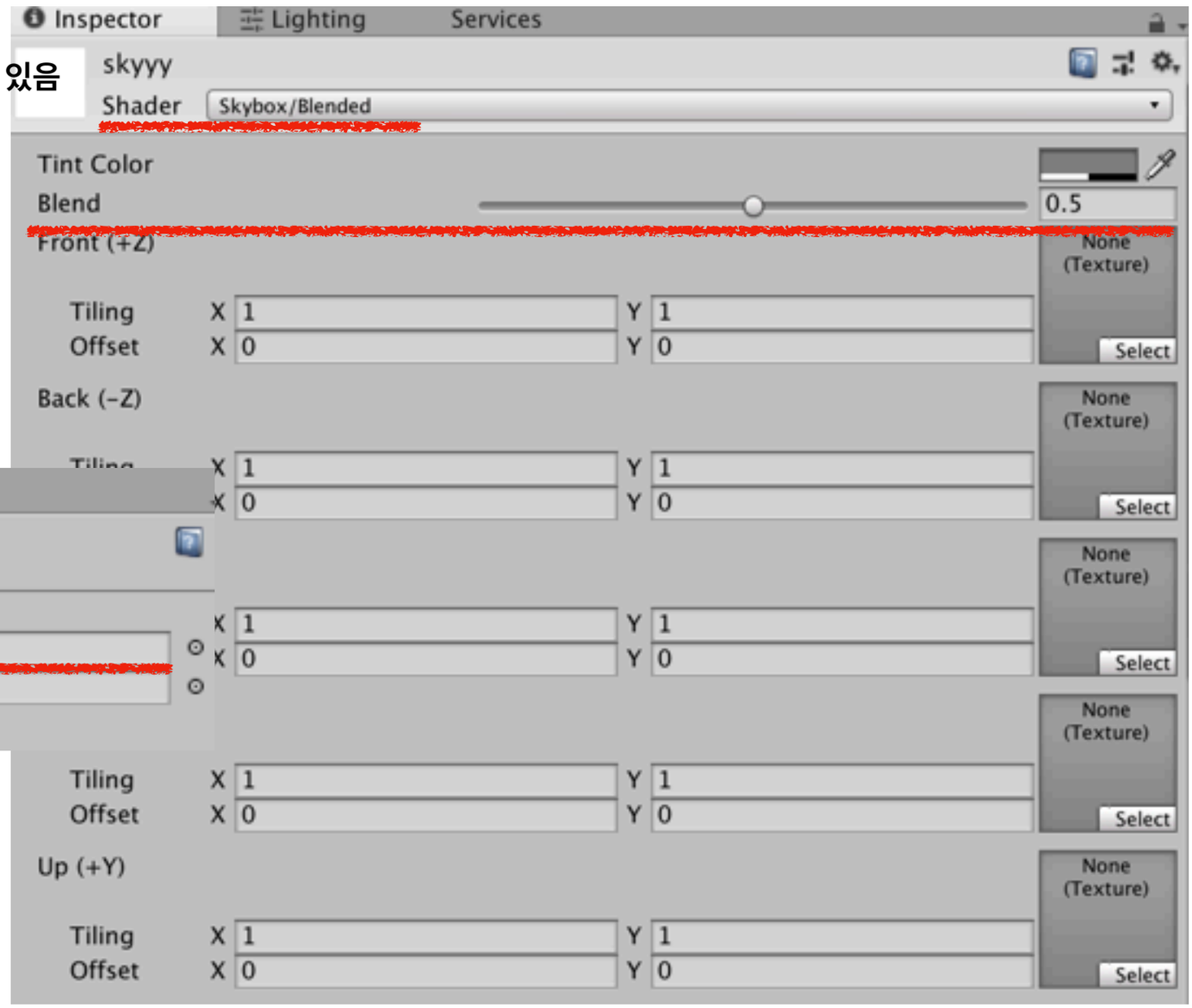
2) Material -> Shader : Skybox / Blended 만들고,

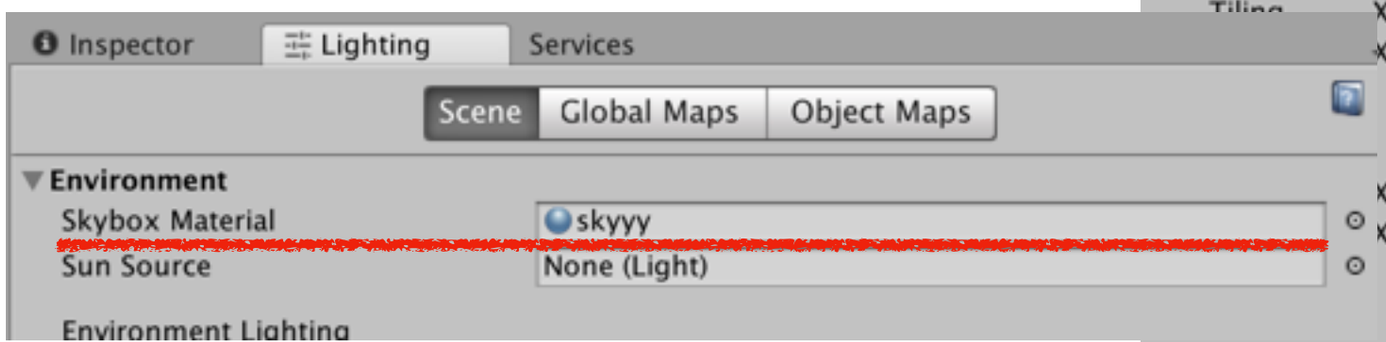
하고 인스펙터에 사진들 넣어줌

3) 그리고 Lighting : skybox material에 만든skybox넣어줌

4) inspector에 blend 좌우로 움직이면 블렌드된 모습을 확인 할 수 있음

5) animator or code로





2-2. Day-night cycle(해와달의 움직임으로)

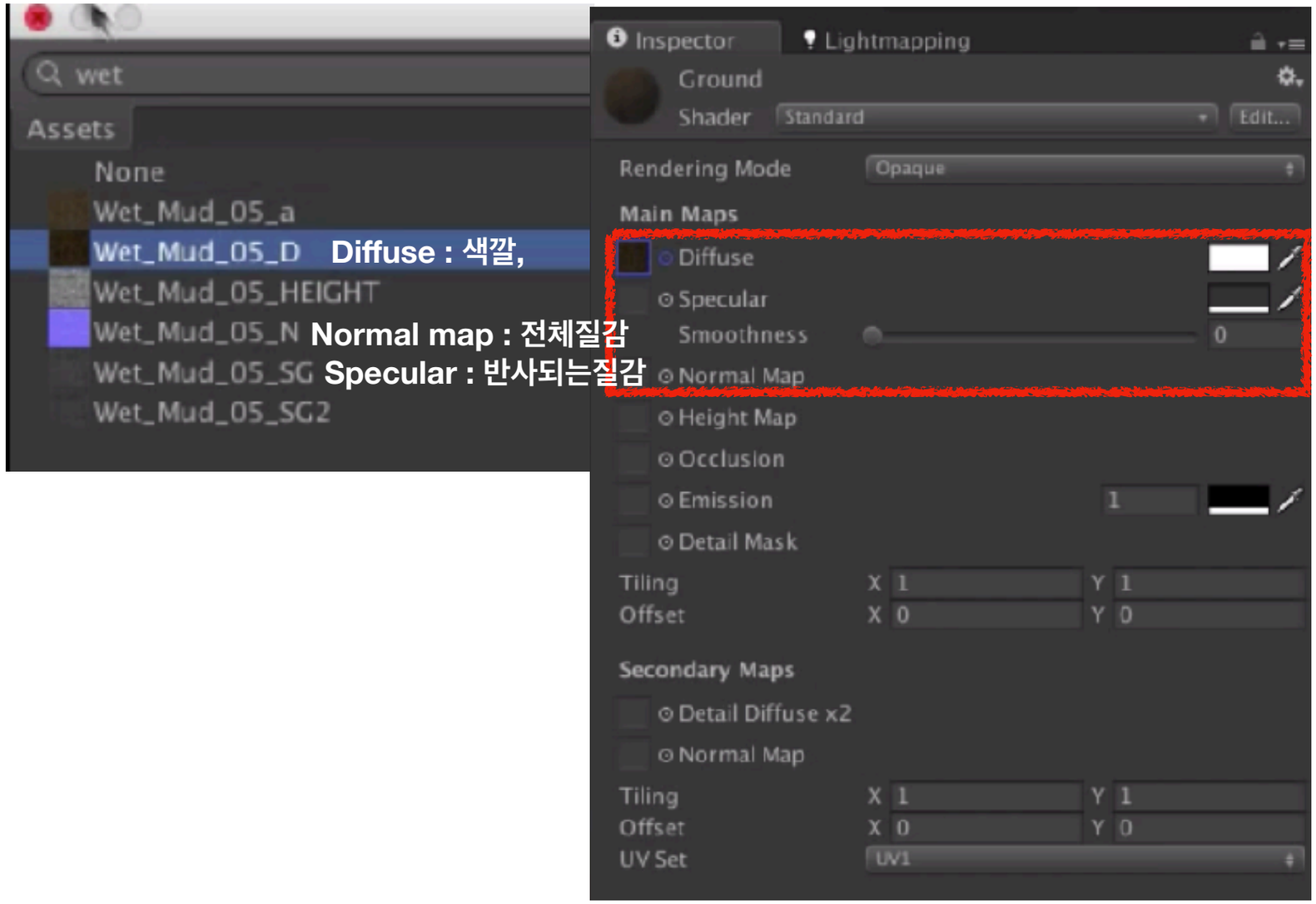
https://www.youtube.com/watch?v=DmhSWEJjphQ&t=594s

!시간변화! :

60 = 1분
15분 = 900

Animation inspector ; loop 꺼주기!!**

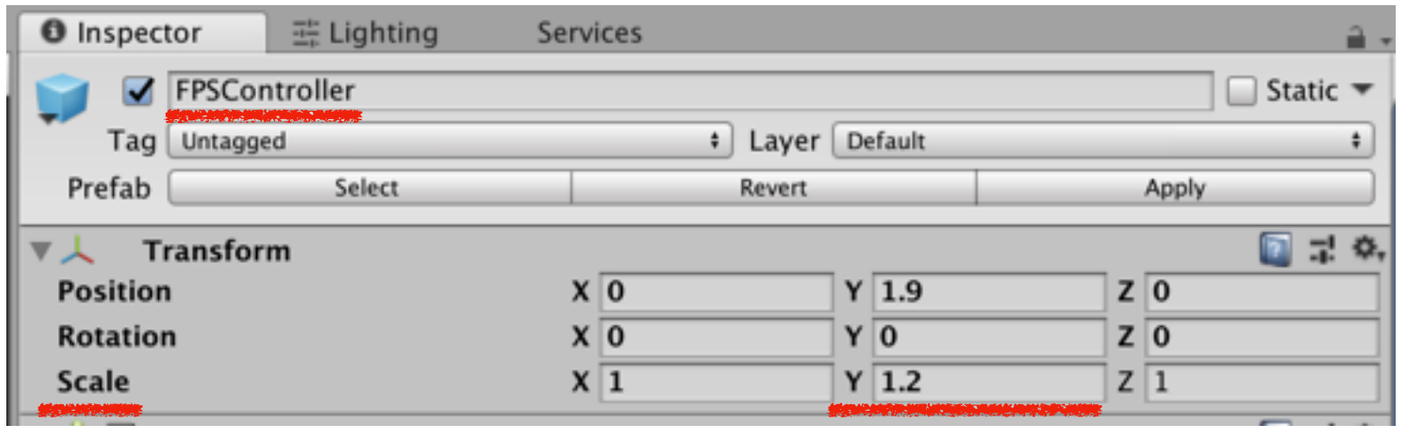
부록 바닥 질감 비 온 것처럼 만들기



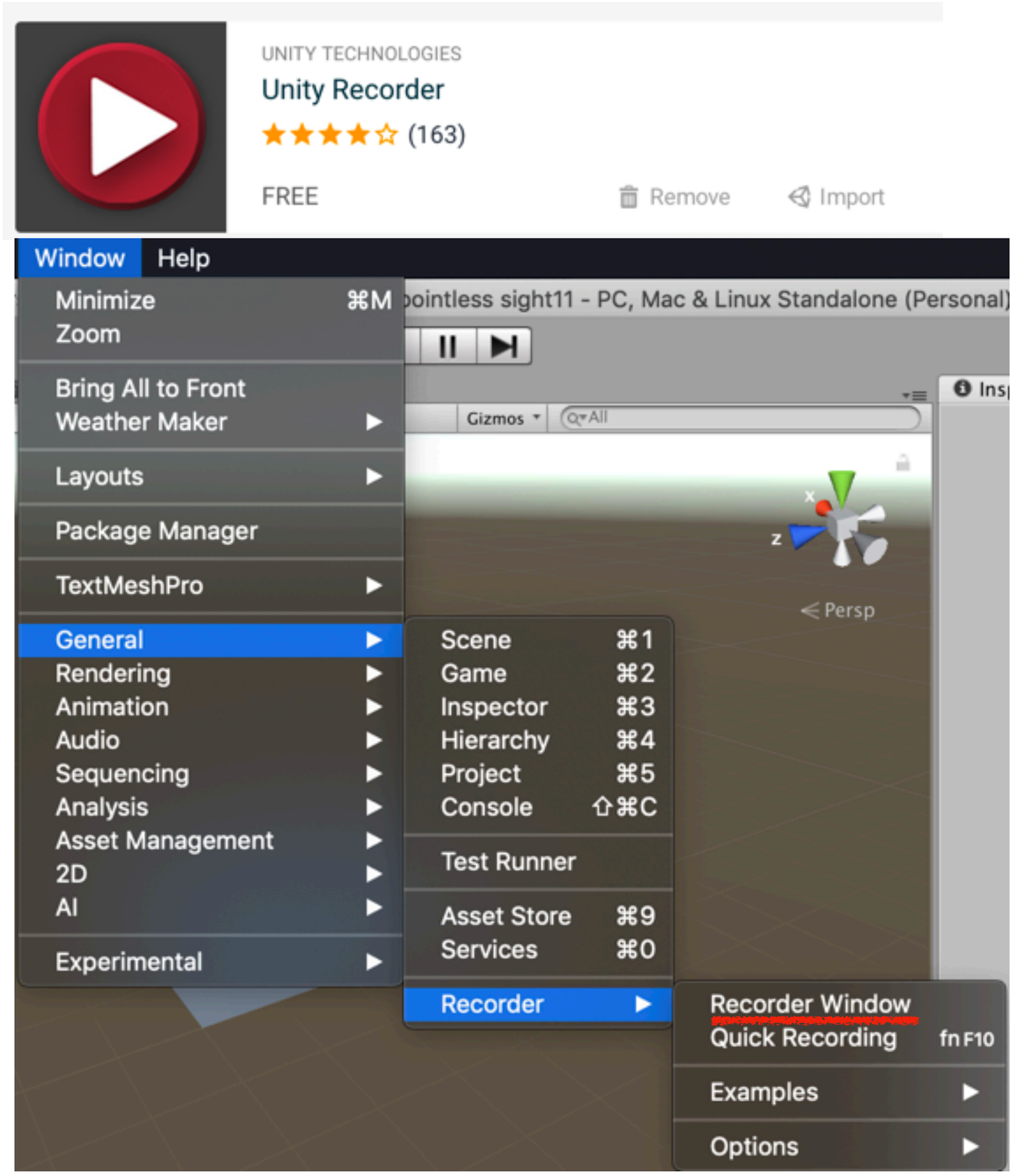
올라갈수록 비에 젖은 효과 남

땅 질감전에 Reflection probe 만들어 주는데, 왜 ??

3. FPS Controller eye level 조정 Scale : y 값 조정



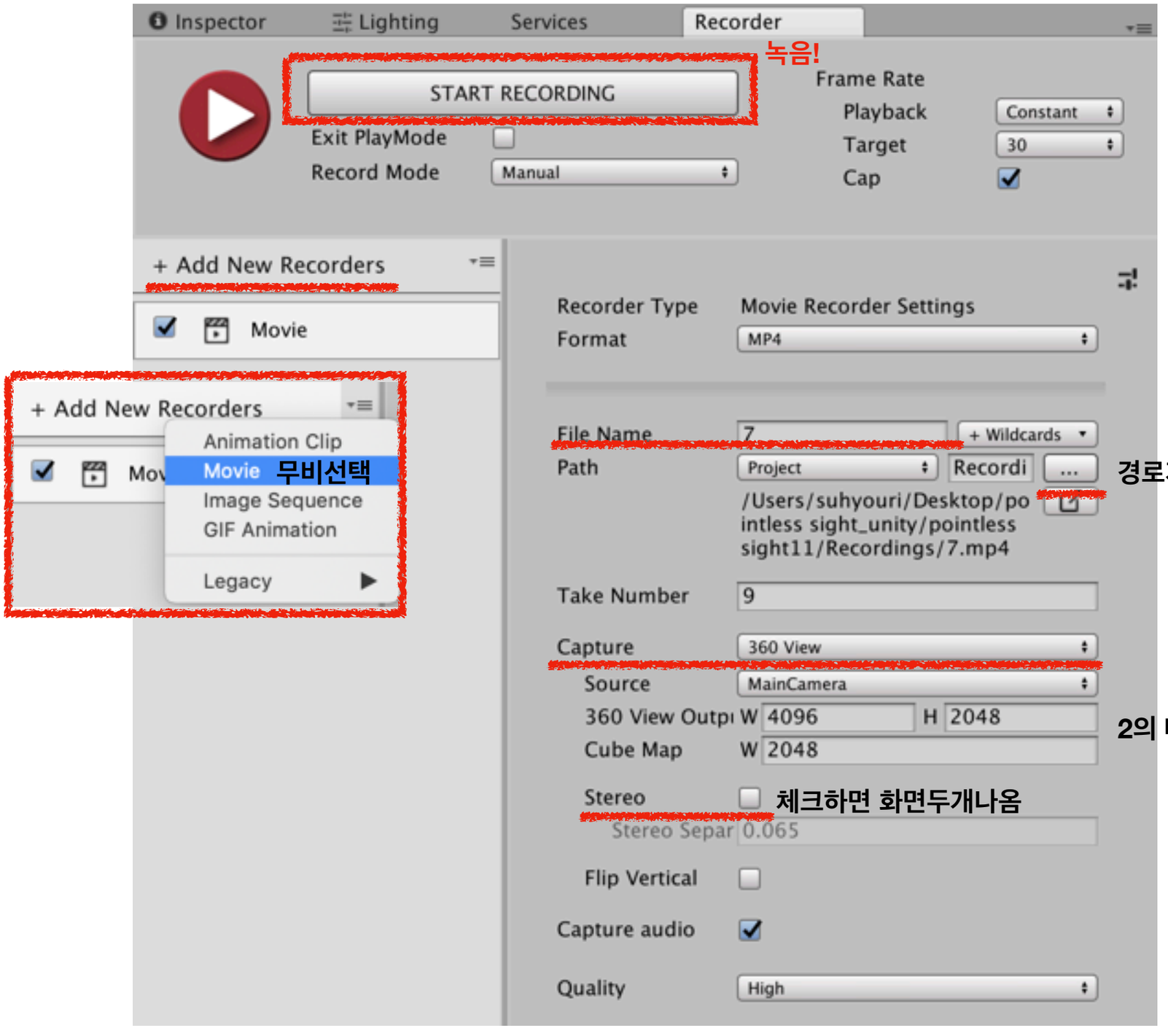
4. 360도 동영상 뜨기

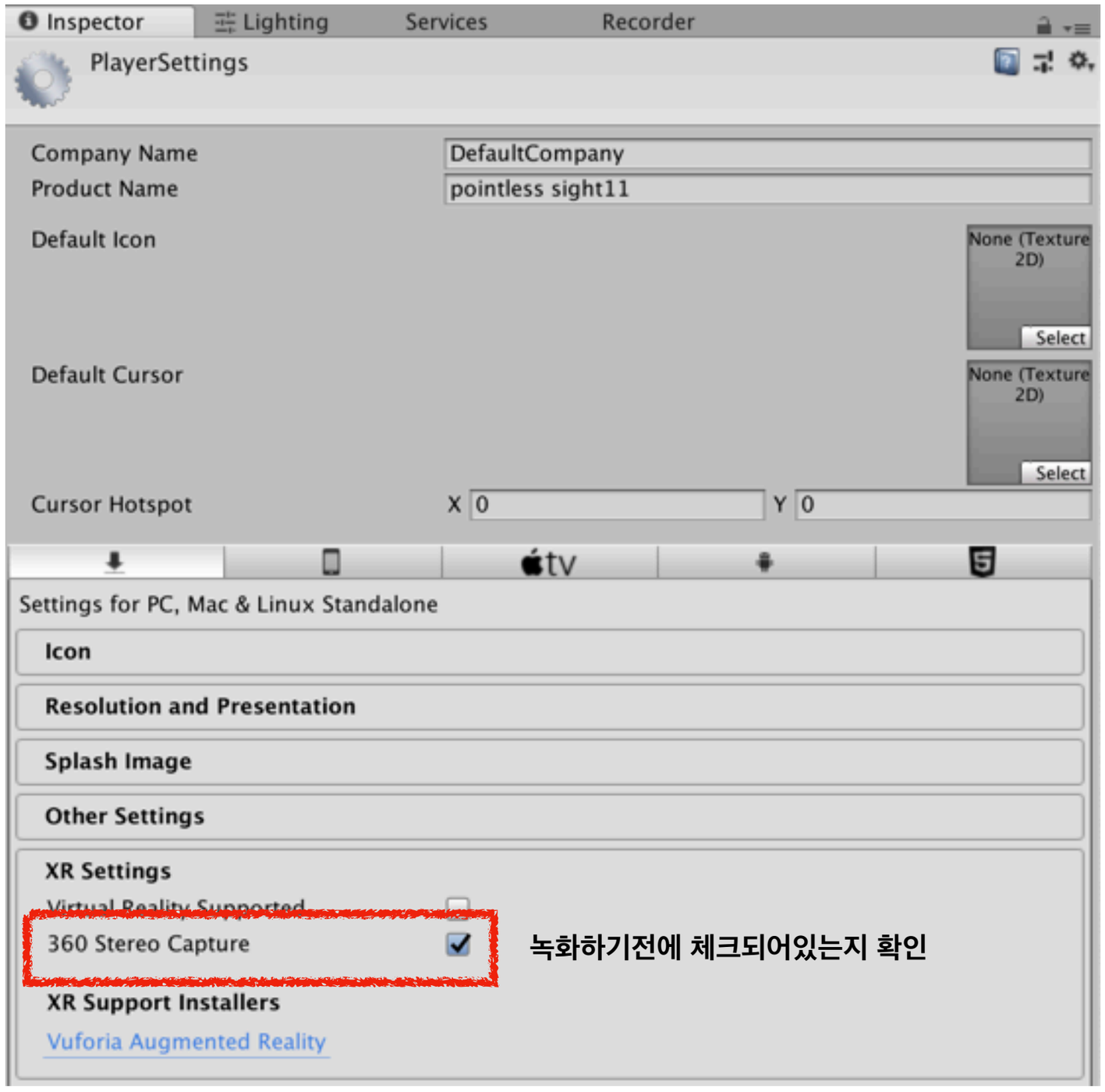


에셋스토어에서 유니티 레코더를 받는다

윈도우 제너럴에 레코더 버튼이 생겼다.

4. 360도 동영상 뜨기


Inspector
Lighting
Services
Recorder
녹음!
START RECORDING
Exit PlayMode
Record Mode
Manual
Frame Rate
Playback
Constant
Target
30
Cap
+ Add New Recorders
Movie
Recorder Type
Movie Recorder Settings
Format
MP4
+ Add New Recorders
Animation Clip
Movie 무비선택
Image Sequence
GIF Animation
Legacy
File Name
7
+ Wildcards
Path
Project
Recordi
...
경로지정
/Users/suhyouri/Desktop/pointless sight_unity/pointless sight11/Recordings/7.mp4
Take Number
9
Capture
360 View
Source
MainCamera
360 View Outpı W 4096 H 2048
2의 배수로
Cube Map
W 2048
Stereo
체크하면 화면두개나옴
Stereo Separ 0.065
Flip Vertical
Capture audio
Quality
High



녹화하기전에 체크되어있는지 확인

확인은 곰플레이어 / 팟플레이어(카카오)에서 확인할 수 있음

궁금한거는 유투브에 360도 올리는 사람들은 어떻게 올렸지?

5. 반딧불이Fireflies : 녹색광선존

https://www.youtube.com/watch?v=9O5XU_jshBU&t=8s

Create Effect-particle system (hierarchy) ->

(Inspector)V = check

V particle system

Start sIze 0.1(크기,나는이게적당한듯) , Start Speed 0

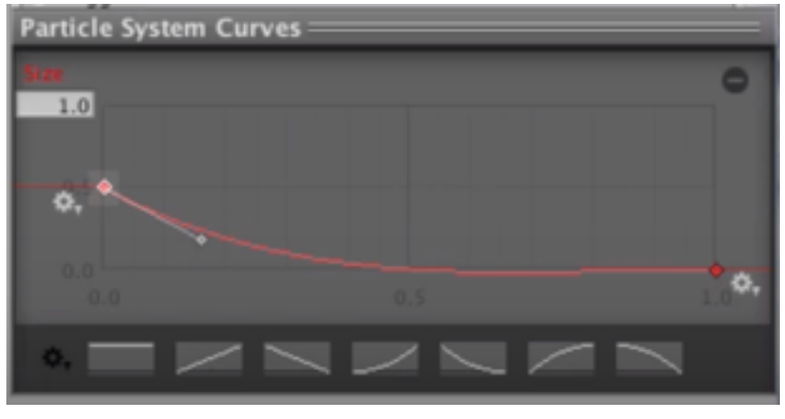
V emission 20

V shape : Sphere (범위모양)

V Radius : 10 (범위)

V ColorOverLifeTime : 노랑 - 초록(원하는 색깔)

V SizeOverLifeTime ; 0.5 (움직임 자연스럽게 나타나고 사라지고)



————————————————-별 같고 충분

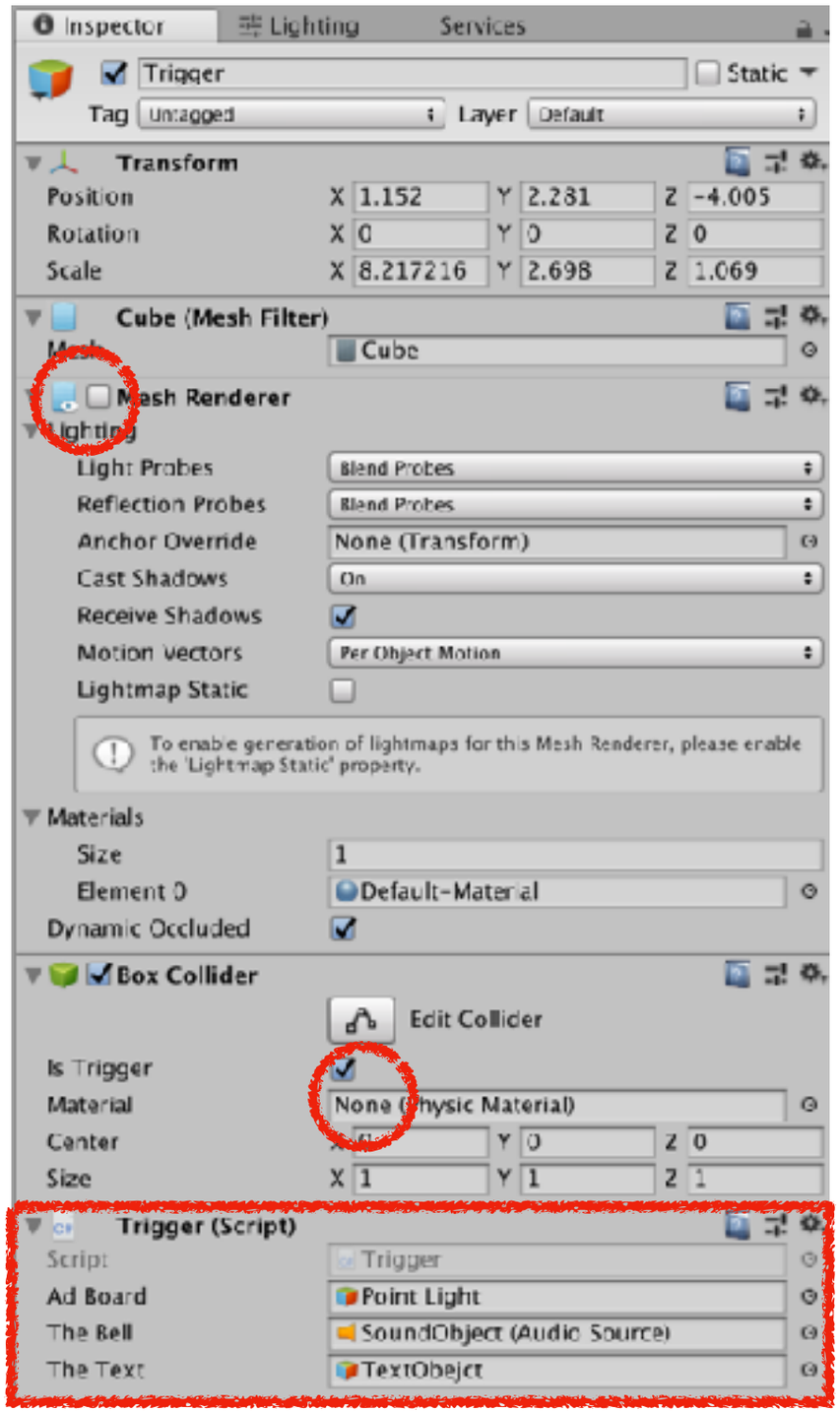
V noise : 움직이기 시작

strength 0.1 (움직이는 힘지정)

frequency0.8

6. Light on & off(트리거 이용)

https://www.youtube.com/watch?v=CSn0hENOIT0



1) Game Object

Create Cube(hierachy) -> 트리거 범위만큼 크기를 만들어준다. -> name “Trigger”
~ Mesh Renderer Unchecked꺼주고 ,
V (check) Box Collider : Trigger

Create C# Script(Project) -> name Trigger

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

public class Trigger : MonoBehaviour {

    public GameObject adBoard;

    void OnTriggerEnter(Collider other)
    {
        adBoard.SetActive(true);
    }
}
```

Trigger (script)in Project를 Trigger(in Hierachy)에 넣어줌 ->
Trigger Aboard slot에 나타났으면 하는 object 드래그 앤 드롭
-> 눈 꺼주기=SetActive(false)상태.
-> 게임모드 작동(트리거 지나가면 보드가 나타남)

6. Light on & off(트리거 이용)

https://www.youtube.com/watch?v=CSn0hENOIT0

2) 소리 트리거

게임오브젝트 만들기 -> 이름 soundobject
사운드를 게임오브젝트에 넣어준다. 플레이 온 웨이크 꺼주고

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

public class Trigger : MonoBehaviour {

    public GameObject adBoard;
    public AudioSource theBell;

    void OnTriggerEnter(Collider other)
    {
        theBell.Play();
    }
}
```

사운드 오브젝트를 트리거 (인스펙터);더벨 슬롯에 넣어준다.
-> 실행!

3) 텍스트

Create UI-Text -> name TextObject

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

public class Trigger : MonoBehaviour {

    public GameObject adBoard;
    public AudioSource theBell;
    public GameObject theText;

    void OnTriggerEnter(Collider other)
    {
        theText.SetActive(true);
    }
}
```

Textobject를 the text슬롯에 넣어준다->실행!

6. Light on & off(트리거 이용)

https://www.youtube.com/watch?v=CSn0hENOIT0

4) 최종코드(소리, 오브젝트, 자막 다 있는 버전)

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

public class Trigger : MonoBehaviour {

    public GameObject adBoard;
    public AudioSource theBell;
    public GameObject theText;

    void OnTriggerEnter(Collider other)
    {
        theText.GetComponent<Text>().text = "Hello there";
        theBell.Play();
        adBoard.SetActive(true);
    }
}
```

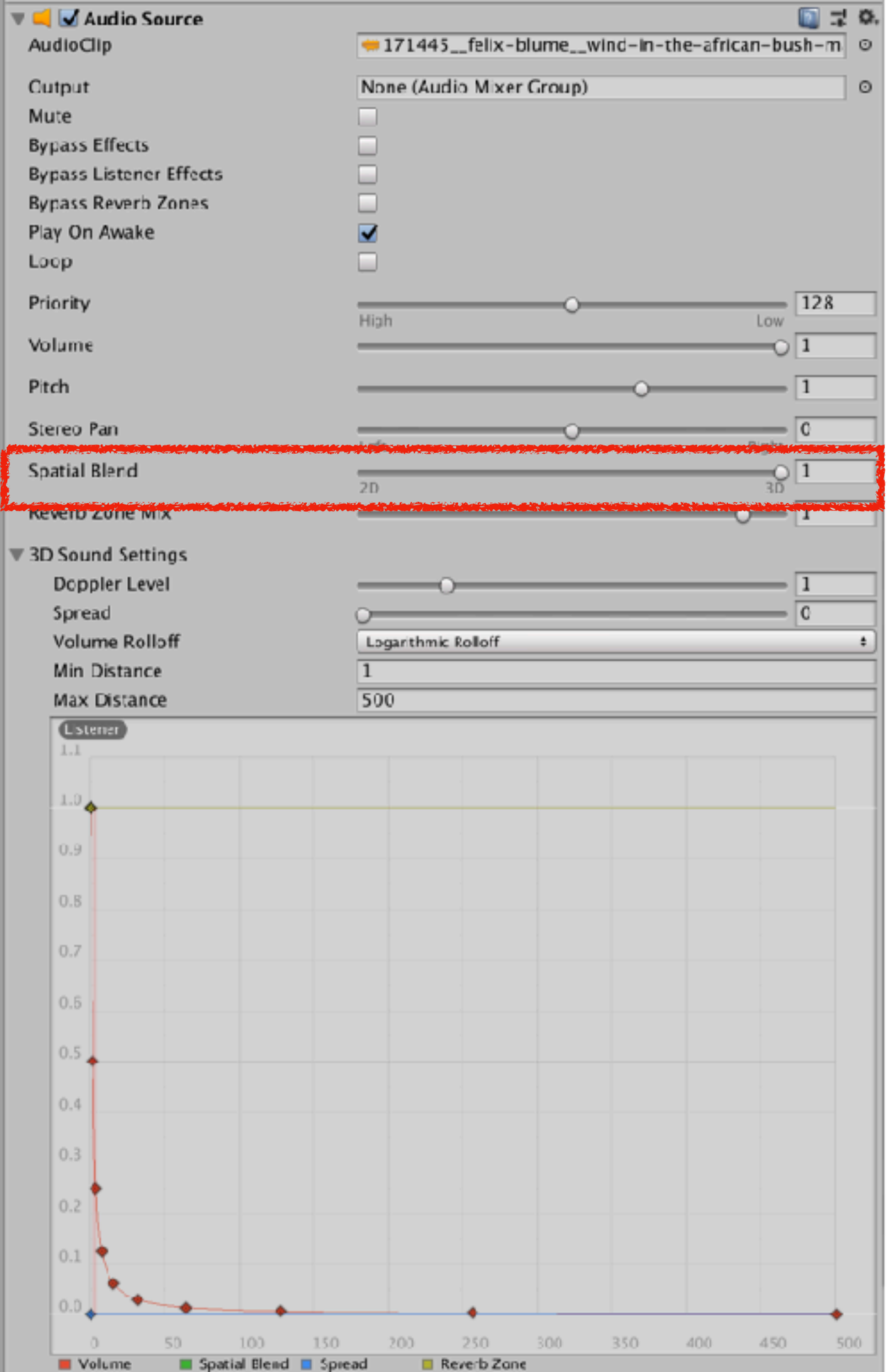
5) 트리거 나가면 없어지게 하기 !

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

public class Trigger : MonoBehaviour {

    public GameObject adBoard;
    public AudioSource theBell;
    public GameObject theText;

    void OnTriggerEnter(Collider other)
    {
        theText.GetComponent<Text>().text = "Hello there";
        theBell.Play();
        adBoard.SetActive(true);
    }

    private void OnTriggerExit(Collider other)
    {
        theText.GetComponent<Text>().text = "";
        adBoard.SetActive(false);
    }
}
```

7. 선line바람들

20번에 있음

8. 360도 사운드 설정방법



게임오브젝트에 오디오 파일을 넣어주고,
inspector창에서

3D로 해야돼

9.움직이는 사운드/물체(c#)

https://www.youtube.com/watch?v=RXB7wKSoupI

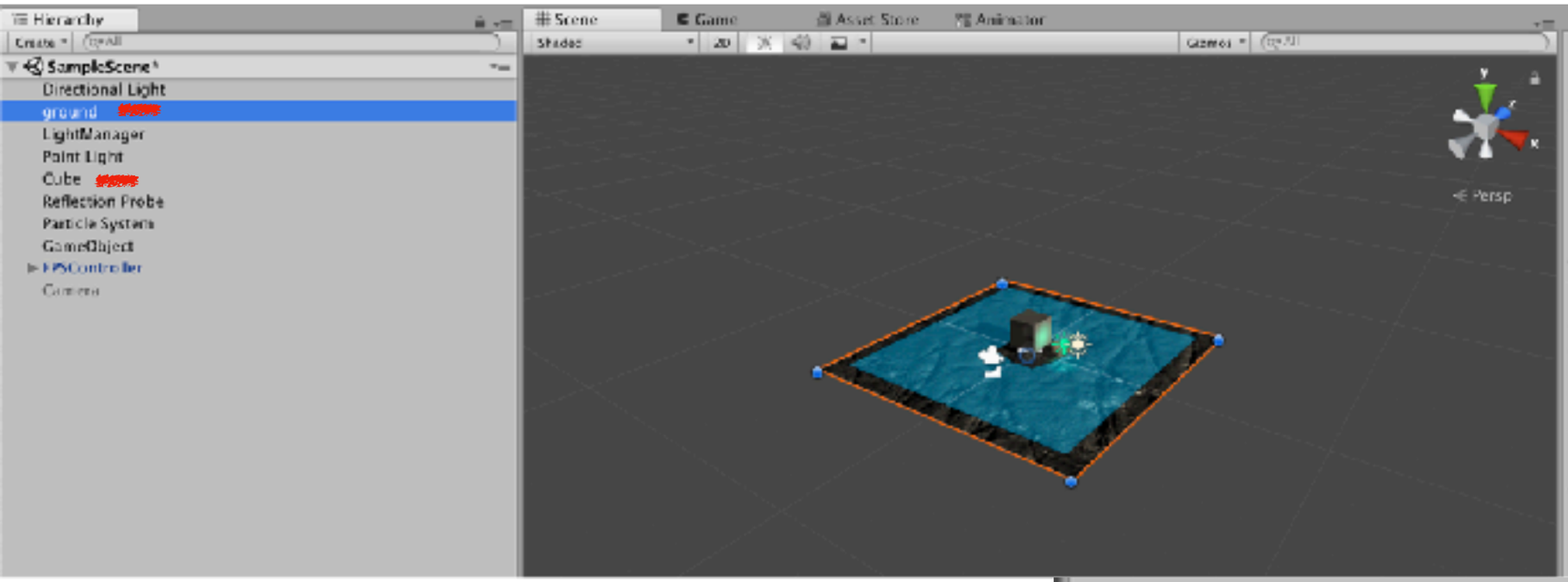
Create plane ->name ‘ground’
Create cube -> name ‘character’ ->(inspector) add NavMeshAgent
Create C# -> name ‘MoveRandomly’ -> drag and drop to ‘character’

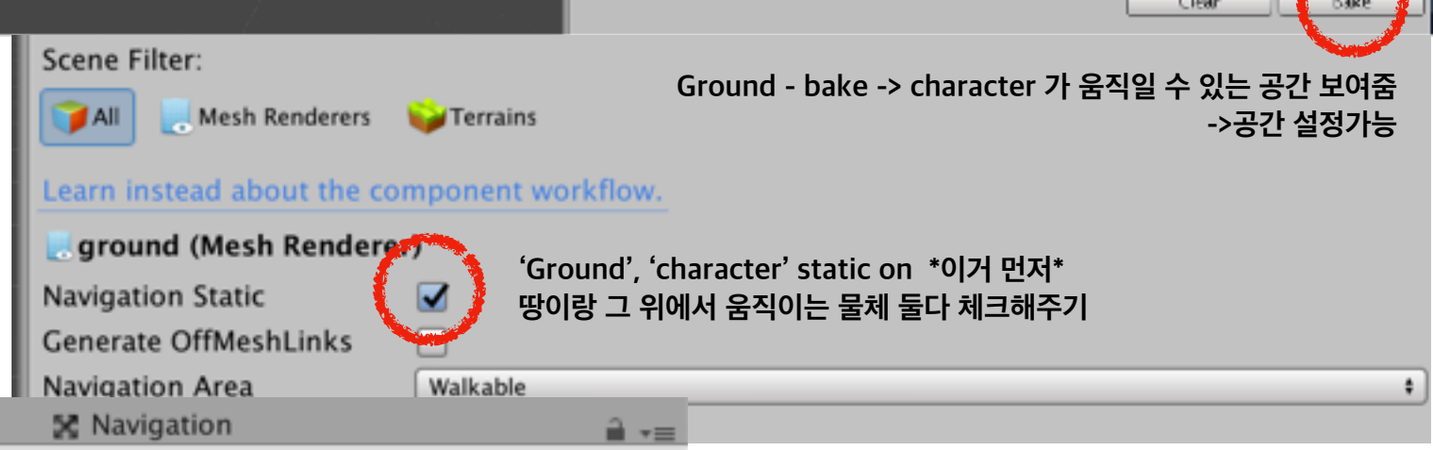
```
using System.Collections;
using UnityEngine;
using UnityEngine.AI;

public class MoveRandomly : MonoBehaviour {


    NavMeshAgent navMeshAgent;
    NavMeshPath path;
    public float timeForNewPath;
    bool inCoRoutine;
    Vector3 target;
    bool validPath;

    // Use this for initialization
    void Start () {

        navMeshAgent = GetComponent<NavMeshAgent>();
        path = new NavMeshPath();

       }

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

        if (!inCoRoutine)
            StartCoroutine(DoSomething());

       }

    Vector3 getNewRandomPosition()
    {
        float x = Random.Range(-20, 20);
        float y = Random.Range(-20, 20);

        Vector3 pos = new Vector3(x, 0, y);
        return pos;
    }

    IEnumerator DoSomething ()
    {
        inCoRoutine = true;
        yield return new WaitForSeconds(timeForNewPath);
        GetNewPath();
        validPath = navMeshAgent.CalculatePath(target, path);
        if (!validPath) Debug.Log("Found an invalid Path");

        while (!validPath)
        {
            yield return new WaitForSeconds(0.01f);
            GetNewPath();
            validPath = navMeshAgent.CalculatePath(target, path);
        }
        inCoRoutine = false;
    }

    void GetNewPath()
    {
        target = getNewRandomPosition();
        navMeshAgent.SetDestination(target);
    }
}
```

9.움직이는 사운드/물체

https://www.youtube.com/watch?v=RXB7wKSoupI

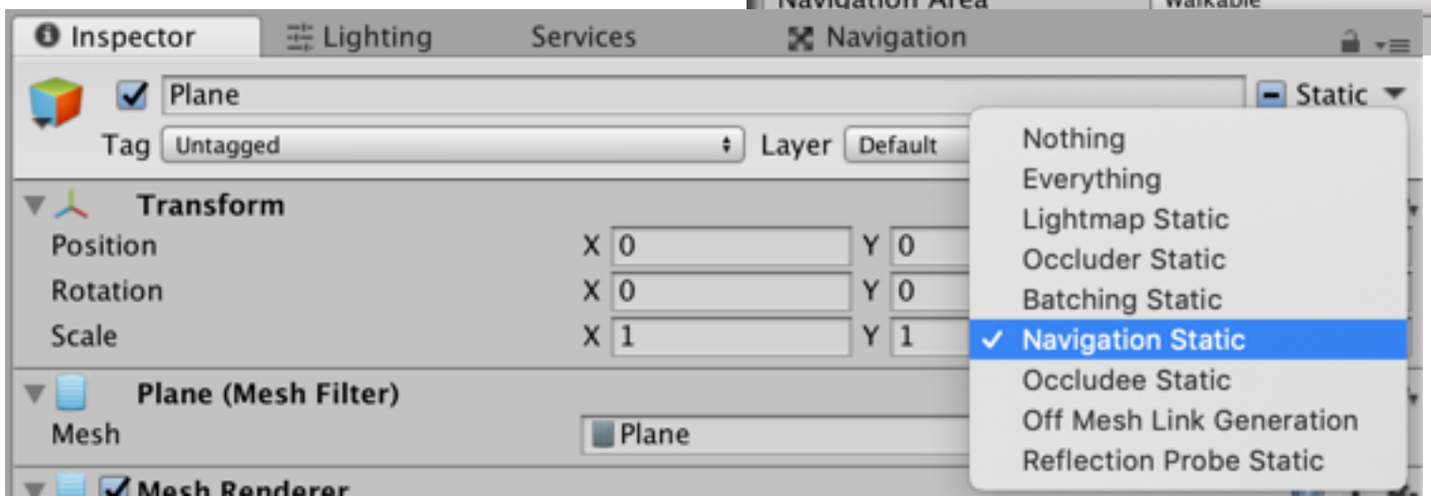
Window - AI - navigation





Ground - bake -> character 가 움직일 수 있는 공간 보여줌
->공간 설정가능

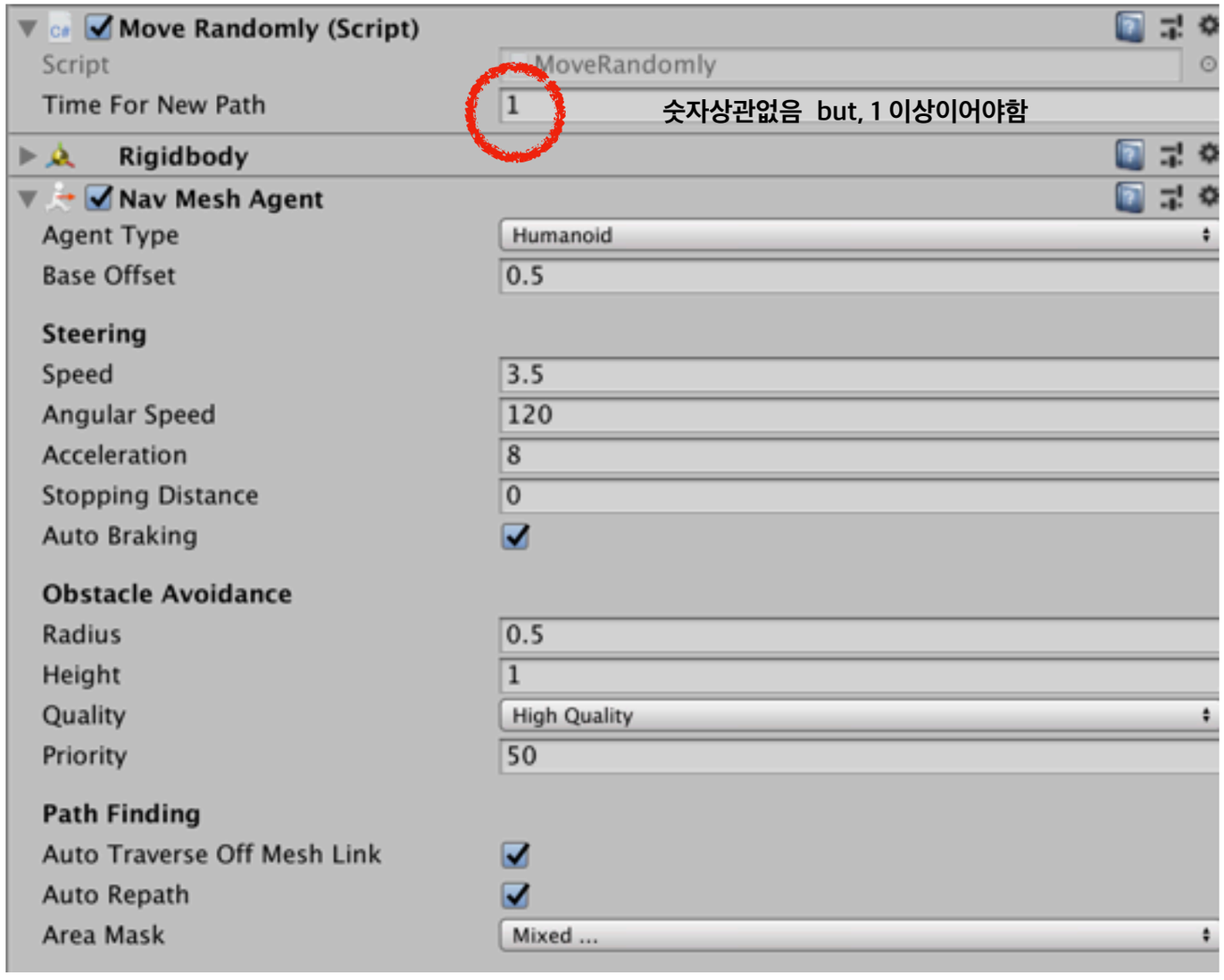
'Ground', 'character' static on *이거 먼저*
땅이랑 그 위에서 움직이는 물체 둘다 체크해주기



9.움직이는 사운드/물체

https://www.youtube.com/watch?v=RXB7wKSoupI

움직이는 오브젝트 인스펙터창



추가로 오디오 넣으려면 인스펙터 창에 audio source 넣고, source clip에 넣어줘야해

9.움직이는 사운드/물체(c#)_두번째방법

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

public class MovingCube : MonoBehaviour {

    public float moveSpeed = 3f;
    public float rotSpeed = 100f;

    private bool isWandering = false;
    private bool isRotatingLeft = false;
    private bool isRotatingRight = false;
    private bool isWalking = false;


     // Use this for initialization
     void Start () {

     }

     // Update is called once per frame
     void Update () {
        if (isWandering == false)
        {
            StartCoroutine(Wander());
        }
        if(isRotatingRight == true)
        {
            transform.Rotate(transform.up * Time.deltaTime * rotSpeed);
        }
        if (isRotatingLeft == true)
        {
            transform.Rotate(transform.up * Time.deltaTime * -rotSpeed);
        }
        if(isWalking ==true)
        {
            transform.position += transform.forward * moveSpeed * Time.deltaTime;
        }

}

IEnumerator Wander()
{
    int rotTime = Random.Range(1, 3);
    int rotateWait = Random.Range(1, 4);
    int rotateLorR = Random.Range(1, 2);
    int walkwait = Random.Range(1, 4);
    int walkTime = Random.Range(1, 5);

    isWandering = true;

    yield return new WaitForSeconds(walkwait);
```

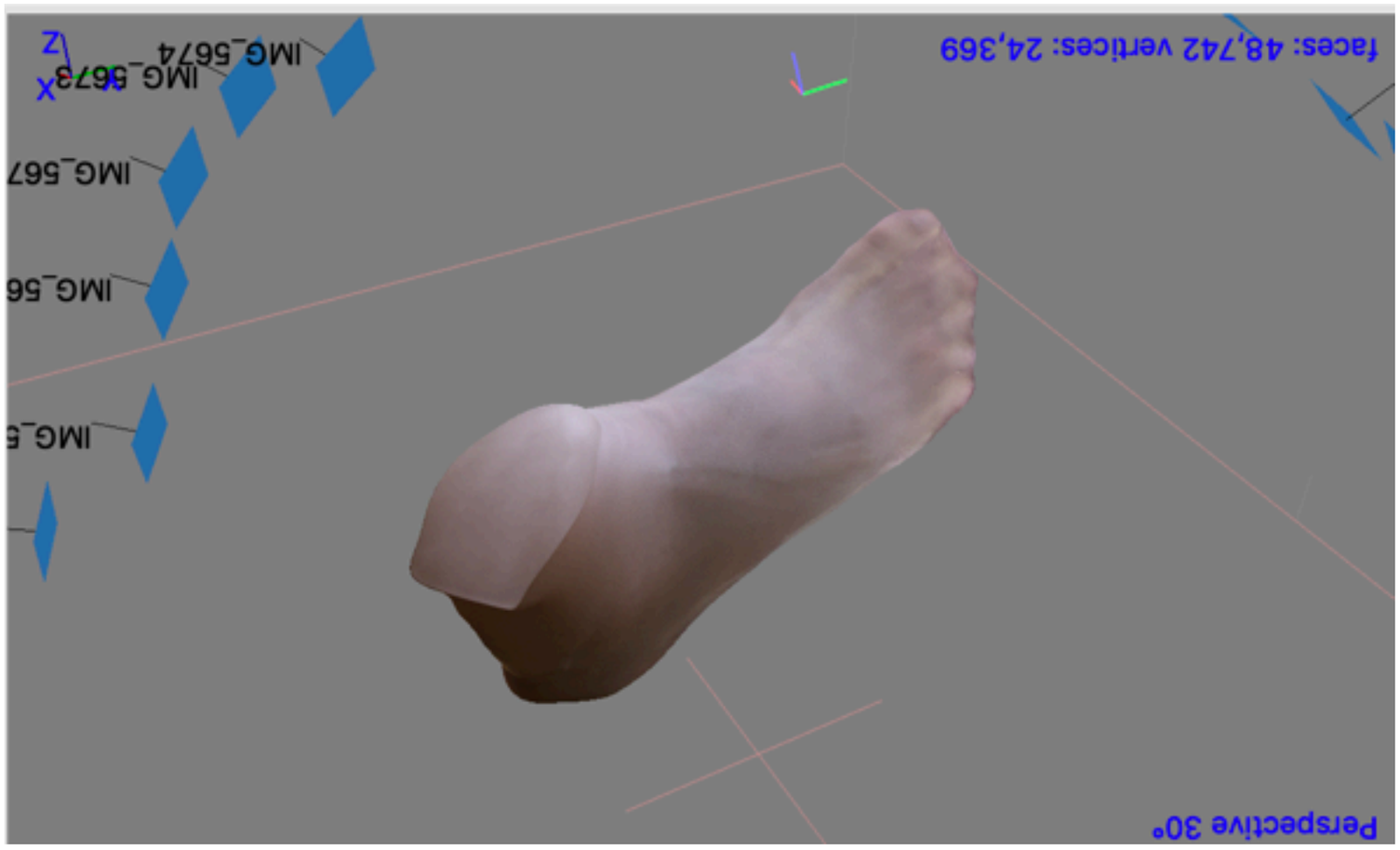
Nav mesh 안쓰고

10. 실물 -> 3d scan받기

https://vimeo.com/123701711
https://vimeo.com/123702711

http://www.agisoft.com :포토스캔 받기

http://www.meshmixer.com/download.html :Mesh Mixer받기



1

<Photo Scan>
Work Flow
1) Align Photos
2) Bulid dense cloud
3) Build mesh(arbitrary, dense cloud, medium, default)
4) build texture(adaptive,average

5) export->model : .obj(vertex normals, export, jpeg, precision:6)

<Mesh mixer>
1)Import obj.file
2)shader -> earth drag and drop to img
3) Sculpt ; brush - robust smooth : making skin smooth (skin)

2

4)Sculpt; refinement enable -> 투박하게도 바꿀수 있음
5) Select ; brush; edit ; 수정하고 싶은 부분 클릭 : edit - erase&fill -> 하면 사라짐-> accept
6) 자르기 및 채우기 : Edit - plane cut ; 구멍 나있는 아래에 맞춰준다(동상 아랫부분 생각하기).
Edit - Cut -accept : 바닥 구멍 메워진다.
7) 구멍메우기 Analysis ; auto repair all
8) Export (name).obj

<Photo scan>

3

1) 작업하던거(1) 위에 얹기 import aa.obj
2) Tool import ; import mesh ; choose(지금은 바뀌어서 다른 위치에 있음 (file->import->mask)
3) Build texture ; adaptive ; mosaic ;
4) export

11.몸과 vr시선 일치시키기 :

게임몸:브이알 몸; 발과 VRbody 연동 : Final IK (for vive)

https://www.youtube.com/watch?v=dY5xMaYuFbE

📌 NurFACEGAMES님이 고정함

NurFACEGAMES 8개월 전

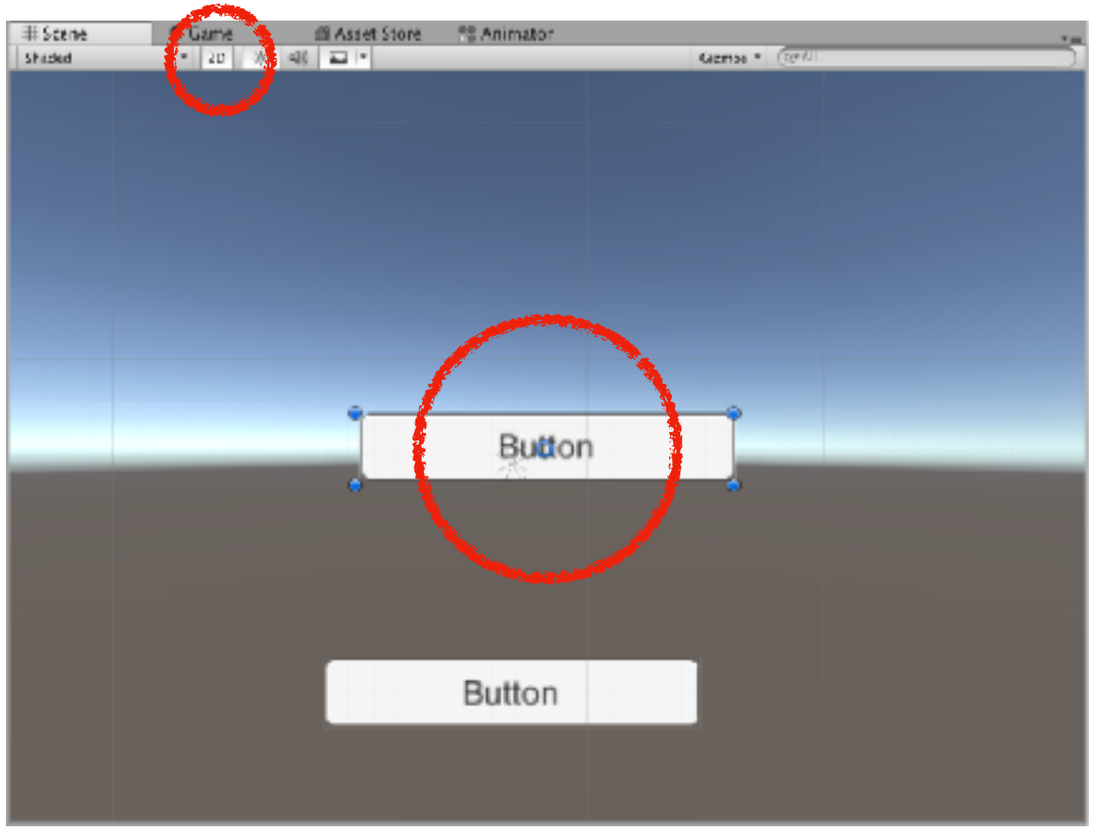
This asset is for Mobile VR. For Vive / Oculus, use Final IK:
https://www.assetstore.unity3d.com/#!/content/14290?aid=1101lHIq

12. 게임메뉴 화면

Create Scene 2개 ->name 각각 01, 02

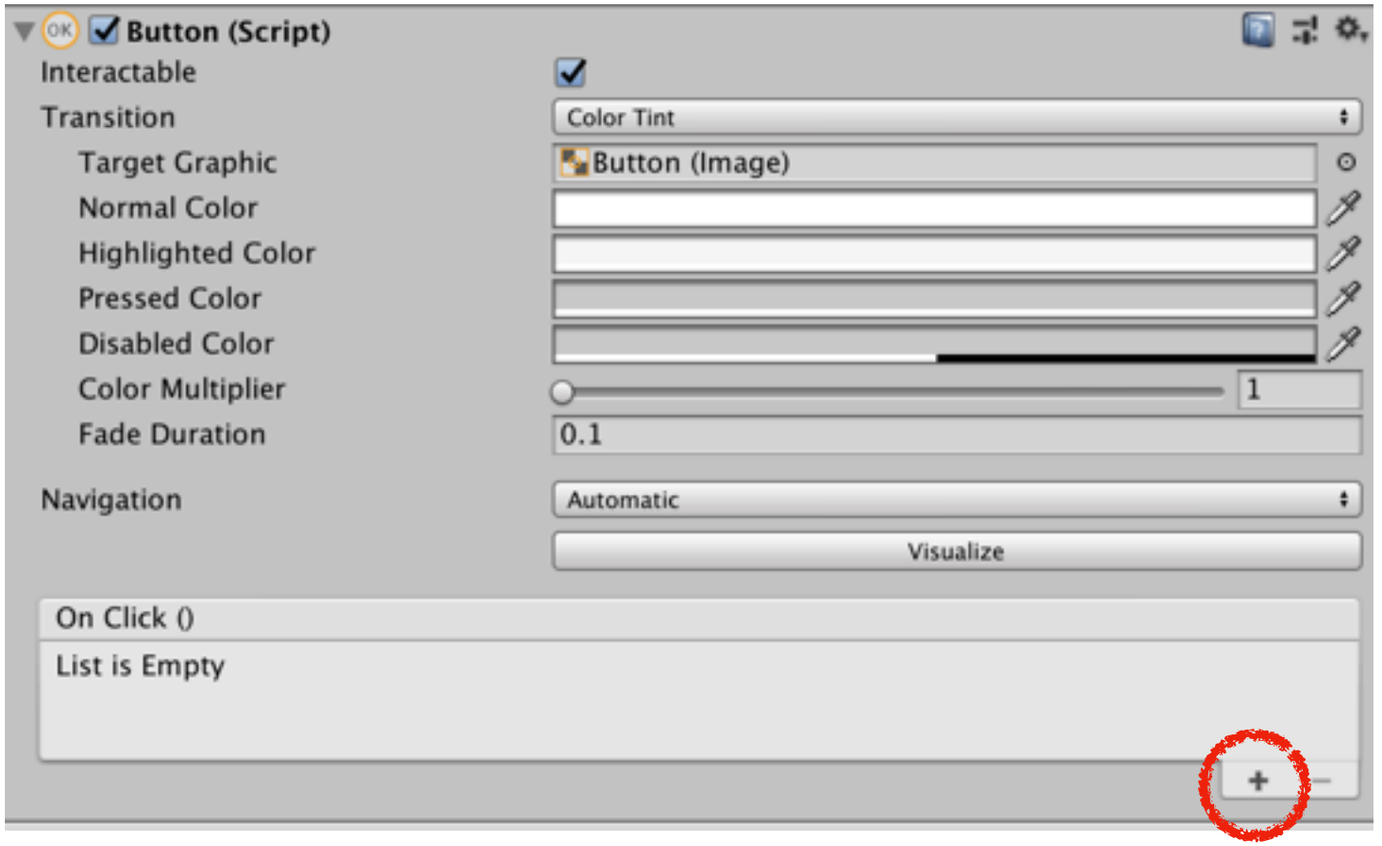
Create UI->button

2D로 보기 하고, 버튼 위치를 조정해 준다.
(image따로 제작)



패널은 항상 아래로 가게

(Inspector)button(Script) OnClick()여기에 +눌러서 슬롯추가



12. 게임메뉴 화면

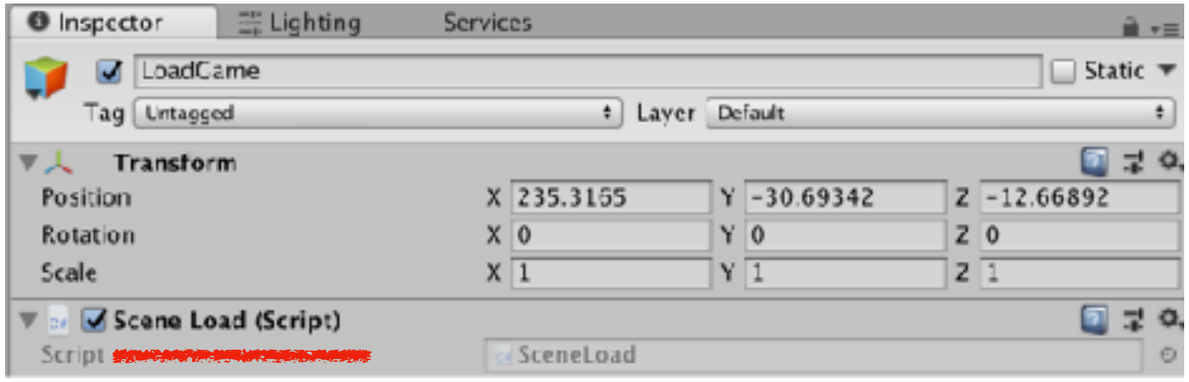
C# SceneLoad

Create C# -> name ‘SceneLoad’

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

public class SceneLoad : MonoBehaviour {

    public void LoadScene(string Scenename){
        SceneManager.LoadScene(Scenename);
    }
}
```

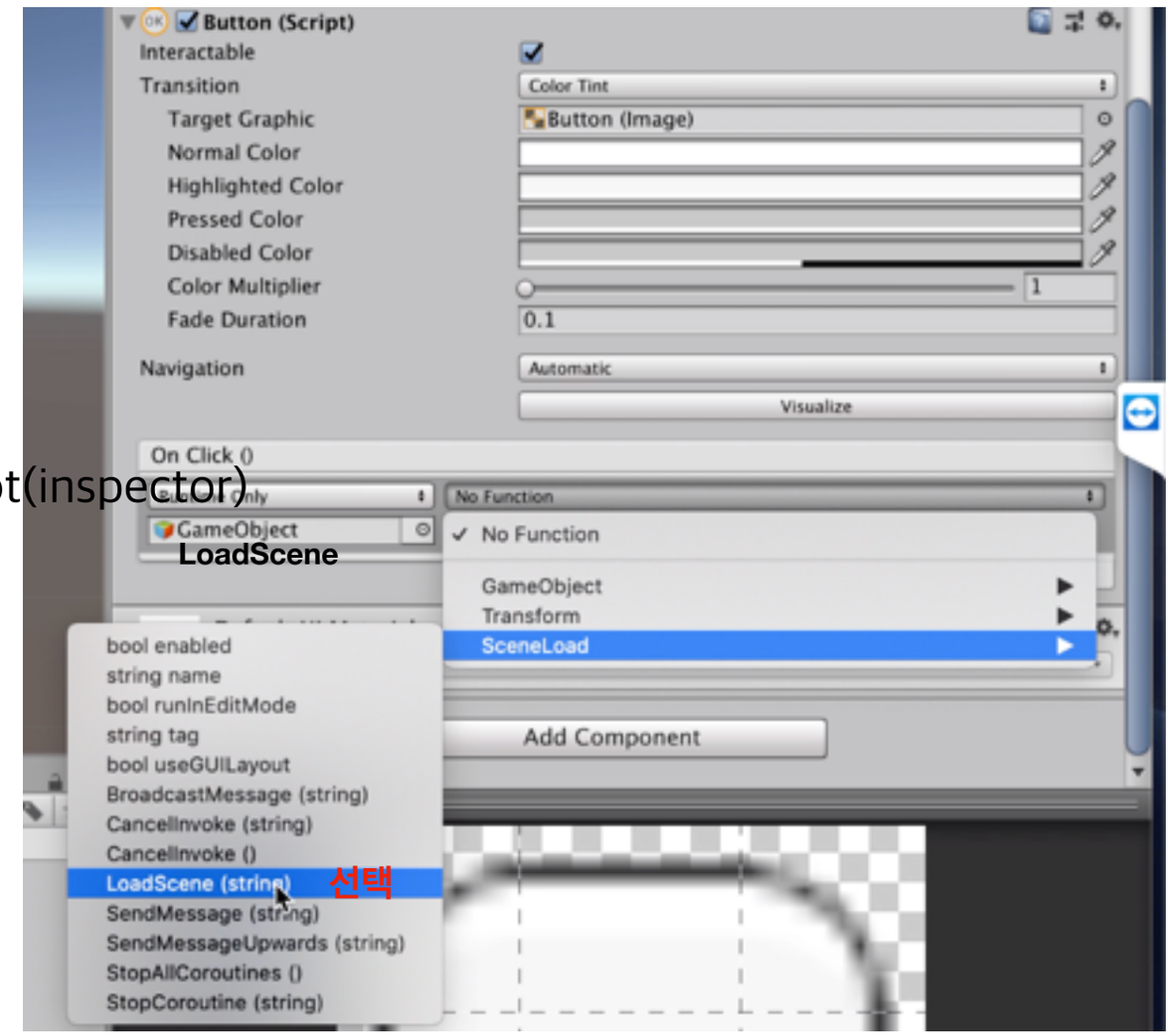
Create empty -> name ‘LoadGame’

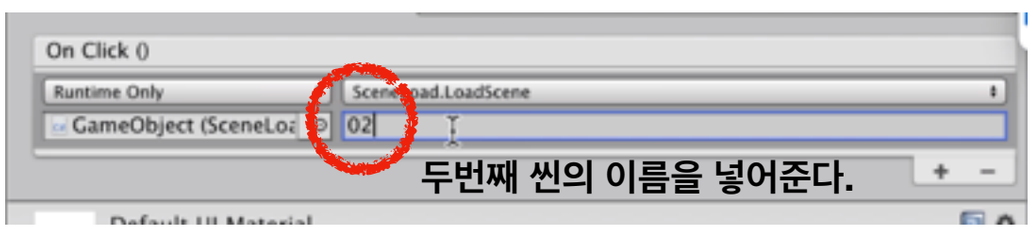
SceneLoad(C#Script) drag and drop to ‘LoadGame’



12. 게임메뉴 화면

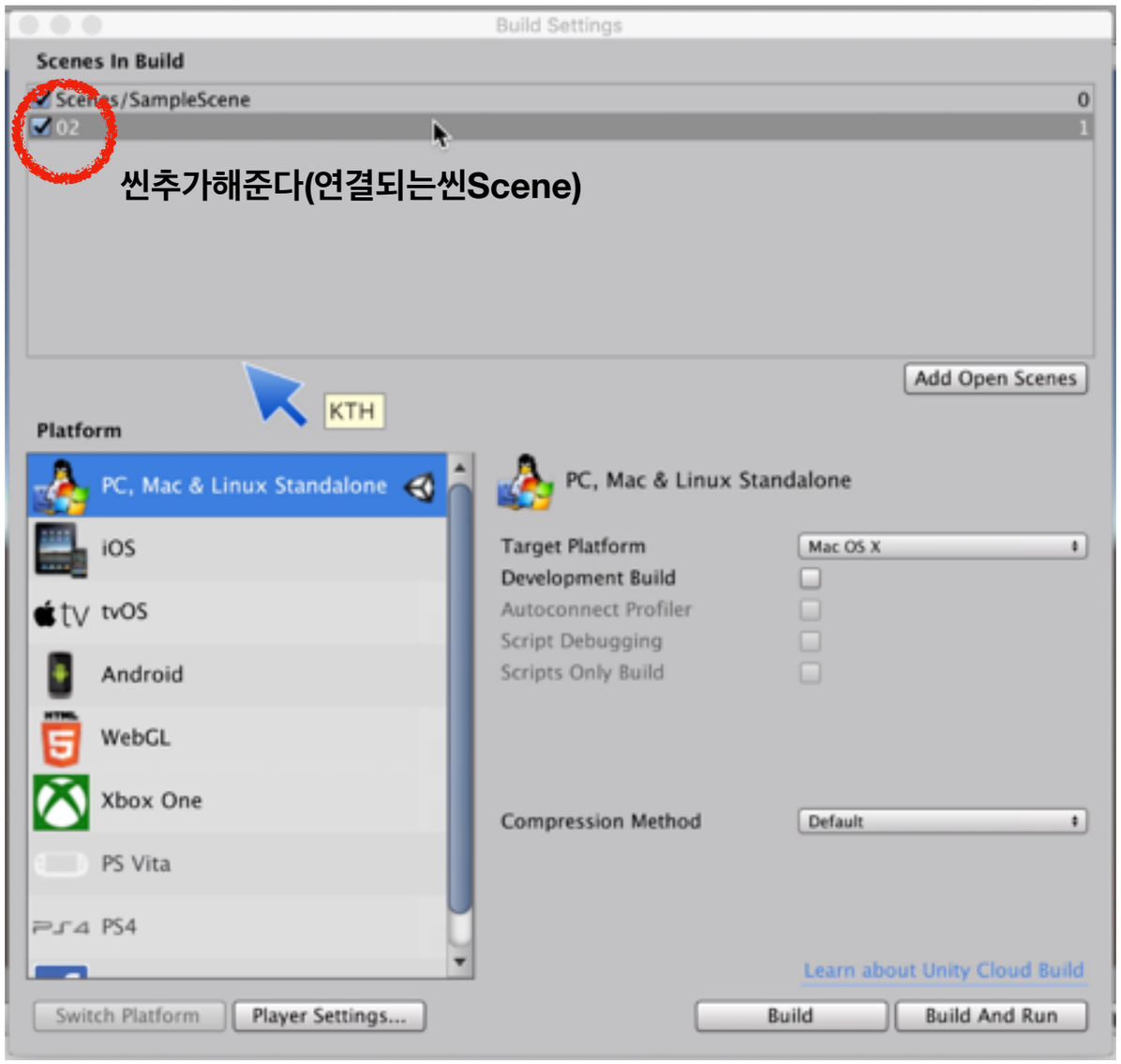
LoadGame(gameobject) drag and drop to button slot(inspector)
; button(script) : below Runtime only slot





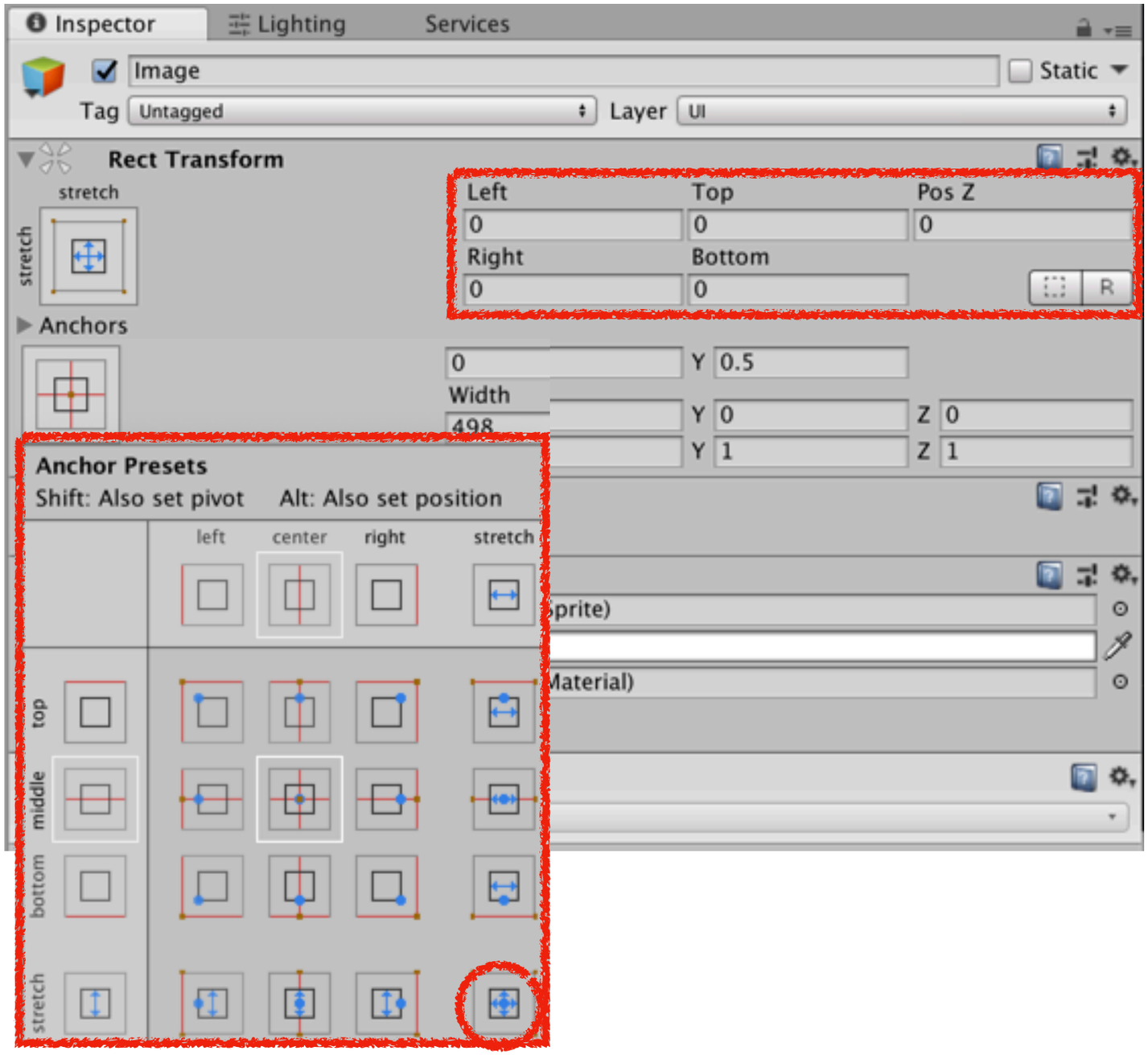
12. 게임메뉴 화면

빌드 셋팅에



끗

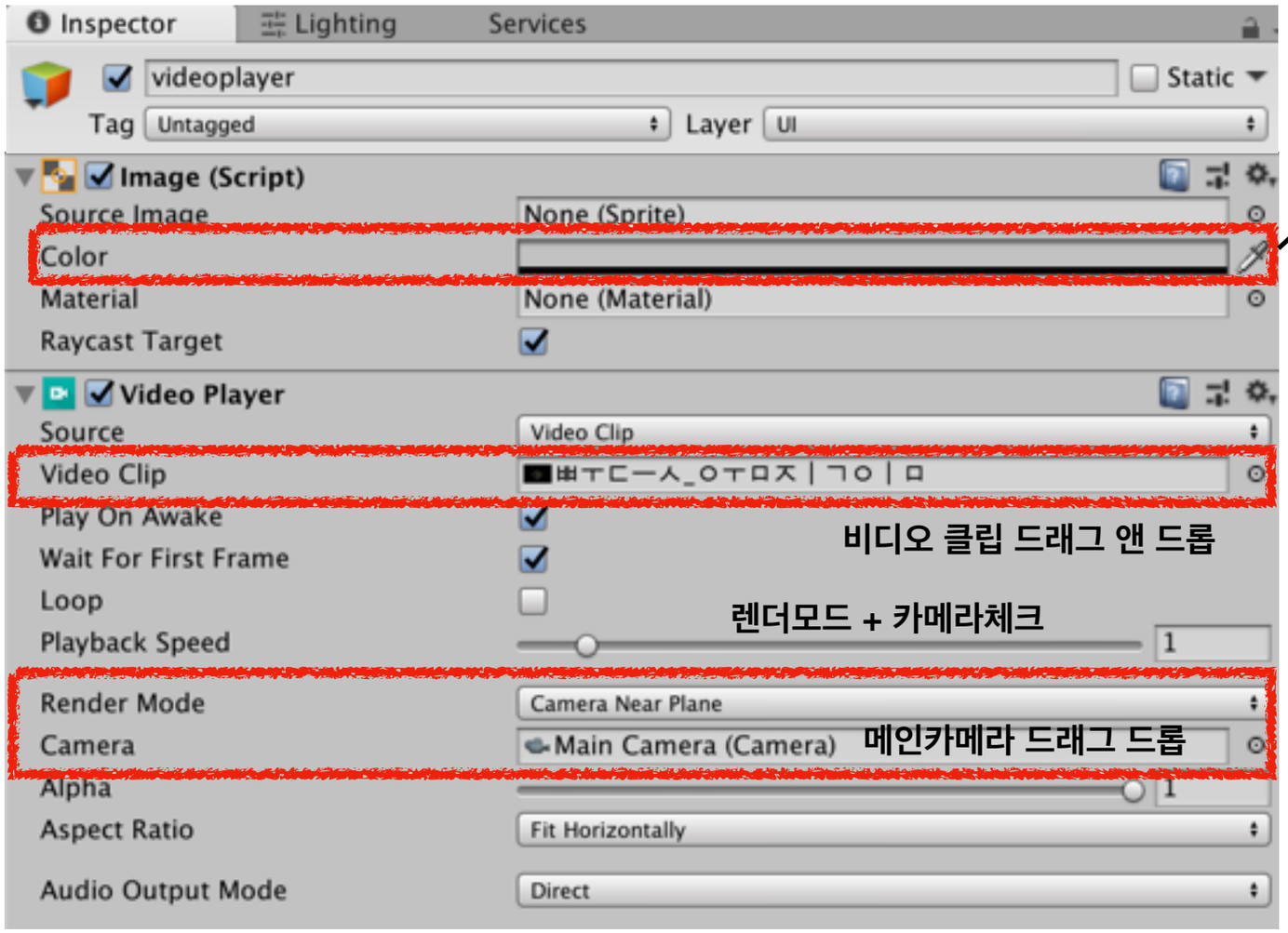
12-1. 게임메뉴 화면-백그라운드 영상 넣기

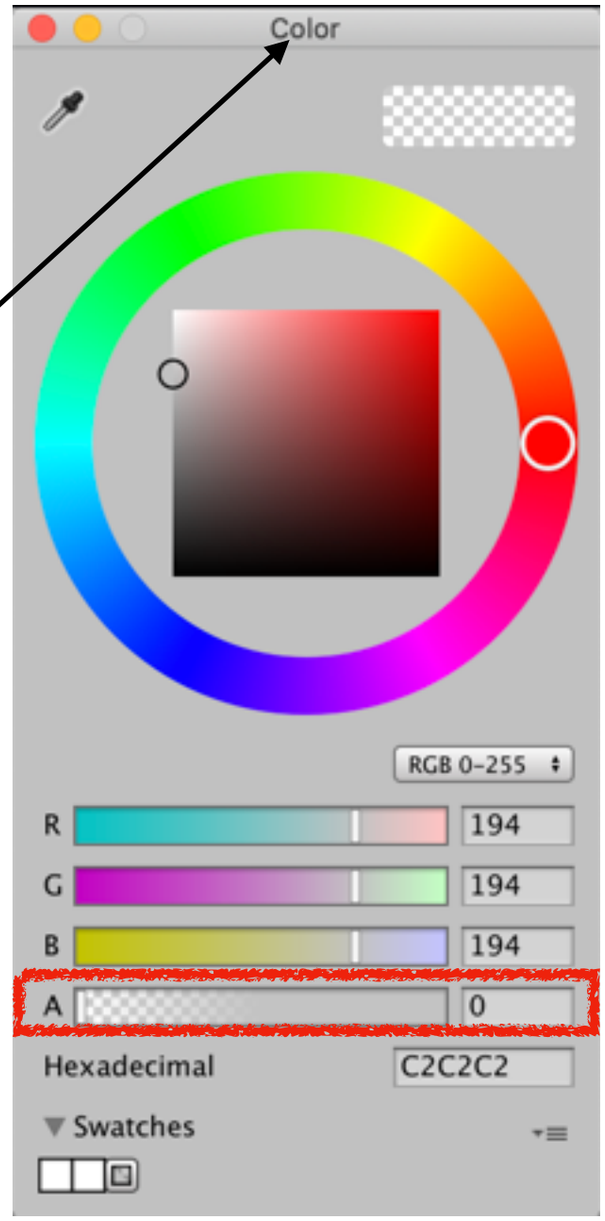


Create UI:Image -> name ‘video player’
anchor 잡아주고, left, top, right, bottom, pos z = 0으로 바꿔주기(reset하면 anchor도 리셋되서 안되고 일일히 0 넣어줘야함)

12-1. 게임메뉴 화면-백그라운드 영상 넣기

->add component video player(in inspector)

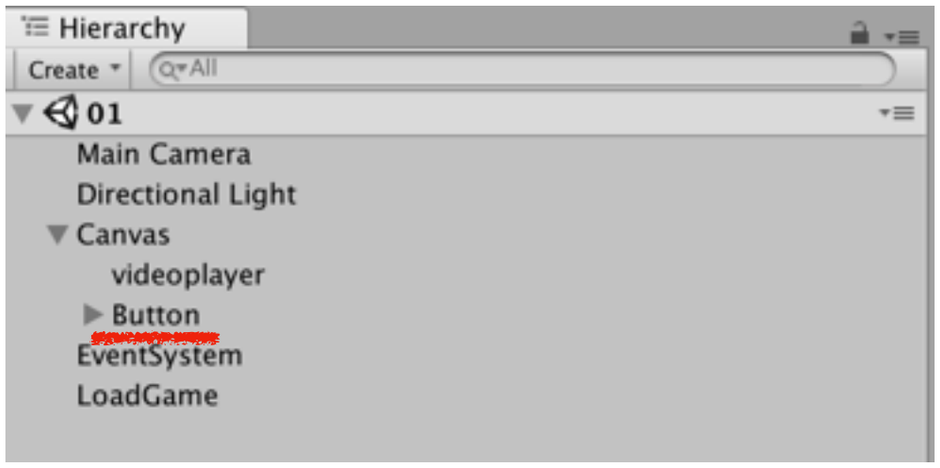




알파채널 0으로

12-1. 게임메뉴 화면-백그라운드 영상 넣기

브릿지 없이 (플레이어가 인식못하게 scene to scene이동가능?)(YESS)



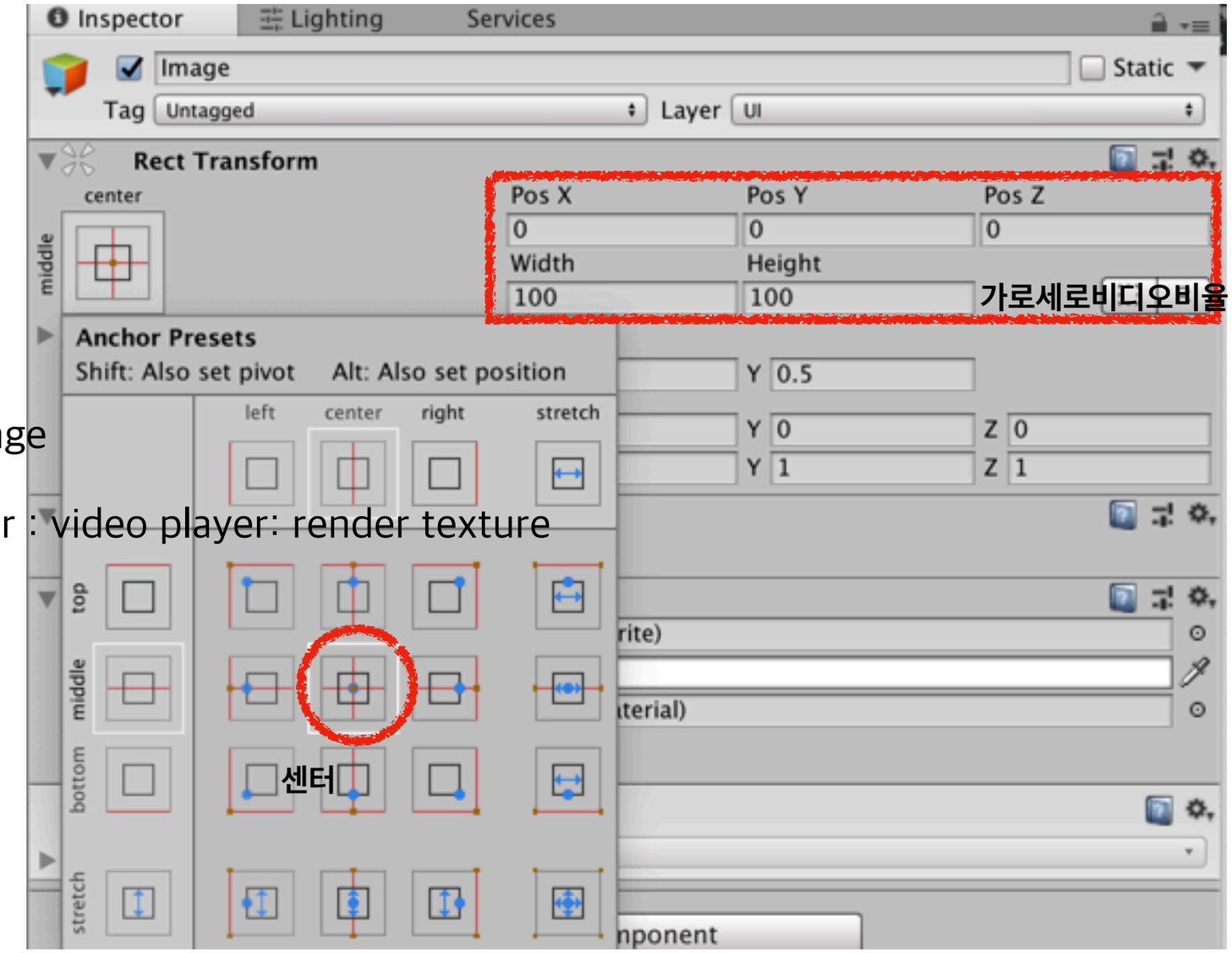
언제나 버튼이 제일 아래로 가게
유니티에서는 맨 아래 있는게 우선순위가 높다
->
그래서 버튼이 위에 있으면 안 눌릴수도 있음.

끗

12-2. 게임메뉴 화면-백그라운드 영상 사이즈 맞추기

Create UI: image : raw image

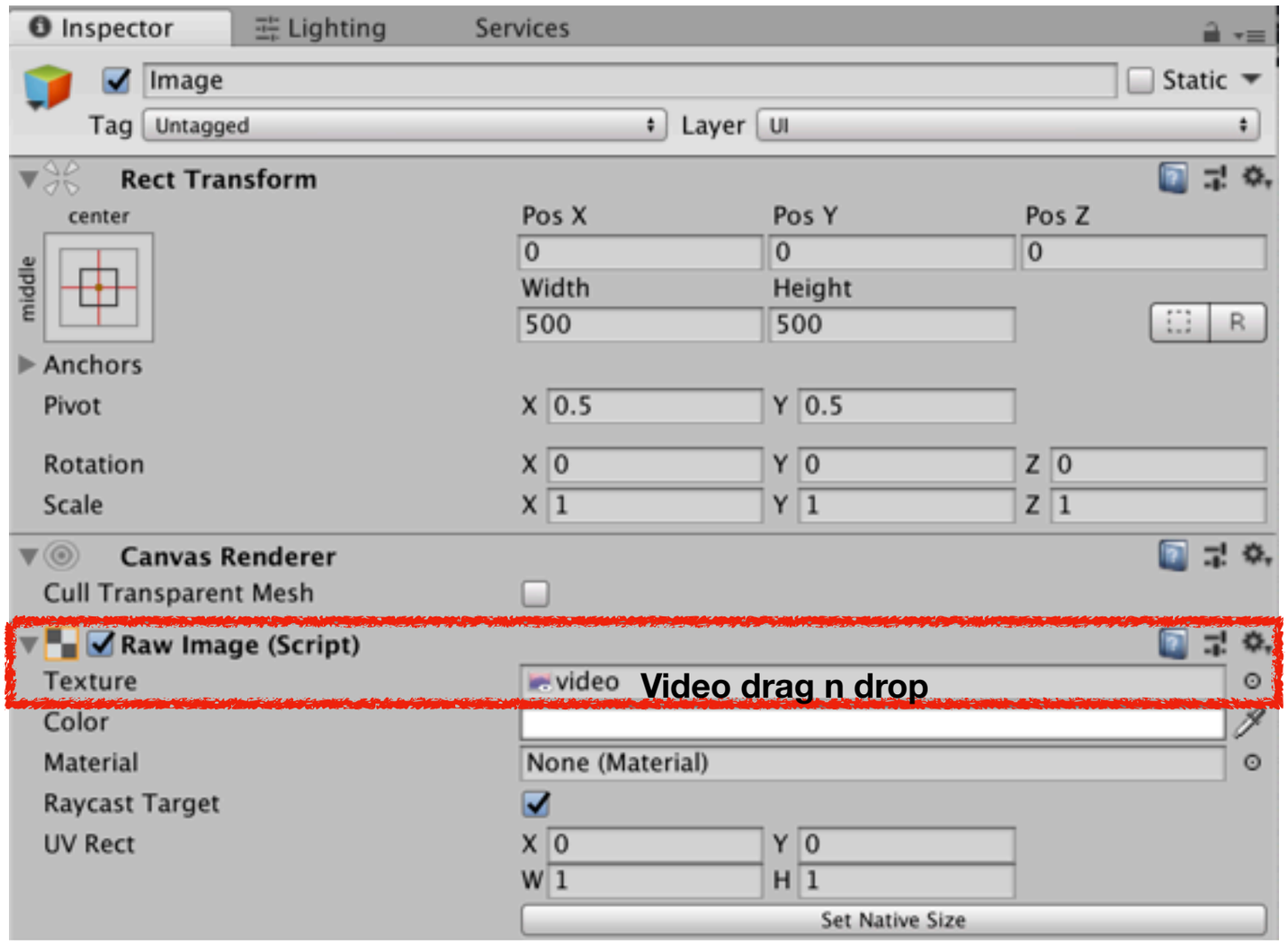
Create empty: video player : video player: render texture

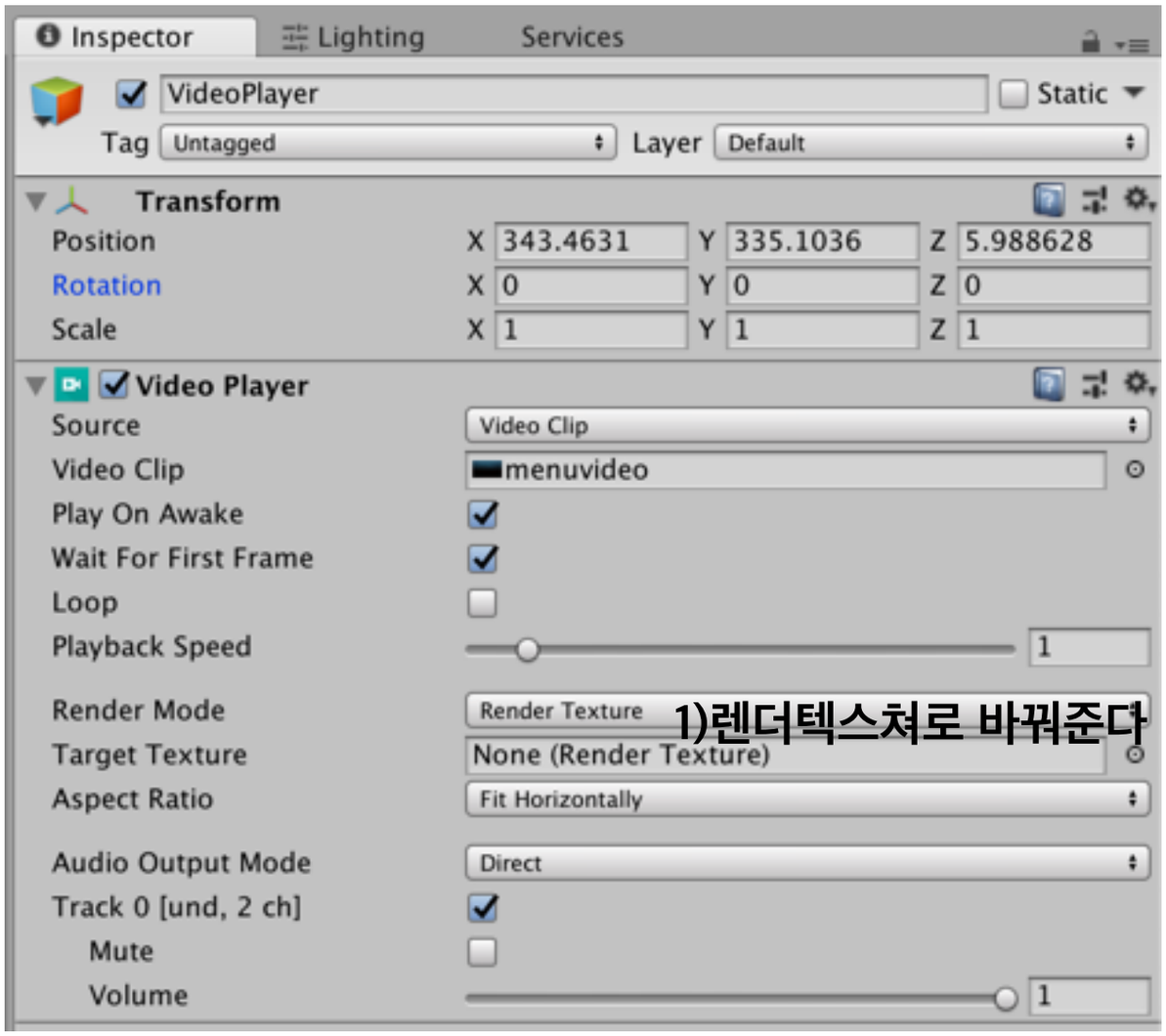


12-2. 게임메뉴 화면-백그라운드 영상 사이즈 맞추기

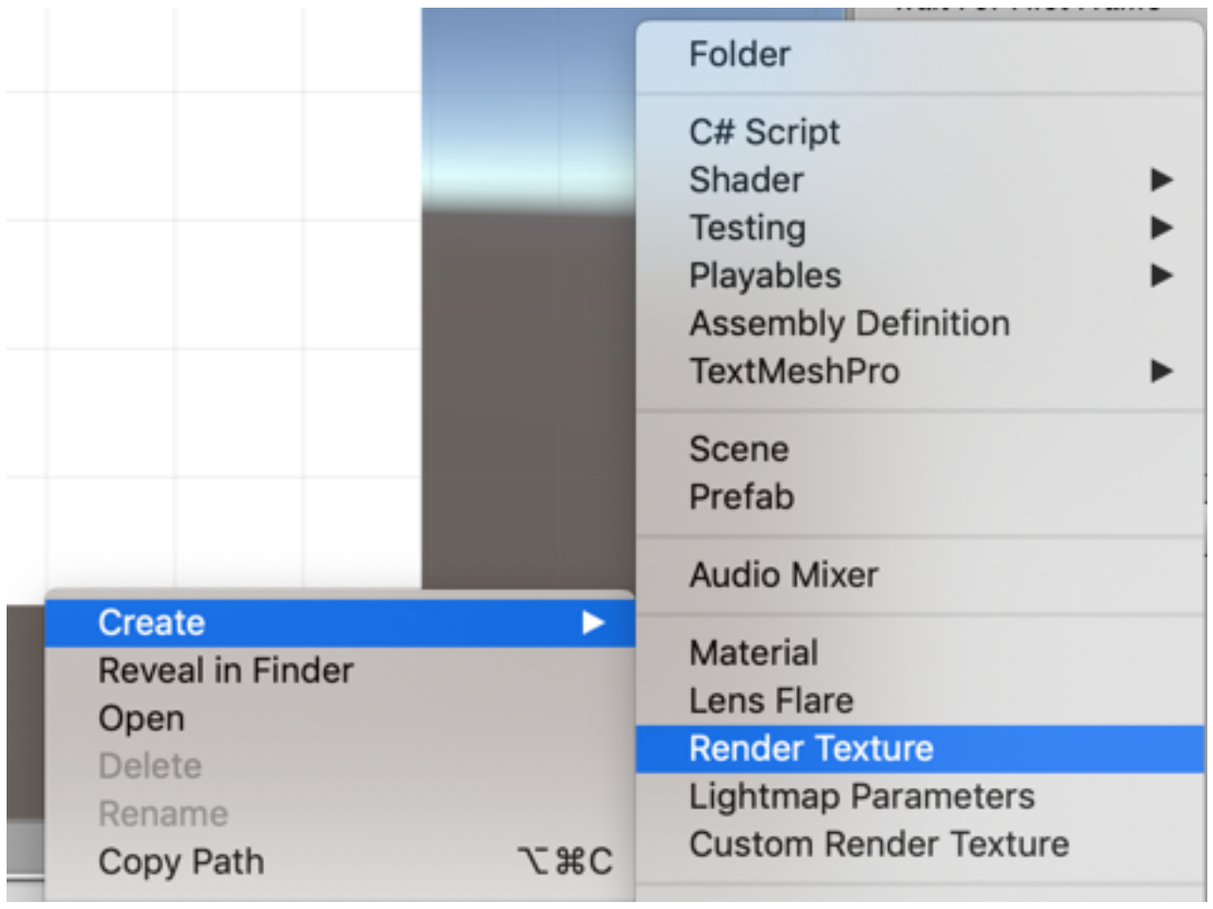
Image (script)지우고

Add component : Raw image

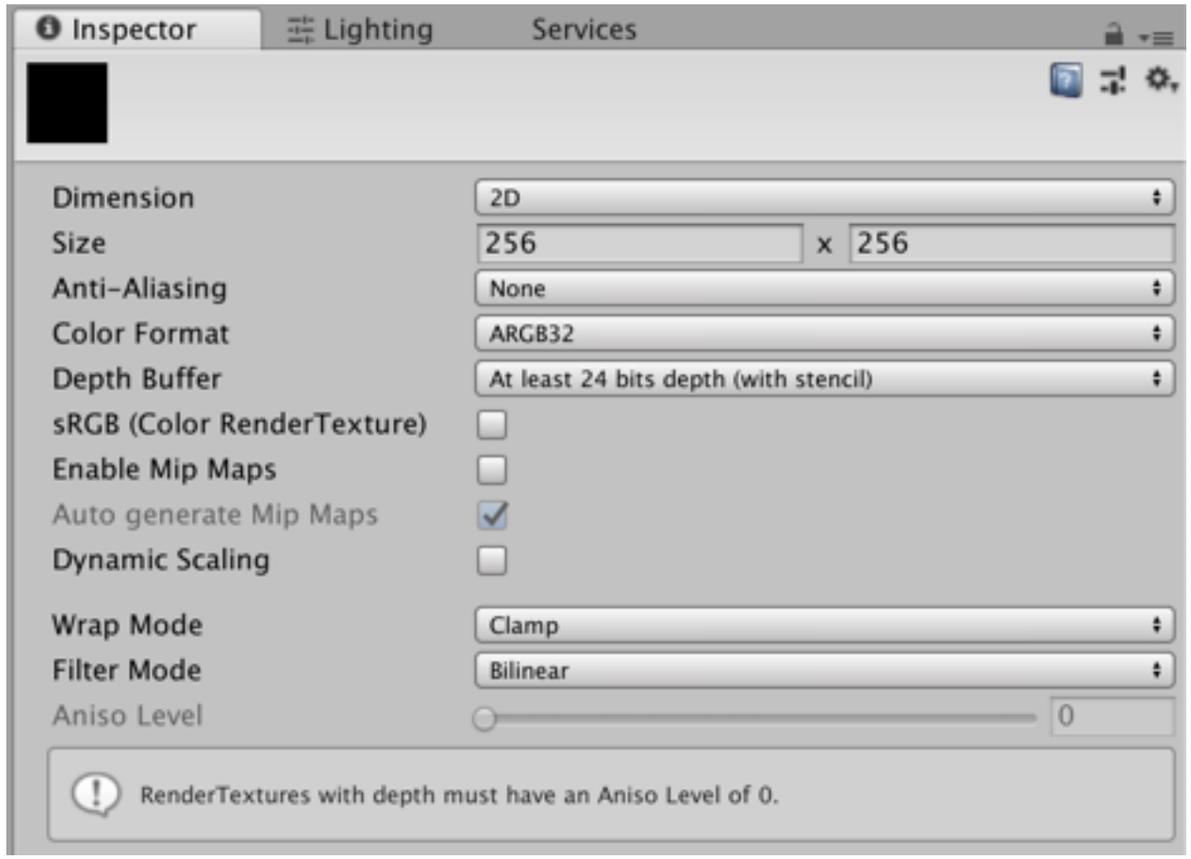




1)렌더텍스쳐로 바꿔준다



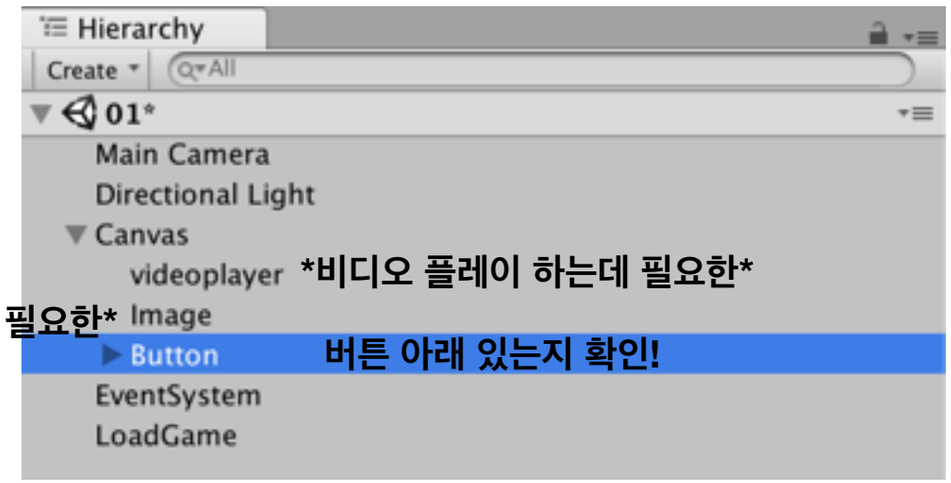
2) 프로젝트에서 렌더 텍스쳐 만든다



가로세로 맞춰준다

여기도 렌더 텍스쳐 넣어주기

12-2. 게임메뉴 화면-백그라운드 영상 사이즈 맞추기



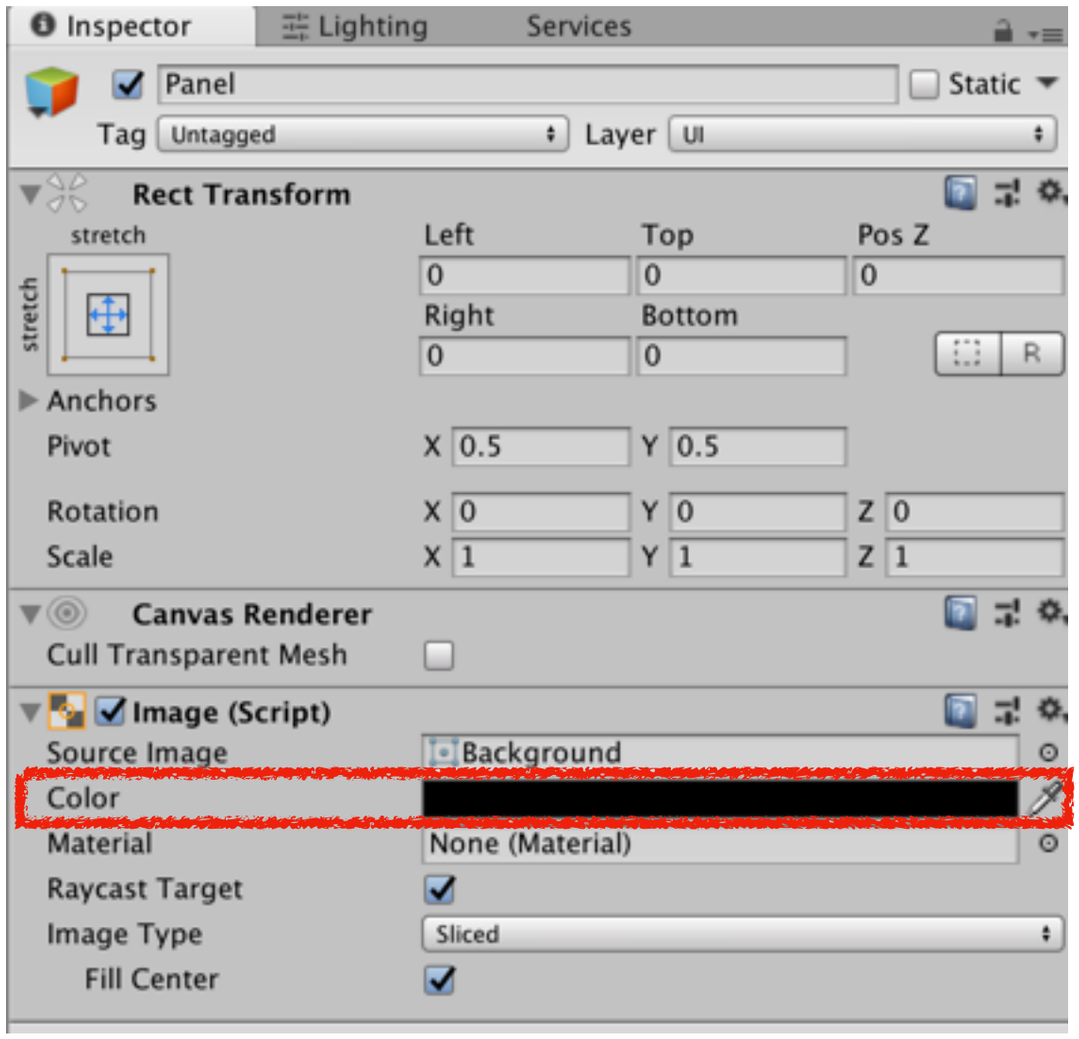
비디오 플레이 하는데 필요한

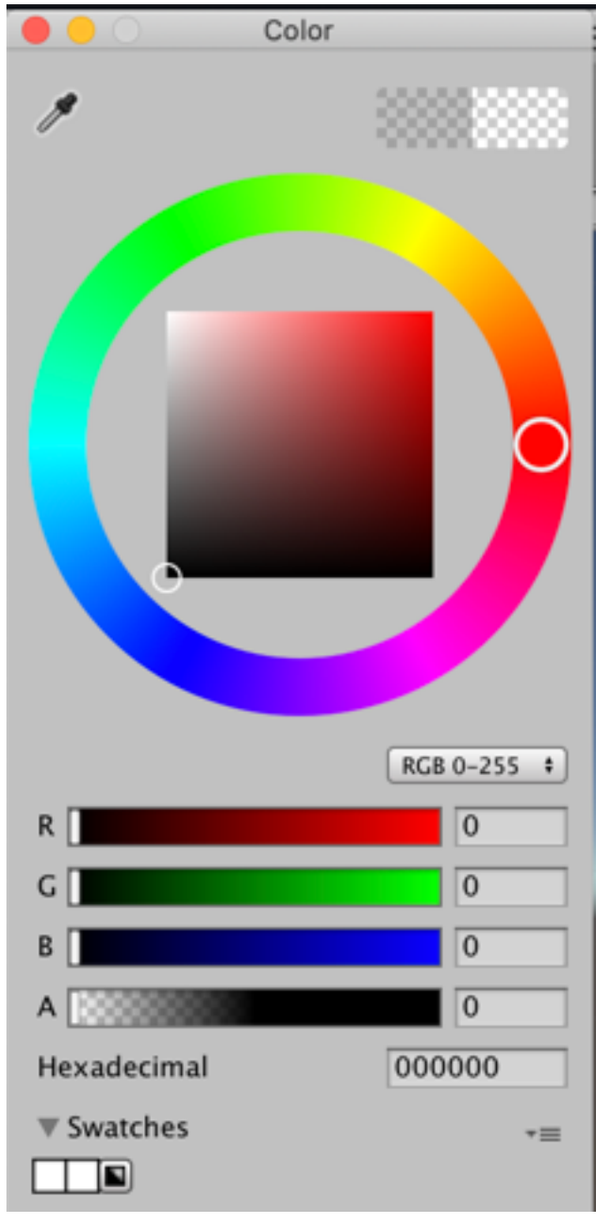
맞는 사이즈의 영상판만드는데 필요한

버튼 아래 있는지 확인!

13.Scene to Scene ; Fade out effect 장면전환 페이드 아웃 이펙트

1) create UI: panel





색깔은 디졸브 됐으면 좋겠는색으로
:검은색지정

알파채널 0

13.Scene to Scene ; Fade out effect 장면전환 페이드 아웃 이펙트

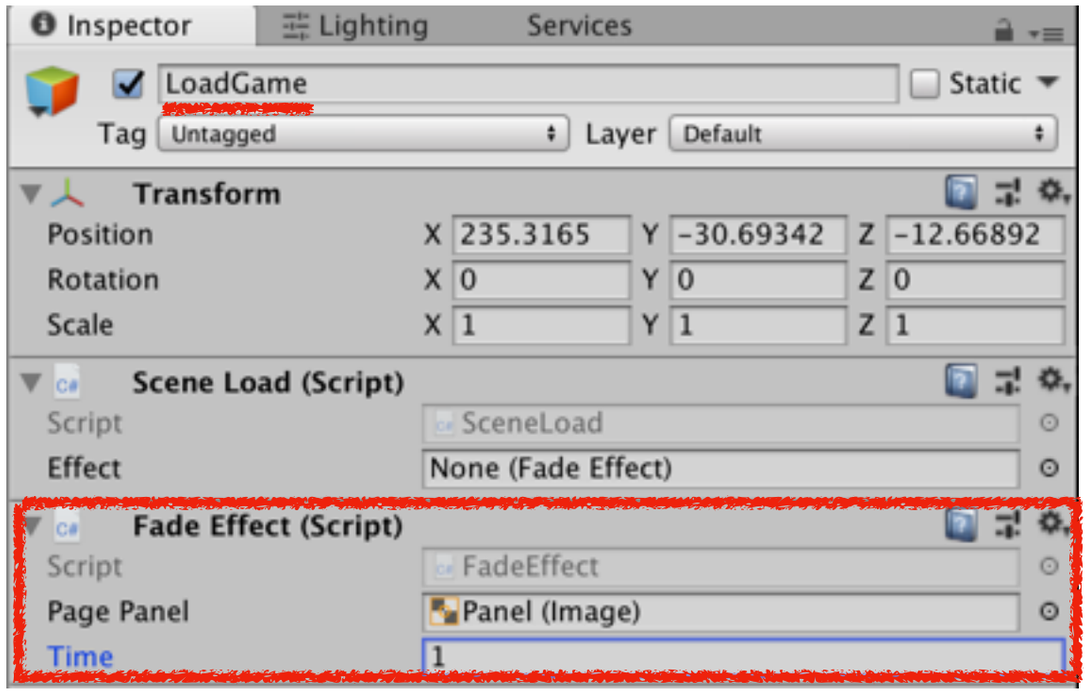
2) create C# ‘FadeEffect’

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

public class FadeEffect : MonoBehaviour
{

    public Image pagePanel;
    public float time;

    // Use this for initialization

    public void Action(bool isIn,System.Action onEnd)
    {
        if (isIn)
        {
            StartCoroutine(FadeIn(onEnd));
        }
        else
        {
            StartCoroutine(Fadeout(onEnd));
        }
    }

    IEnumerator FadeIn(System.Action onEnd)
    {

        for (float t = 0; t < time; t += Time.deltaTime)
        {
            pagePanel.color = Color.Lerp(Color.black, new Color(0, 0, 0, 0), t / time);
            yield return new WaitForEndOfFrame();
        }

        onEnd();
    }
    IEnumerator Fadeout(System.Action onEnd)
    {
        for (float t = 0; t < time; t += Time.deltaTime)
        {
            pagePanel.color = Color.Lerp(new Color(0, 0, 0, 0), Color.black, t / time);
            yield return new WaitForEndOfFrame();
        }

        onEnd();
    }

    // Update is called once per frame
}
```

13.Scene to Scene ; Fade out effect 장면전환 페이드 아웃 이펙트

12번에서 만들었던 load game,

기억이 안난다면 뒤로가서 보길



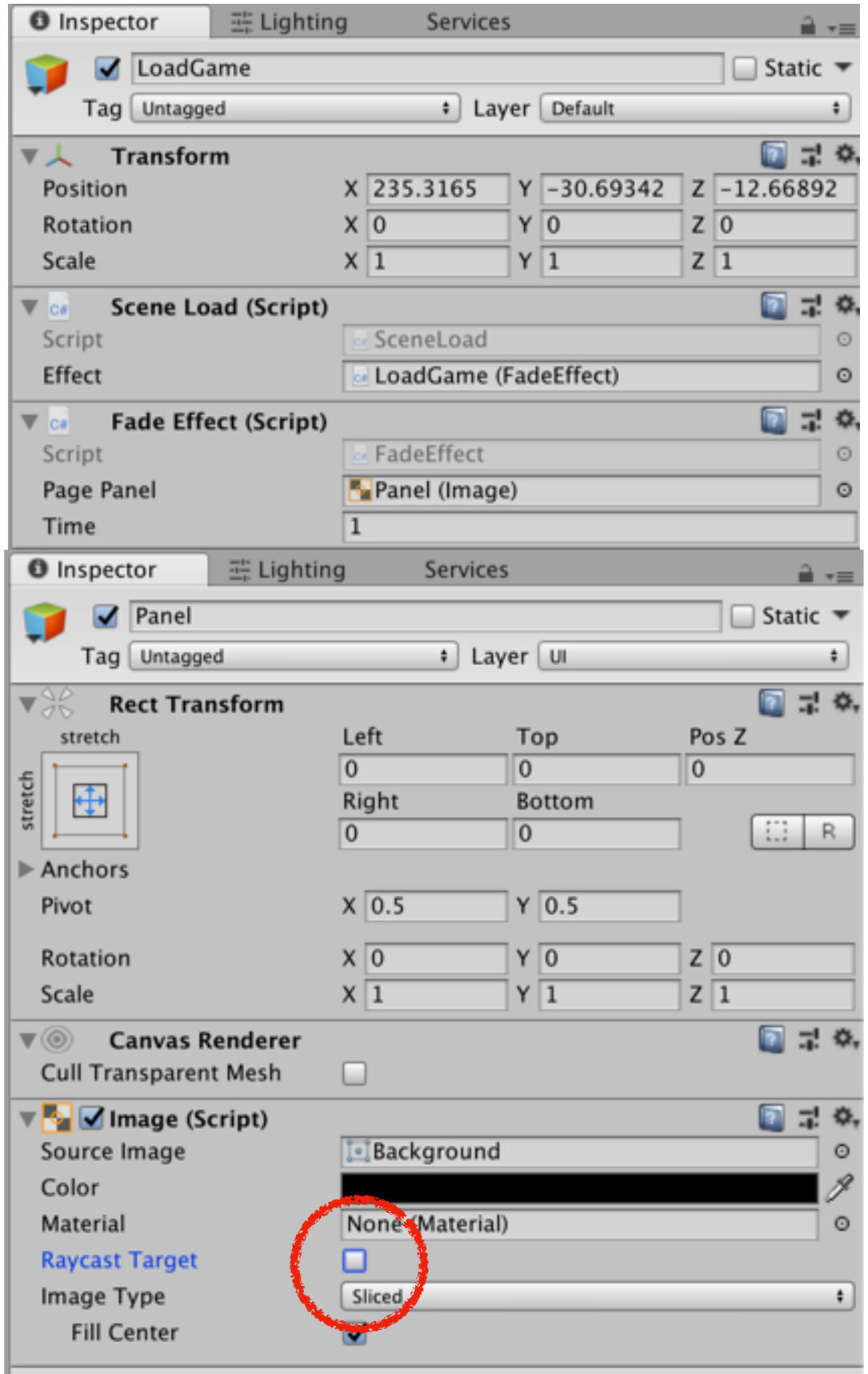
3) LoadGame에 페이드 이펙트 스크립트 넣어줌
슬롯이 생기는데 패널을드래그 드롭해서
페이지 패널창에 넣어줌
타임 ; 1 로 설정

13.Scene to Scene ; Fade out effect 장면전환 페이드 아웃 이펙트

SceneLoad C#수정

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

public class SceneLoad : MonoBehaviour {

    public FadeEffect effect;

    public void LoadScene(string scenename){
        effect.Action(false,() => {
            SceneManager.LoadScene(scenename);
        });


    }
}
```

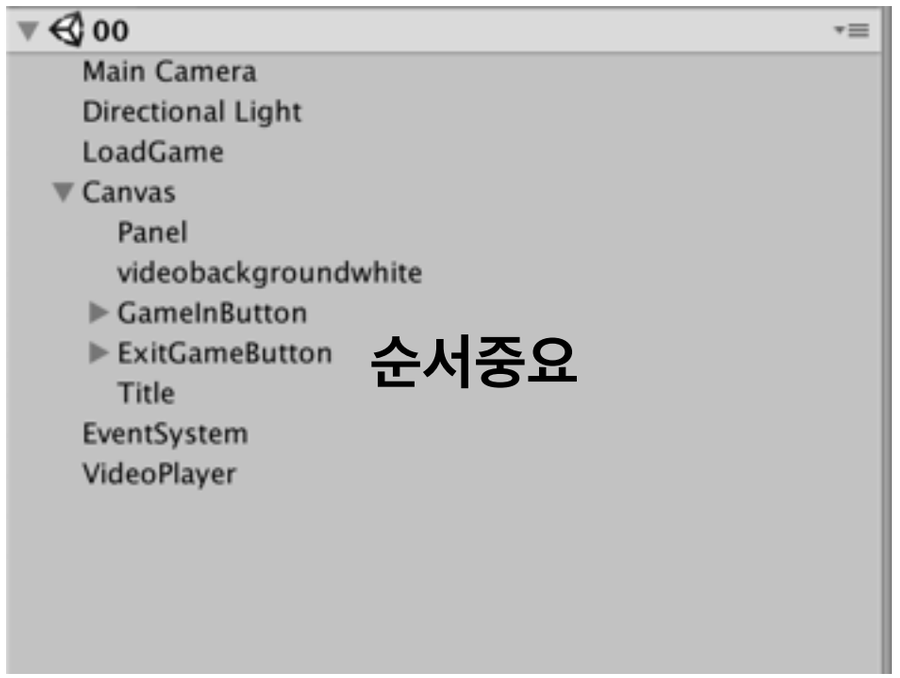
13.Scene to Scene ; Fade out effect 장면전환 페이드 아웃 이펙트



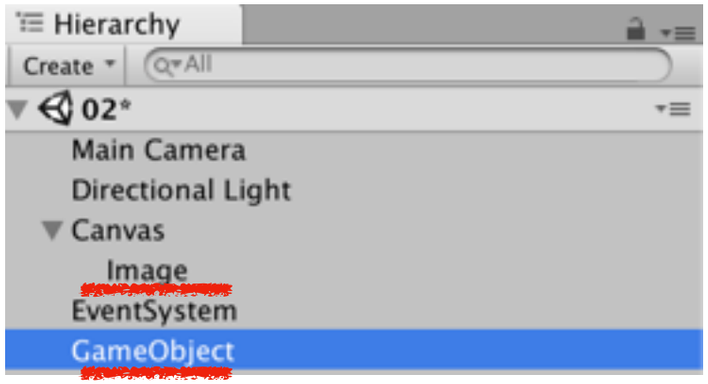
로드게임(인스펙터)에 씬로드에 이펙트에
로드게임 오브젝트 넣어줌(자기안에 자기 넣는거)

패널(인스펙터)에 레이캐스트 타겟 꺼줌

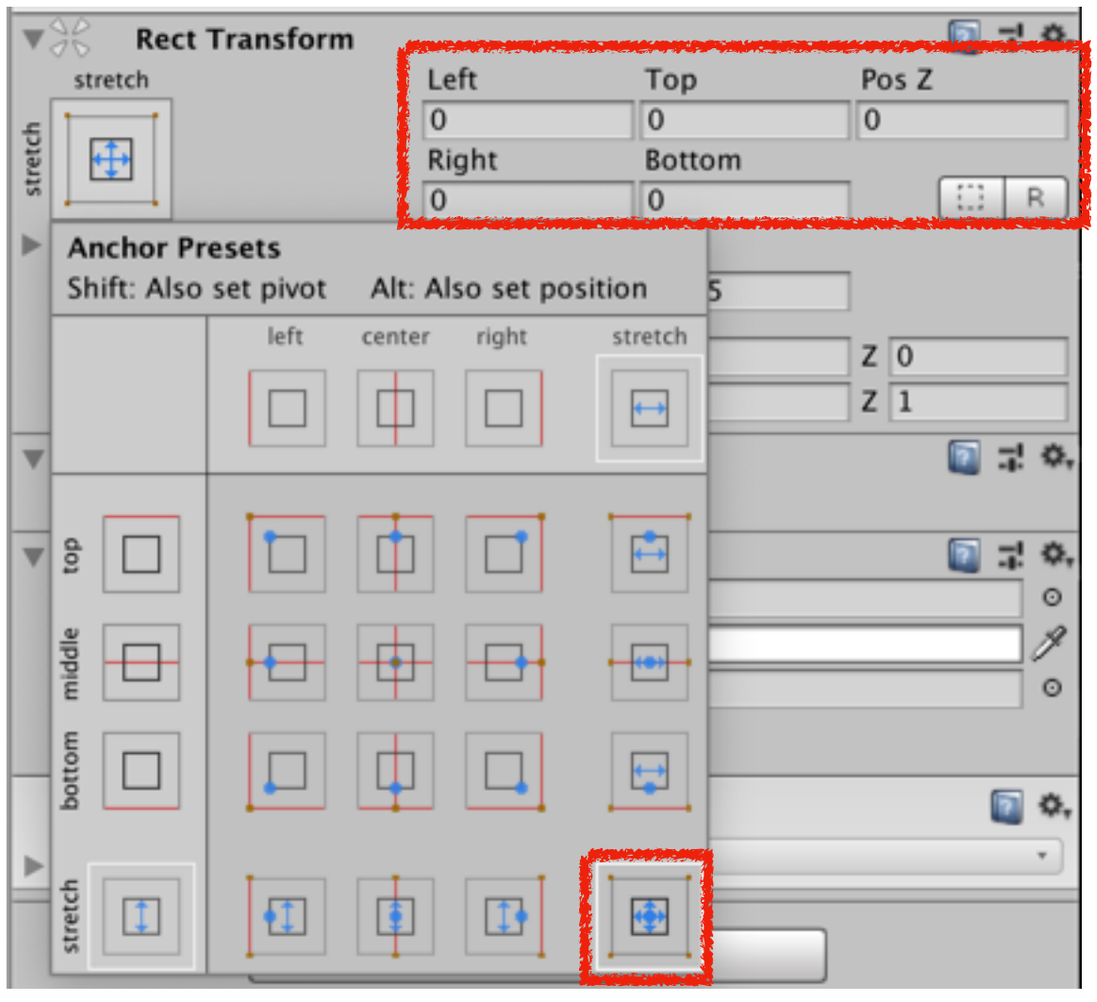
13.Scene to Scene ; Fade out effect 장면전환 페이드 아웃 이펙트



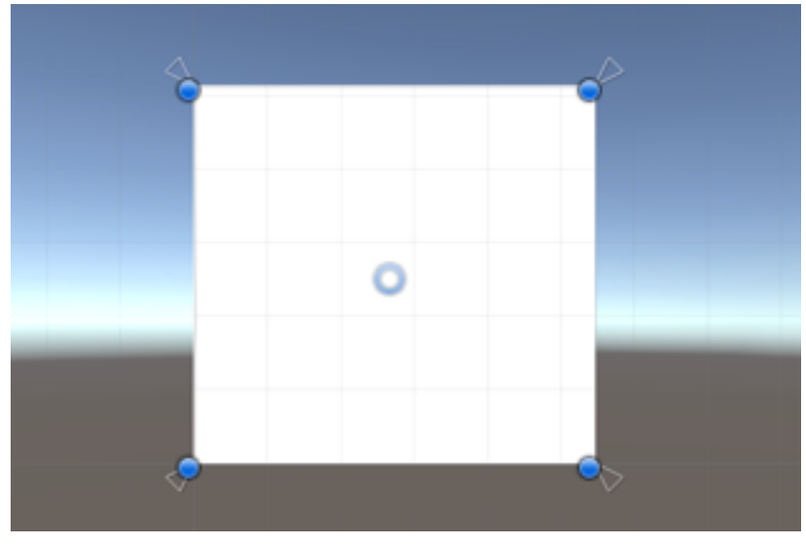
13-1.Scene to Scene ; Fade in effect 장면전환 페이드 인 이펙트



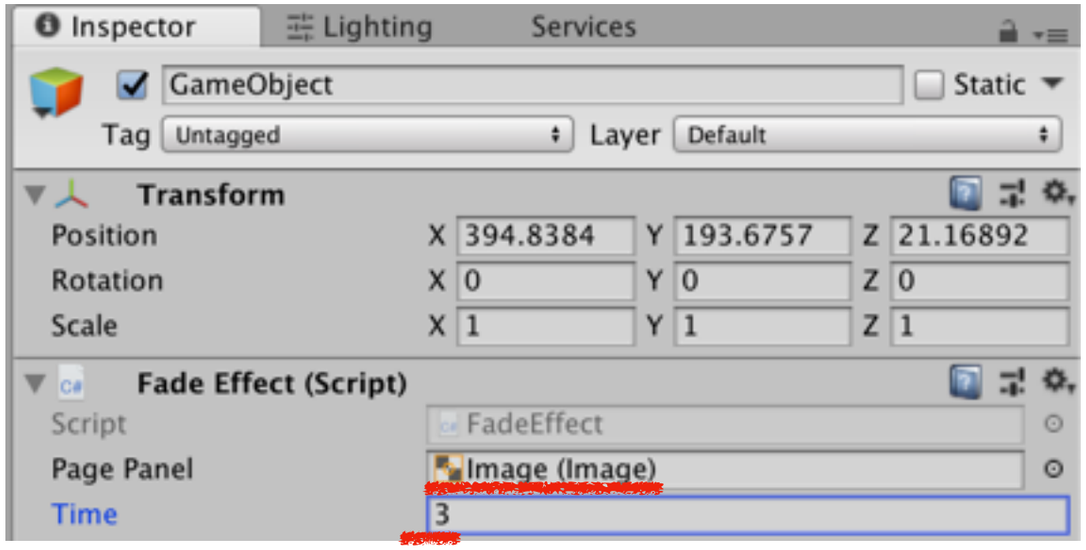
1) Create UI:Image & Empty



2) anchor & 위치잡기



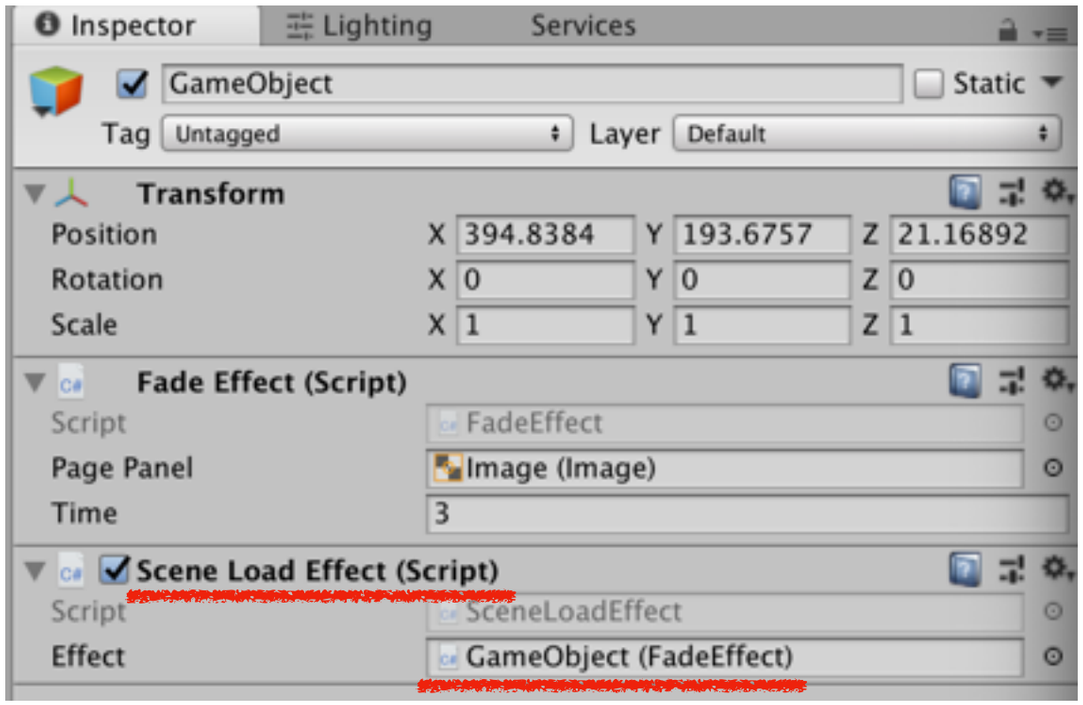
13-1.Scene to Scene ; Fade out effect 장면전환 페이드 인 이펙트




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

public class SceneLoadEffect : MonoBehaviour {

    public FadeEffect effect;

     void Start () {

        effect.Action(true, () => { });
     }

}
```

C# SceneLoadEffect

13-1.Scene to Scene ; Fade out effect 장면전환 페이드 인 이펙트



엠프티에 씬로드이펙트 넣어주고, 이펙트창에 게임오브젝트 넣어줌(자기안에 자기 넣는거맞음)

14. 게임종료버튼 만들기

01 Scene에서

Create c# -game quit

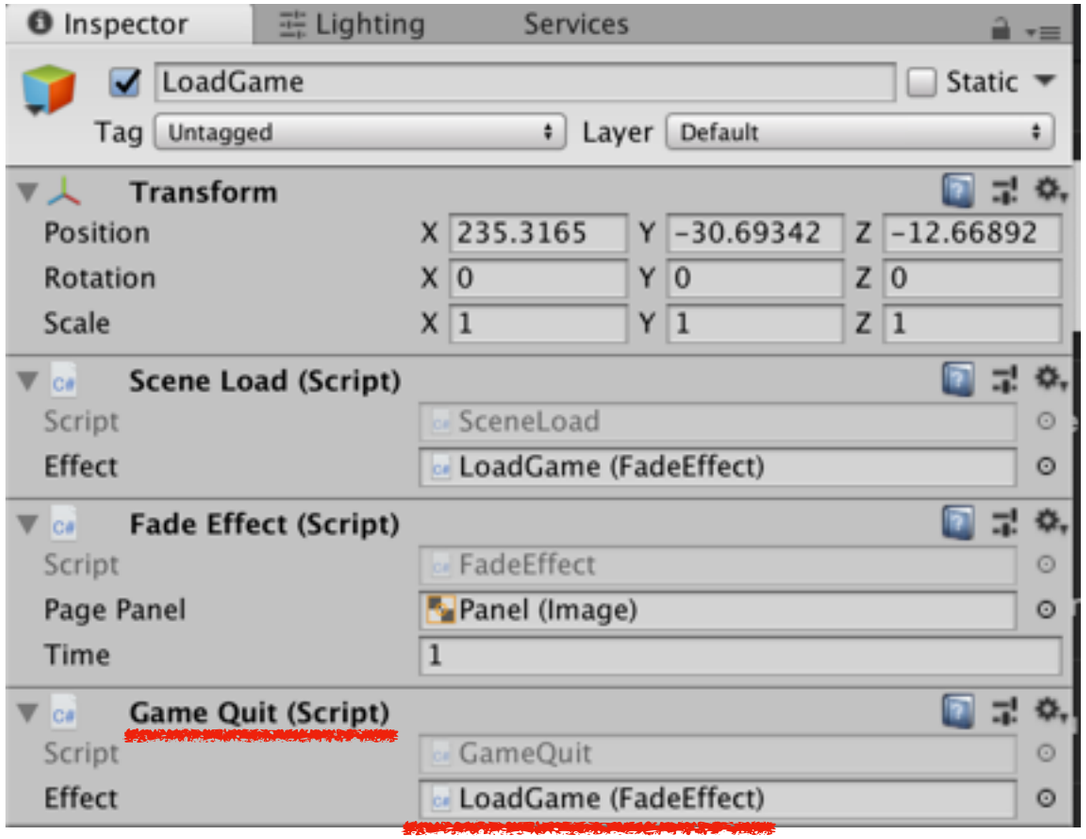
```
using System.Collections;
using System.Collections.Generic;
using UnityEngine;

public class GameQuit : MonoBehaviour {

    public FadeEffect effect;


    public void Quit()
    {
        effect.Action(false, () => {
            Application.Quit();
        });


    }
}
```

GameQuit.cs | SceneLoad.cs | InActiveplan.cs | PlayerTimer.cs | FirstPersonControlle

PlayerTimer ▸ Update()

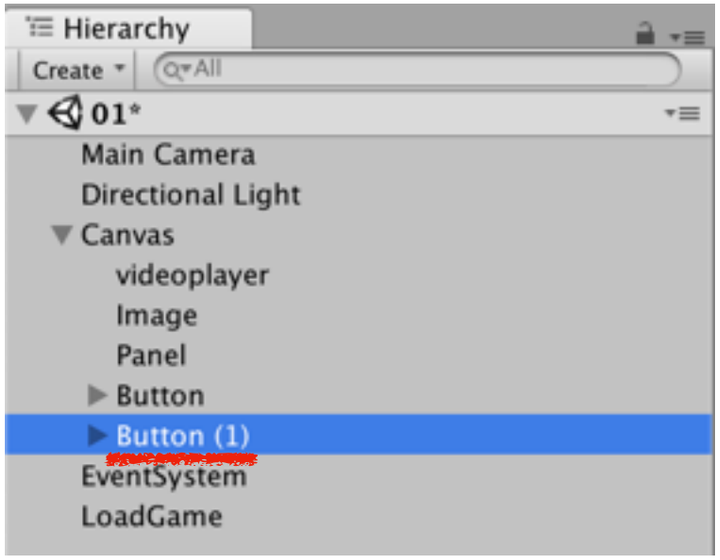
```
1  using System.Collections;
2  using System.Collections.Generic;
3  using UnityEngine;
4  using UnityStandardAssets.Characters.FirstPerson;
5
6  public class PlayerTimer : MonoBehaviour {
7
8      public float restTime;
9
10     // Use this for initialization
11     void Start () {
12         restTime *= 60;
13     }
14
15     // Update is called once per frame
16     void Update () {
17         restTime -= Time.deltaTime;
18         if(restTime < 0){
19             GetComponent<FirstPersonController>().enabled = false;
20         }
21
22     }
23 }
24
```

14. 게임종료버튼 만들기

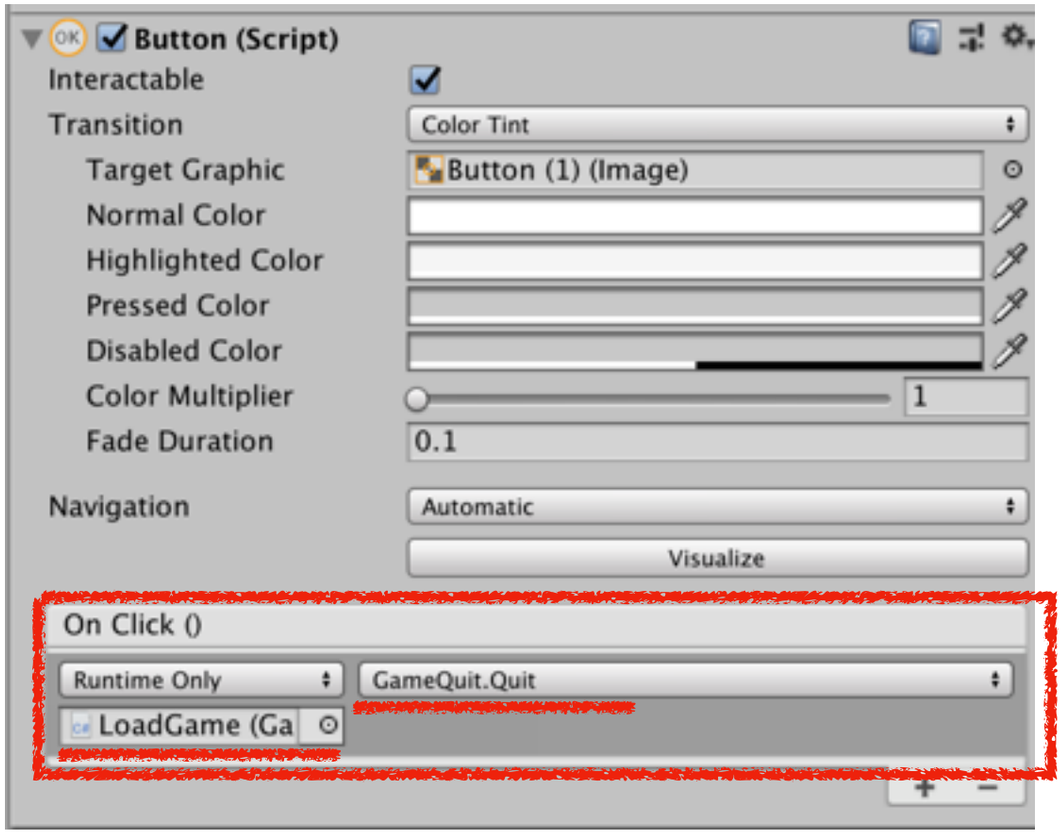


게임오브젝트 게임퀫 추가
-> 이펙트에 게임오브젝트 드래그앤드롭

14. 게임종료버튼 만들기

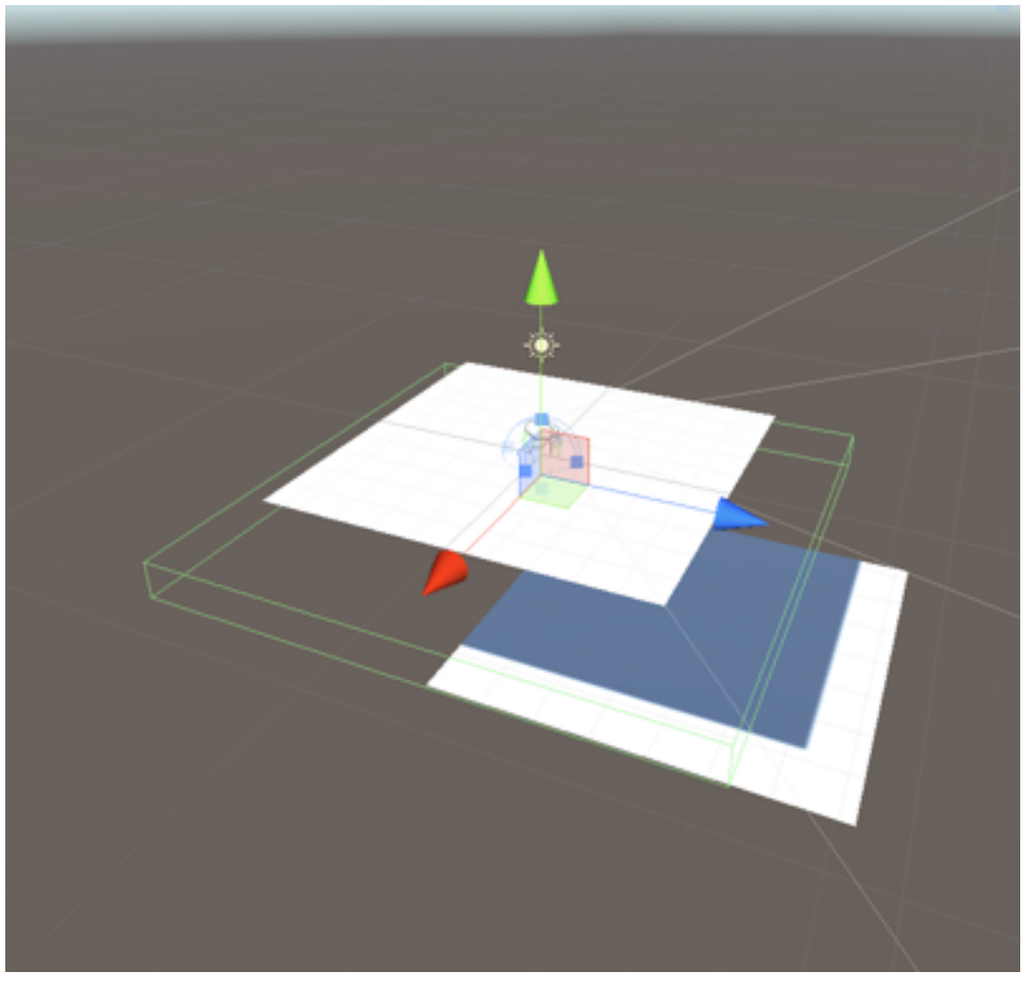


New 버튼 만들기(hierachy) for game quit



게임오브젝트 드래그엔 드롭
+ 펑션 ; 게임 아웃 : 퀴 설정

15. 공간이동시 이전 공간 눈끄기



(기본셋팅)

플레인2개
큐브1:메쉬렌더러 꺼주고,트리거 켜준다
fps controller prefab

15. 공간이동시 이전 공간 눈끄기

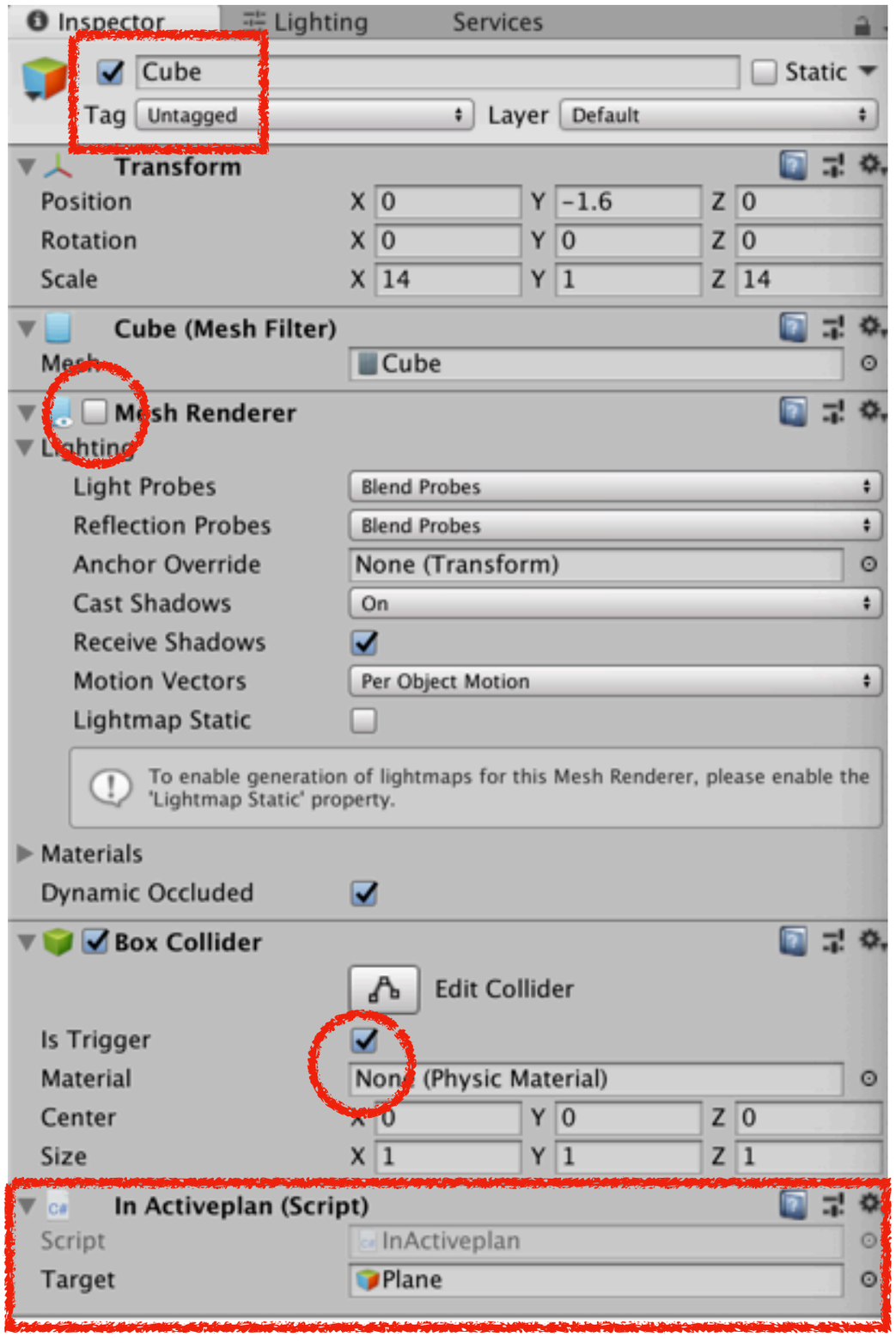
C# InAcitveplan

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

public class InActiveplan : MonoBehaviour {

    public GameObject target;

    private void OnTriggerEnter(Collider other)
    {
        if(other.gameObject.CompareTag("Player"))
        {
            target.SetActive(false);
        }
    }
}
```

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

public class InActiveplan : MonoBehaviour {

    public GameObject target;

    private void OnTriggerEnter(Collider other)
    {
        if(other.gameObject.CompareTag("Player"))
        {
            target.SetActive(false);
        }
    }

}
```

15. 공간이동시 이전 공간 눈끄기

트리거 큐브야!



큐브에 씨샵InActivePlan넣어준다.
Target : 없어질 땅 넣어준다

16. 게임전체 이용시간 정하기

GameQuit.cs | SceneLoad.cs | InActiveplan.cs | PlayerTimer.cs

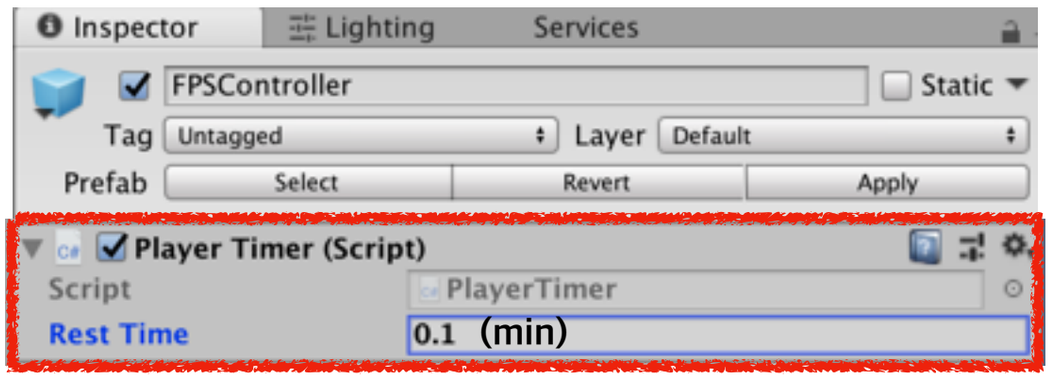
layerTimer ▸ Update()

```
1  using System.Collections;
2  using System.Collections.Generic;
3  using UnityEngine;
4  using UnityStandardAssets.Characters.FirstPerson;
5
6  public class PlayerTimer : MonoBehaviour {
7
8      public float restTime;
9
10     // Use this for initialization
11     void Start () {
12         restTime *= 60;
13     }
14
15     // Update is called once per frame
16     void Update () {
17         restTime -= Time.deltaTime;
18         if(restTime < 0){
19             GetComponent<FirstPersonController>().enabled = false;
20         }
21
22     }
23 }
24
```

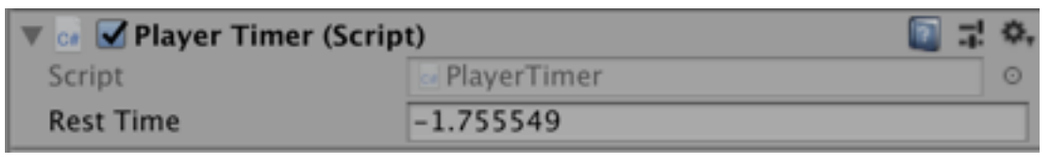
C# : PlayerTimer

```
using System.Collections;
using System.Collections.Generic;
using UnityEngine;
using UnityStandardAssets.Characters.FirstPerson;

public class PlayerTimer : MonoBehaviour {

    public float restTime;

     void Start () {
        restTime *= 60;
     }

     void Update () {
        restTime -= Time.deltaTime;
        if(restTime < 0){
            GetComponent<FirstPersonController>().enabled = false;

        }

     }
}
```

16. 게임전체 이용시간 정하기



Fps controller 에 PlayerTImer(script)넣어줌



실행시 이 화면!

17.크레딧 올라가기

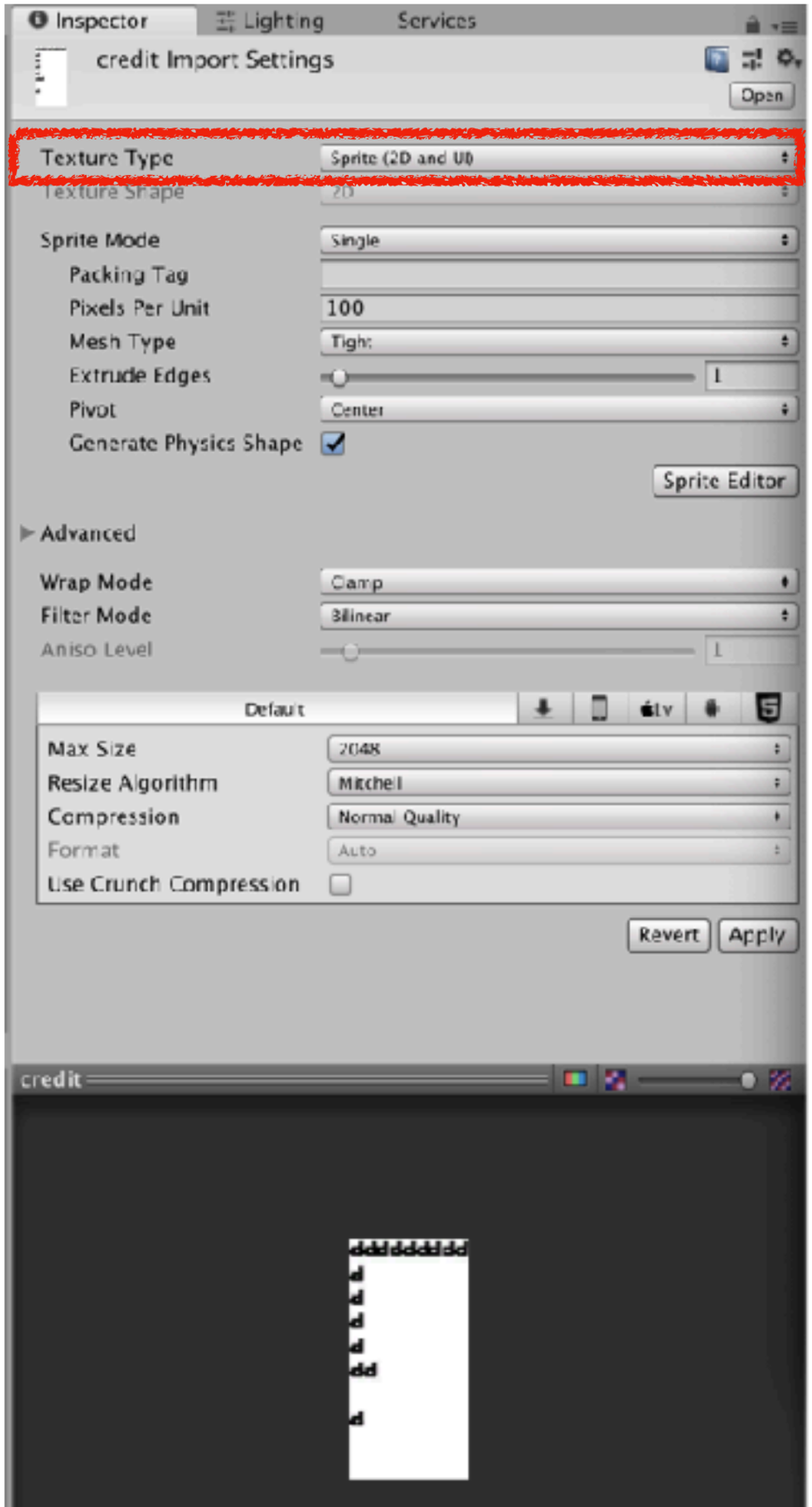
GameQuit.cs | SceneLoad.cs | InActiveplan.cs | PlayerTimer.cs

PlayerTimer ▸ Update()

```
1  using System.Collections;
2  using System.Collections.Generic;
3  using UnityEngine;
4  using UnityStandardAssets.Characters.FirstPerson;
5
6  public class PlayerTimer : MonoBehaviour {
7
8      public float restTime;
9      public GameObject creditObject;
10
11     // Use this for initialization
12     void Start () {
13         restTime *= 60;
14     }
15
16     // Update is called once per frame
17     void Update () {
18         restTime -= Time.deltaTime;
19         if(restTime < 0){
20             GetComponent<FirstPersonController>().enabled = false;
21             creditObject.SetActive(true);
22         }
23
24     }
25 }
26
```

```
using System.Collections;
using System.Collections.Generic;
using UnityEngine;
using UnityStandardAssets.Characters.FirstPerson;

public class PlayerTimer : MonoBehaviour {

    public float restTime;
    public GameObject creditObject;

     // Use this for initialization
     void Start () {
        restTime *= 60;
     }

     // Update is called once per frame
     void Update () {
        restTime -= Time.deltaTime;
        if(restTime < 0){
            GetComponent<FirstPersonController>().enabled = false;
            creditObject.SetActive(true);
        }

     }
}
```

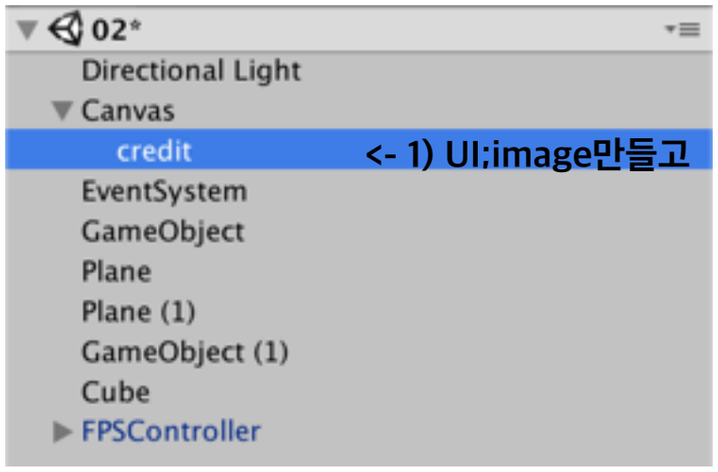
17.크레딧 올라가기



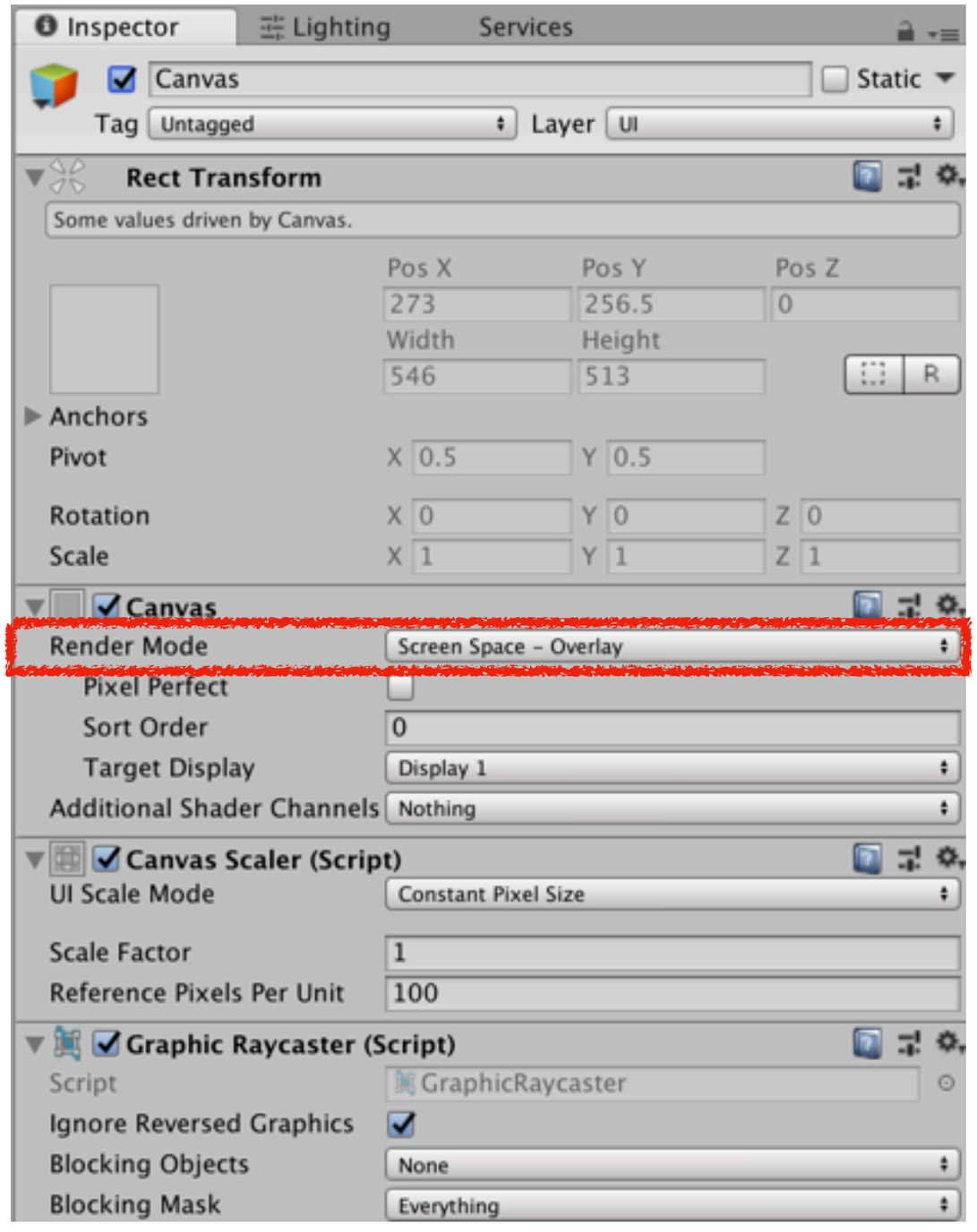
1) 먼저 크레딧 올릴png파일을 불러온다
2) 텍스쳐 파일을 정해준다.

하고 적용하기!

17.크레딧 올라가기

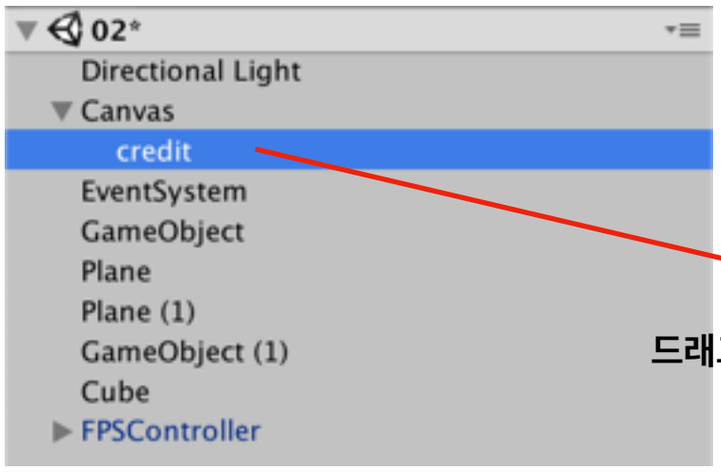


<- 1) UI;image만들고

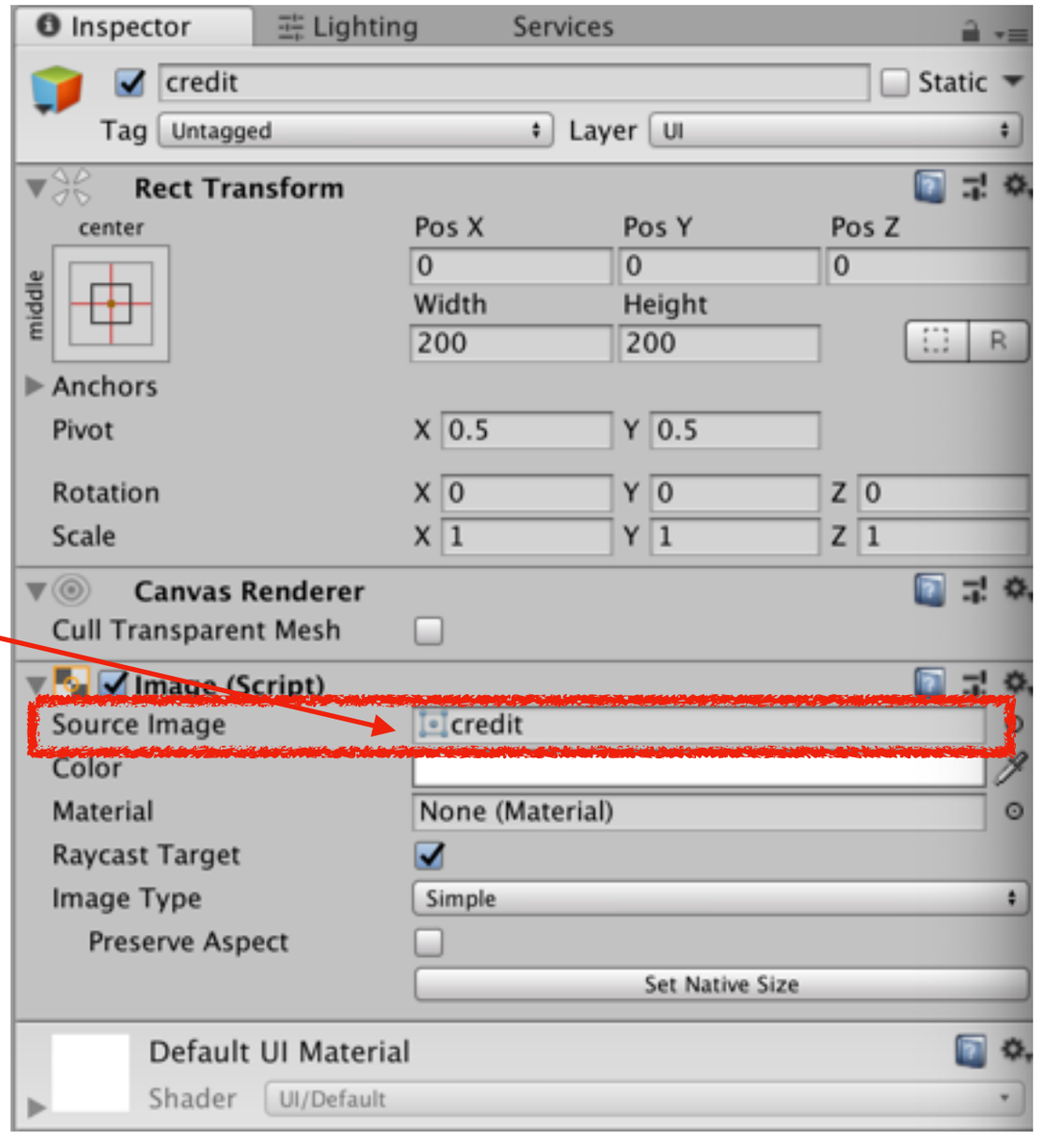


렌더모드 체크

17.크레딧 올라가기

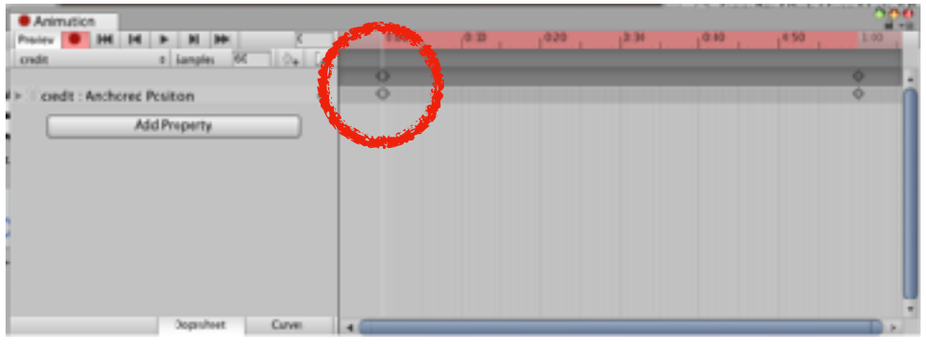


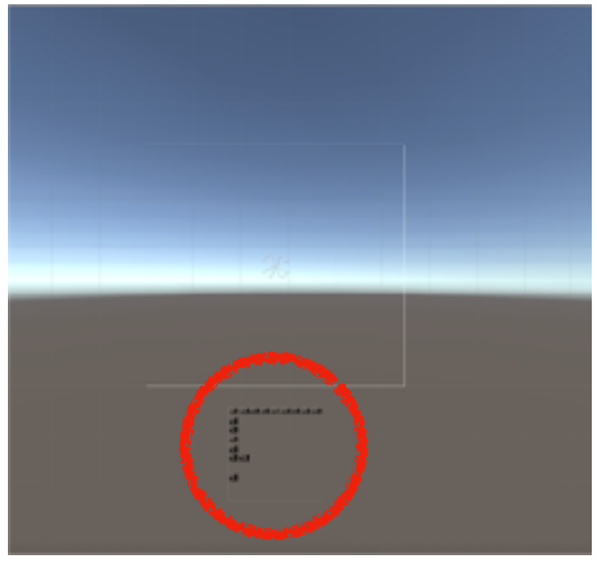
드래그앤 드롭

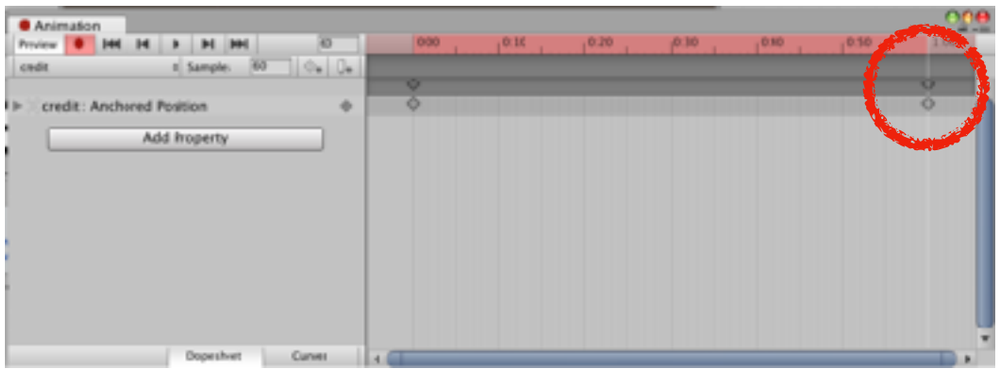


17.크레딧 올라가기

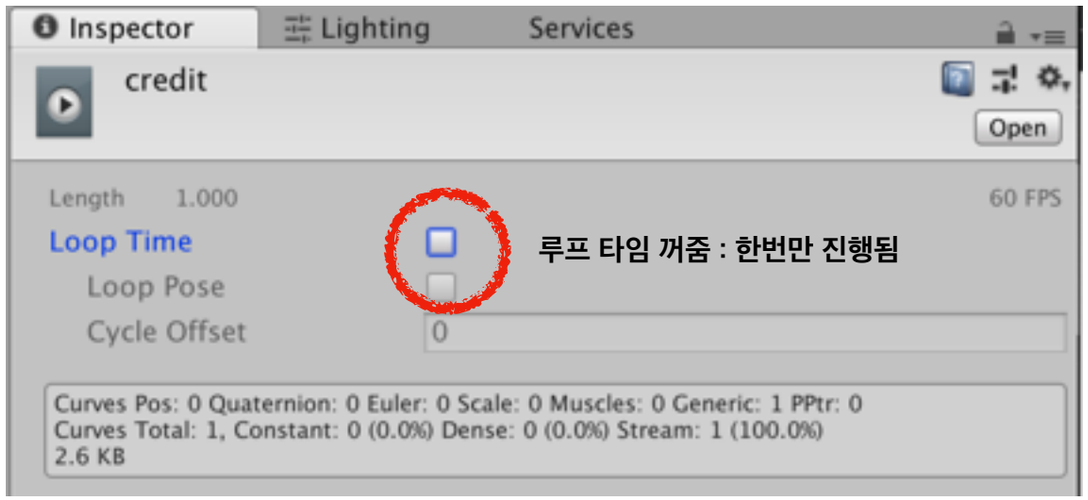
키잡기







17.크레딧 올라가기



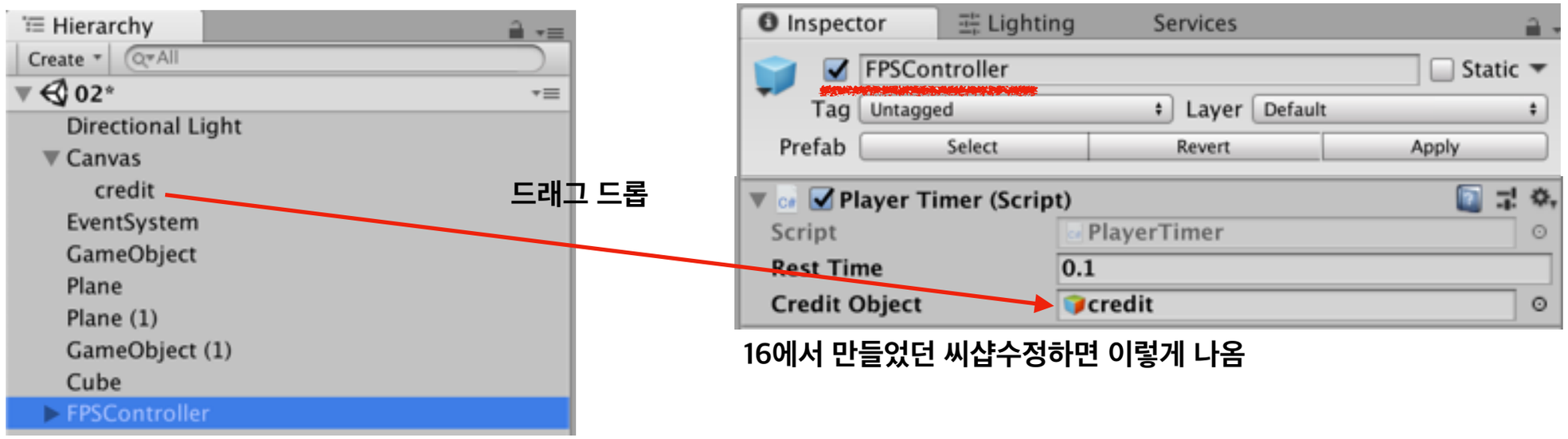
루프 타임 꺼줌 : 한번만 진행됨

17.크레딧 올라가기

16에서 만들었던 씨샵수정

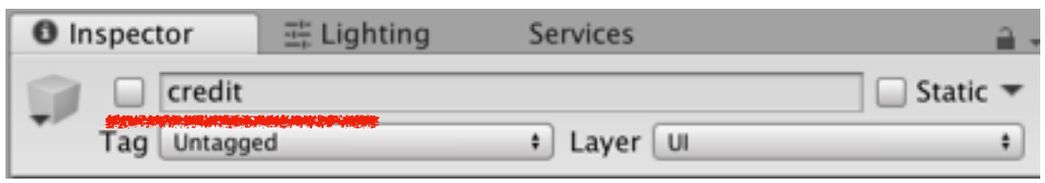
```
using System.Collections;
using System.Collections.Generic;
using UnityEngine;
using UnityStandardAssets.Characters.FirstPerson;

public class PlayerTimer : MonoBehaviour {

    public float restTime;
    public GameObject creditObject;


     void Start () {
        restTime *= 60;
    }


    void Update () {
        restTime -= Time.deltaTime;
        if(restTime < 0){
            GetComponent<FirstPersonController>().enabled = false;
            creditObject.SetActive(true);
        }

    }
}
```

17.크레딧 올라가기

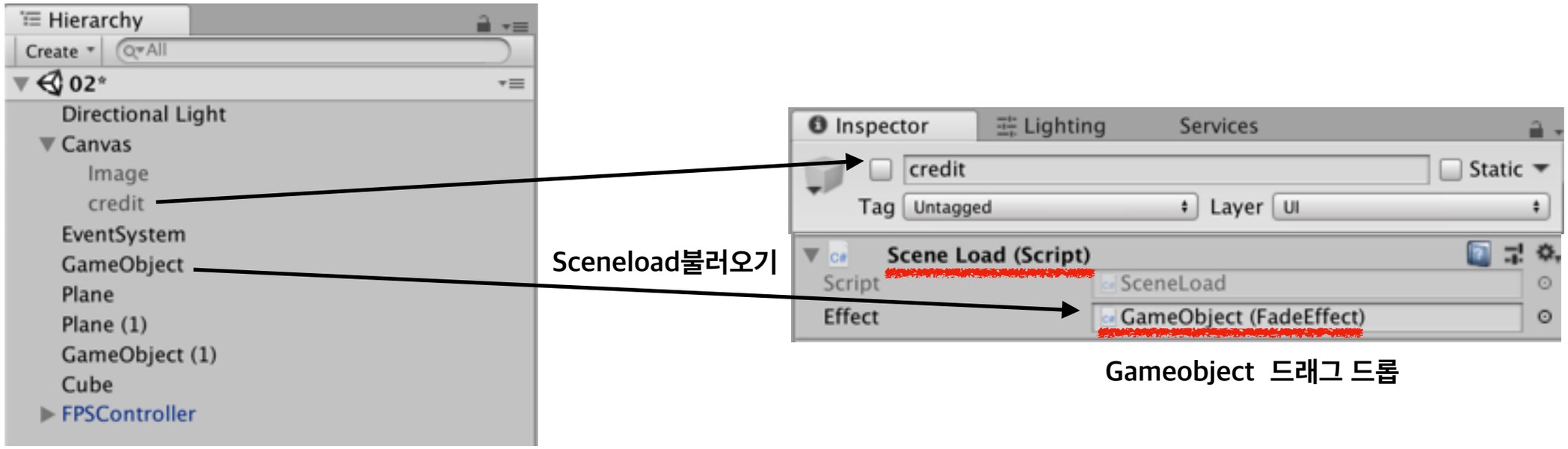


16에서 만들었던 씨샵수정하면 이렇게 나옴

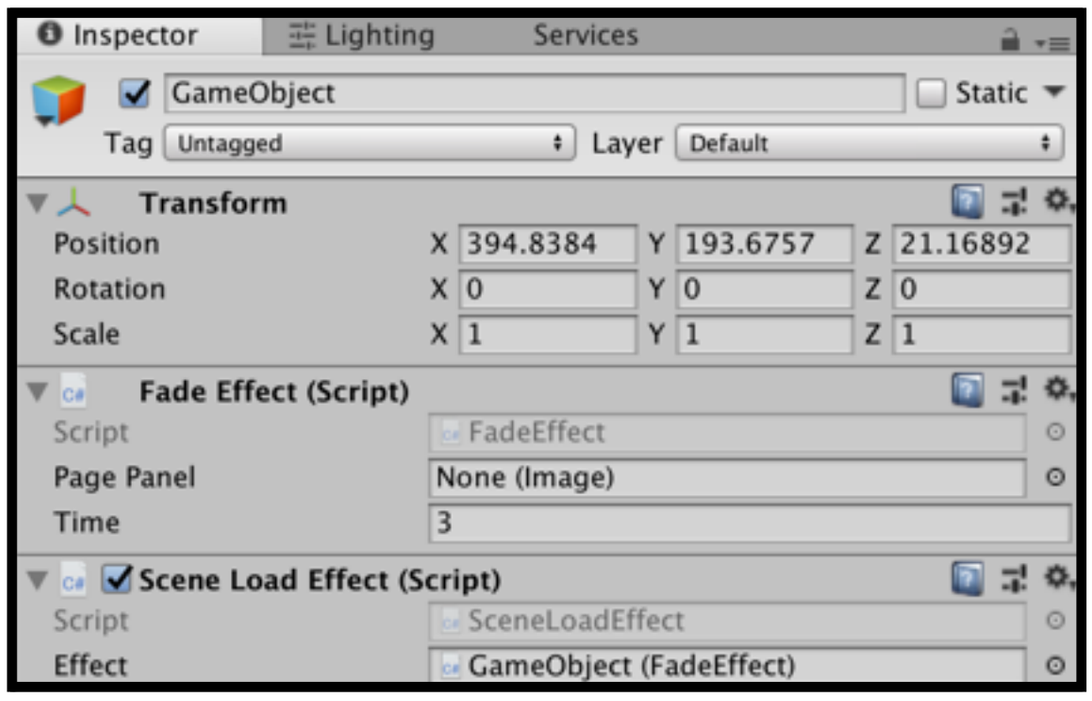
크레딧 눈 꺼줘야돼, 실행전에
안그러면 실행하고 바로 실행됨



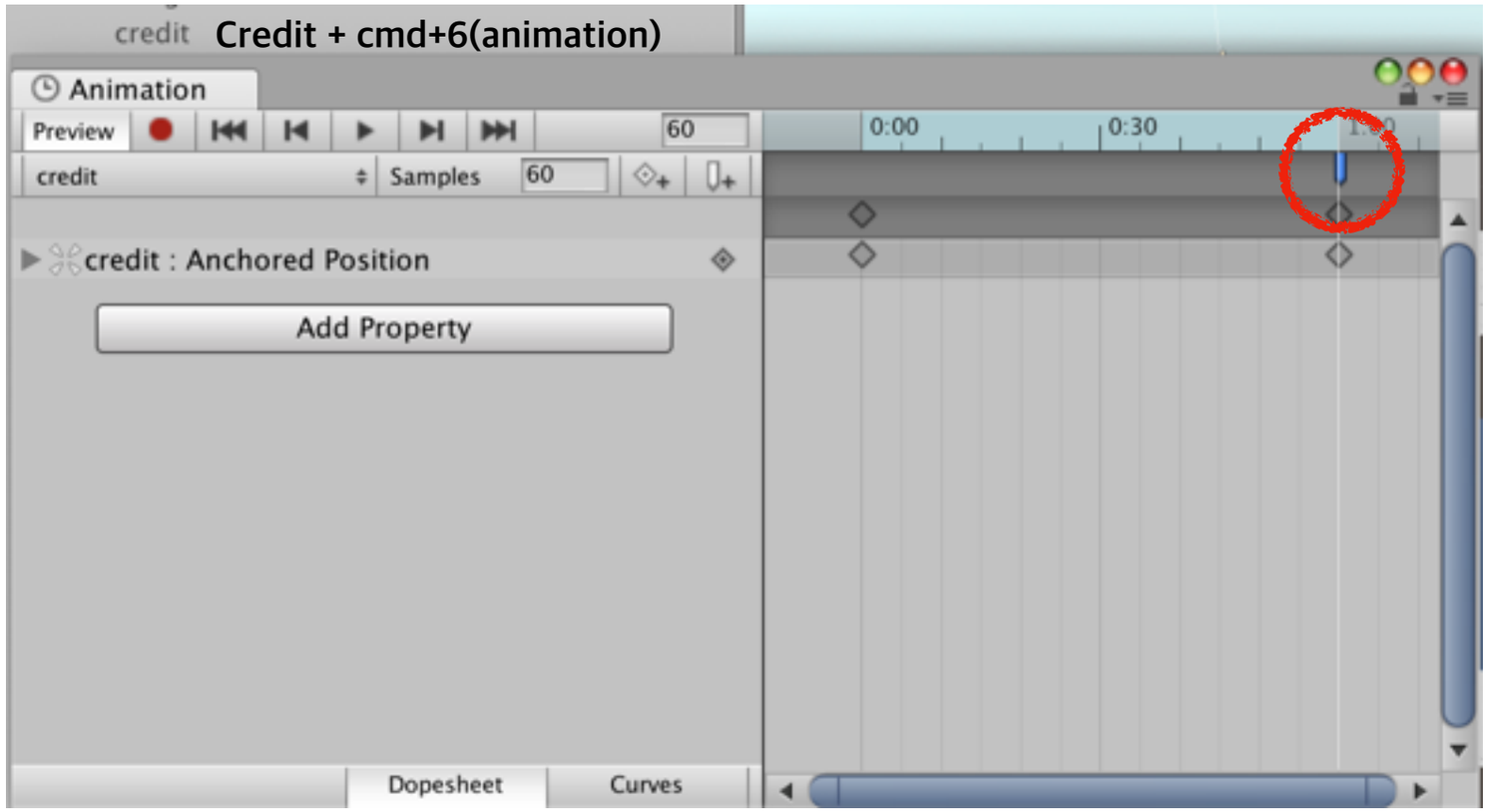
18.크레딧 올라가고 게임 로드 씬으로 돌아오기



Game object 구성

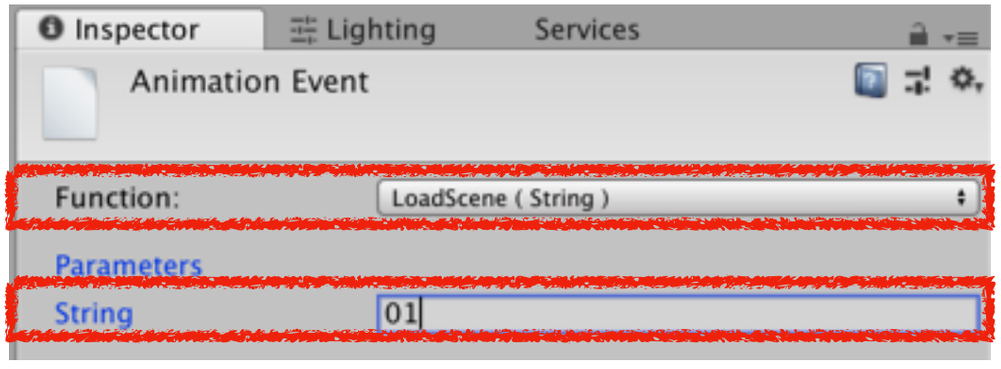


18.크레딧 올라가고 게임 로드 씬으로 돌아오기



우클릭하면

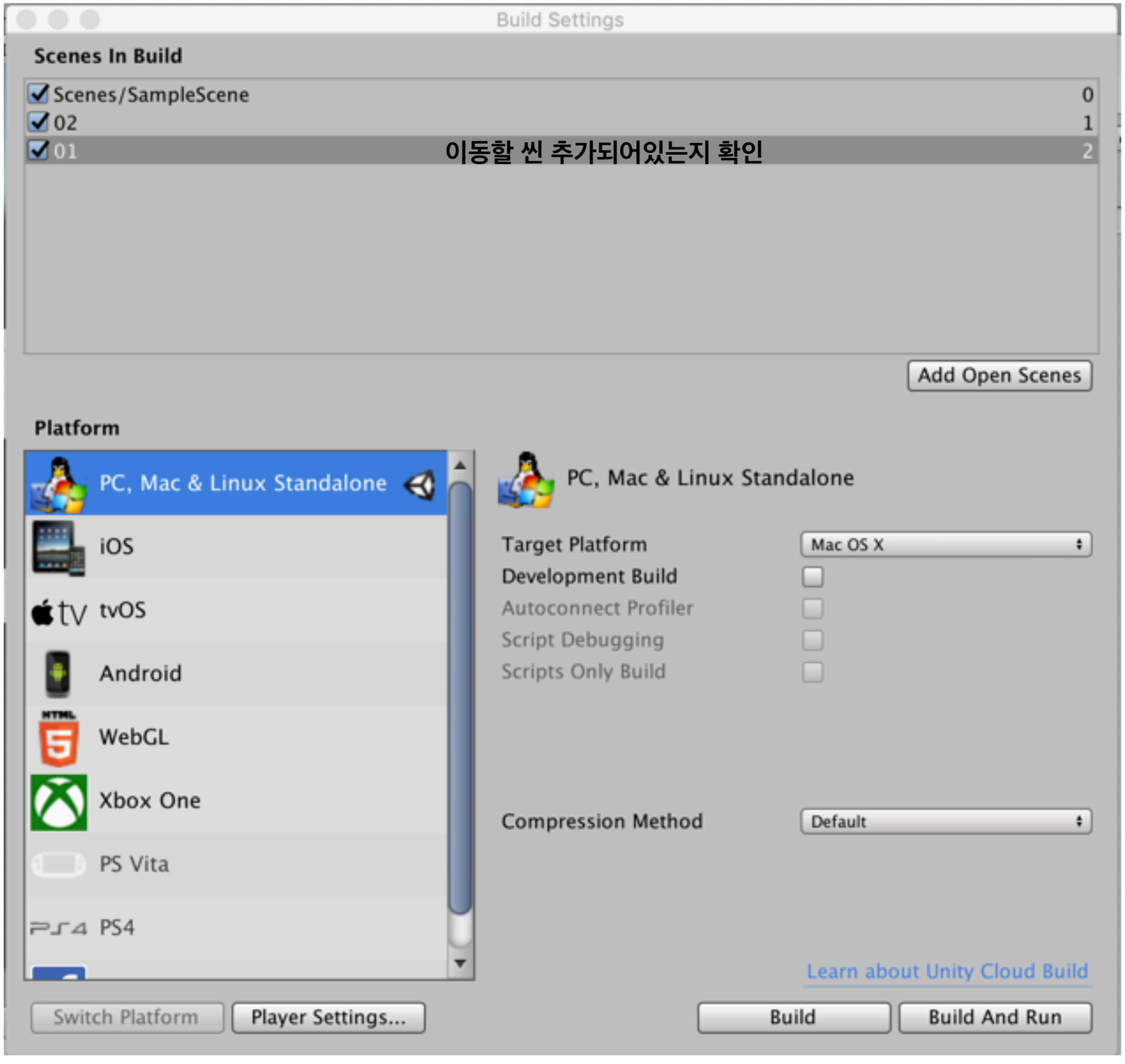
추가하고



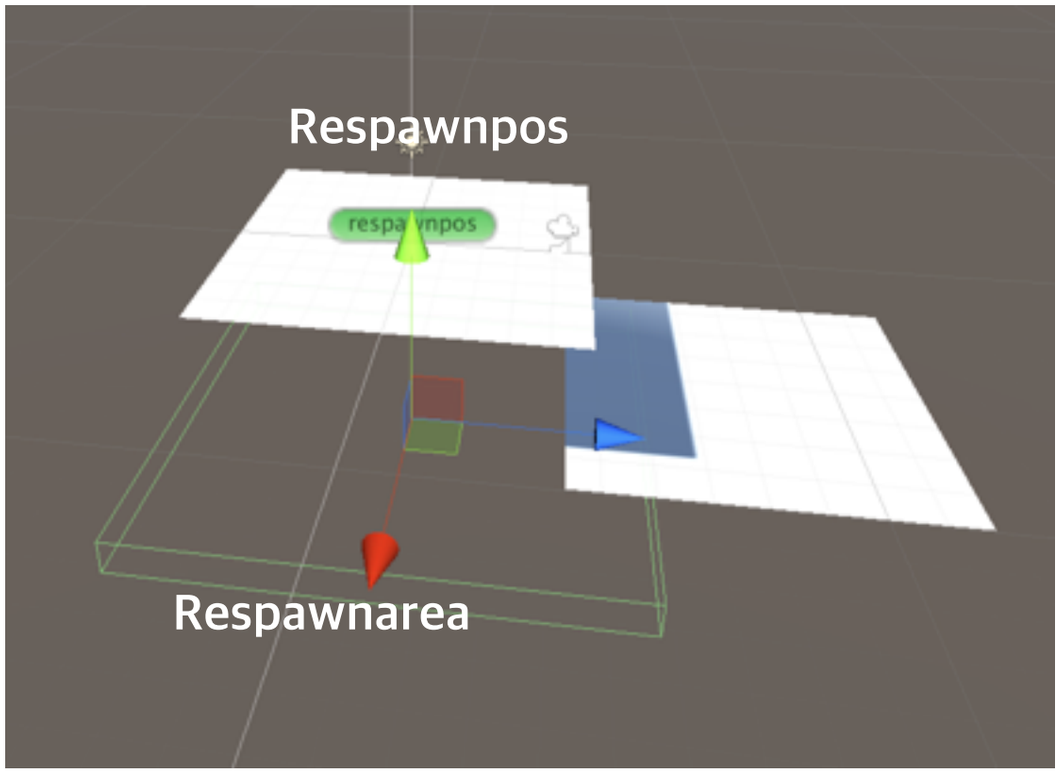
이동할 씬넘버

18.크레딧 올라가고 게임 로드 씬으로 돌아오기

02222.mov (끝)



19. 죽으면 살아나기Respawn

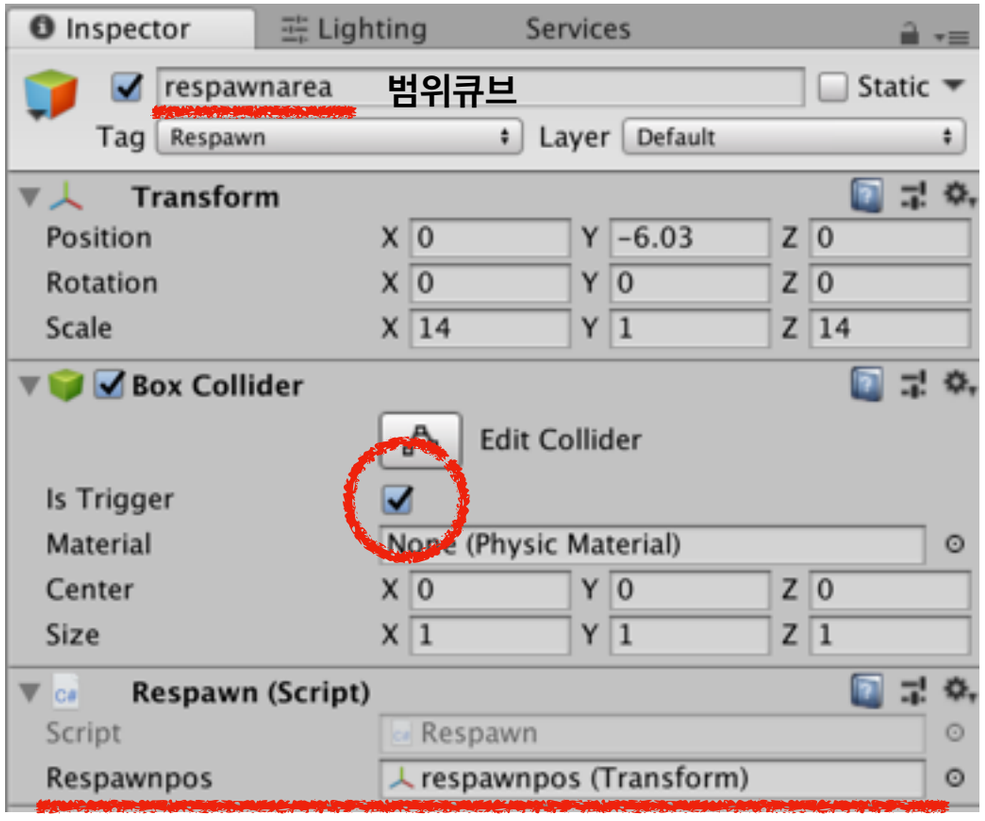


기본적인 셋팅(플레인2개,
큐브(메쉬렌더러 눈꺼주고, 트리거 켜주고),
큐브 죽었으면 하는공간 설정

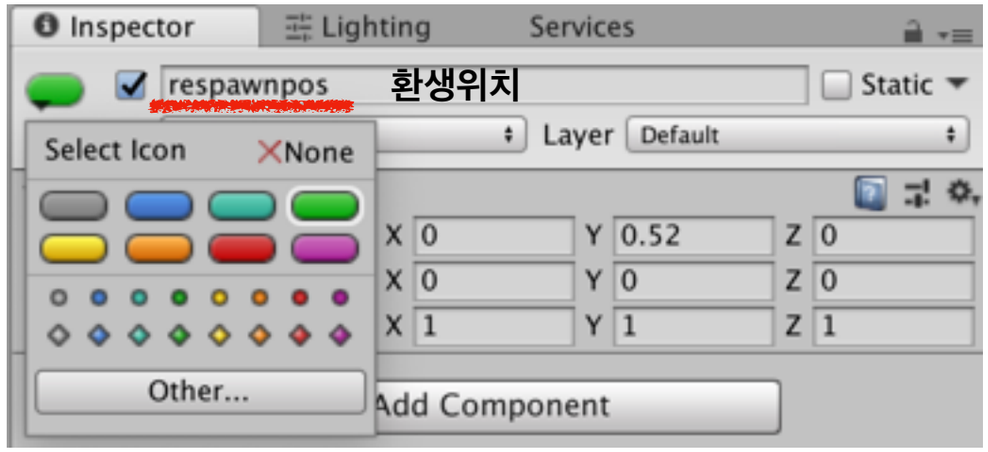
Create C# : Respawn

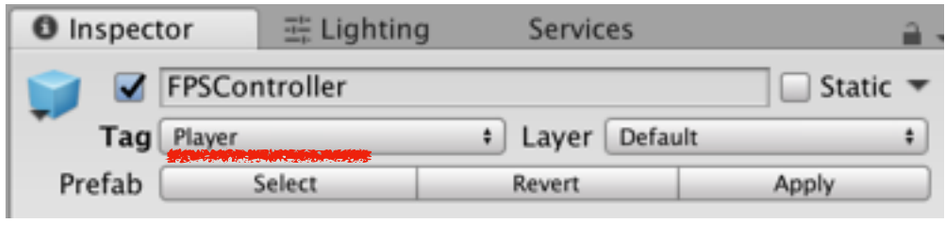
```
using System.Collections;
using System.Collections.Generic;
using UnityEngine;

public class Respawn : MonoBehaviour {

    public Transform respawnpos;

    private void OnTriggerEnter(Collider other)
    {
        if (other.gameObject.CompareTag(“Player")) //태그가 player로 걸린애가 지나갈때!작동!
        {
            other.gameObject.transform.position = respawnpos.position;
        }
    }
}
```

19. 죽으면 살아나기Respawn



Create empty -> name ‘respawnpos’





20.선 바람

선 바람 사이즈

Create particle system : particle system(inspector)
 shape ; shape ; cone / Radius : 0.0001로 지정
Transform : rotation x : -90
파티클 나오는 양쪽 동그라미 줄여서 일직선으로 나오게 하기

에미션 레이트 오버타임 :0.1

파티클 시스템 듀레이션 60
스타트라이프 타임 20
스타트 스피드10->30
스타트 사이즈 0.01

머터리얼 만들고 ;쉐이더 ; 파티클 ; 애딕티브

파티클 시스템 렌더러 ; 만든 메터리얼을 (렌더러)트레일 메테리얼에 드래그 드롭

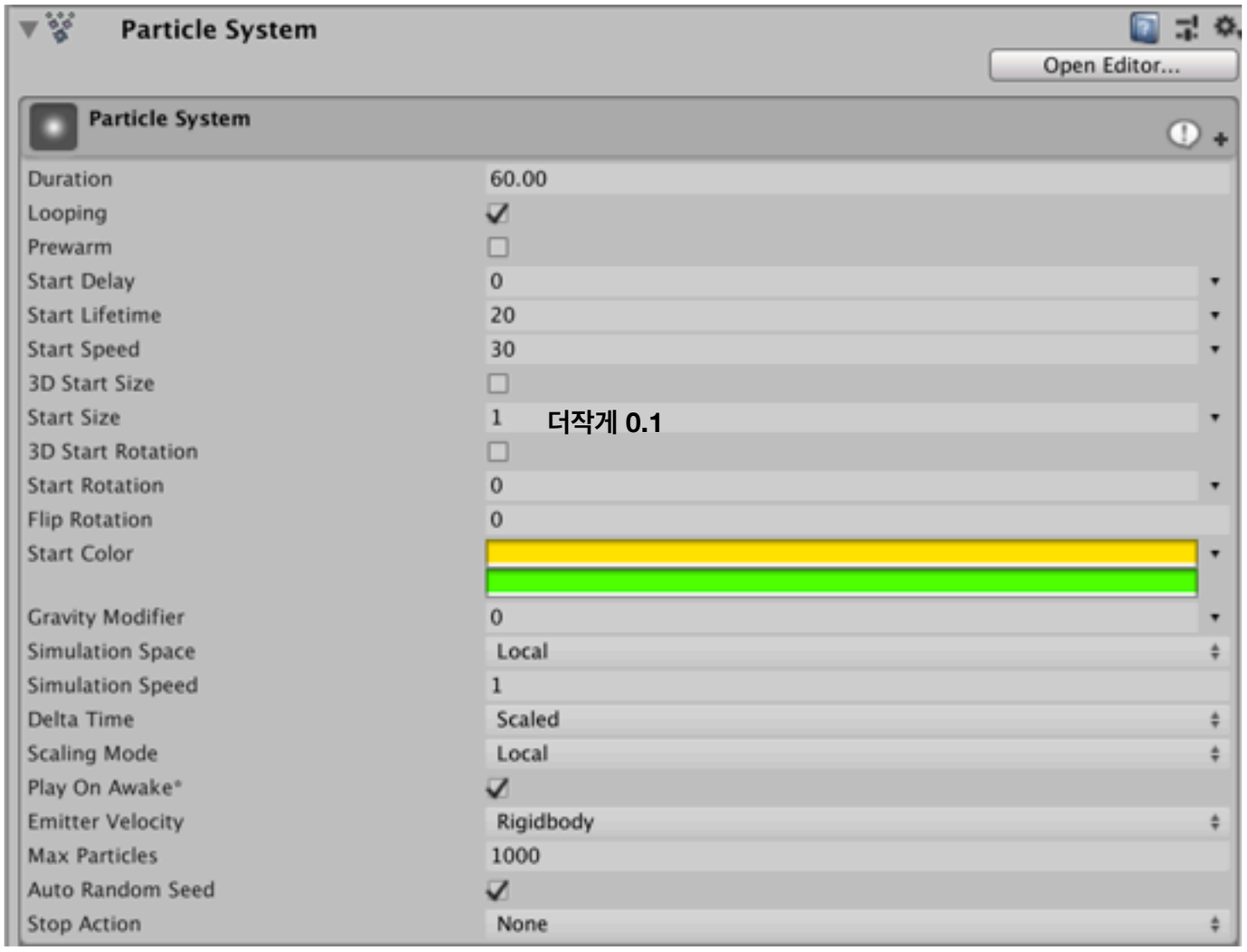
트레일 키고, 라이프타임 0.3 / 위드 오버 트레일 0.1(굵기 조정)/

쉐입을 서클로 변경 : 무작위 방향으로 송출/ position rotation x ;90

쉐입 ; 라디우스 늘이기
에미션 ; 레이트 오버 타임 (숫자 늘이면 늘일수록 개체 많아짐)
쉐입 ; 아스 ; 90 으로 해서 사각형 끝에 붙이면
완성

파티클시스템 스타트 컬러 ; 랜덤 비트윈 컬러 ; 해서 색지정

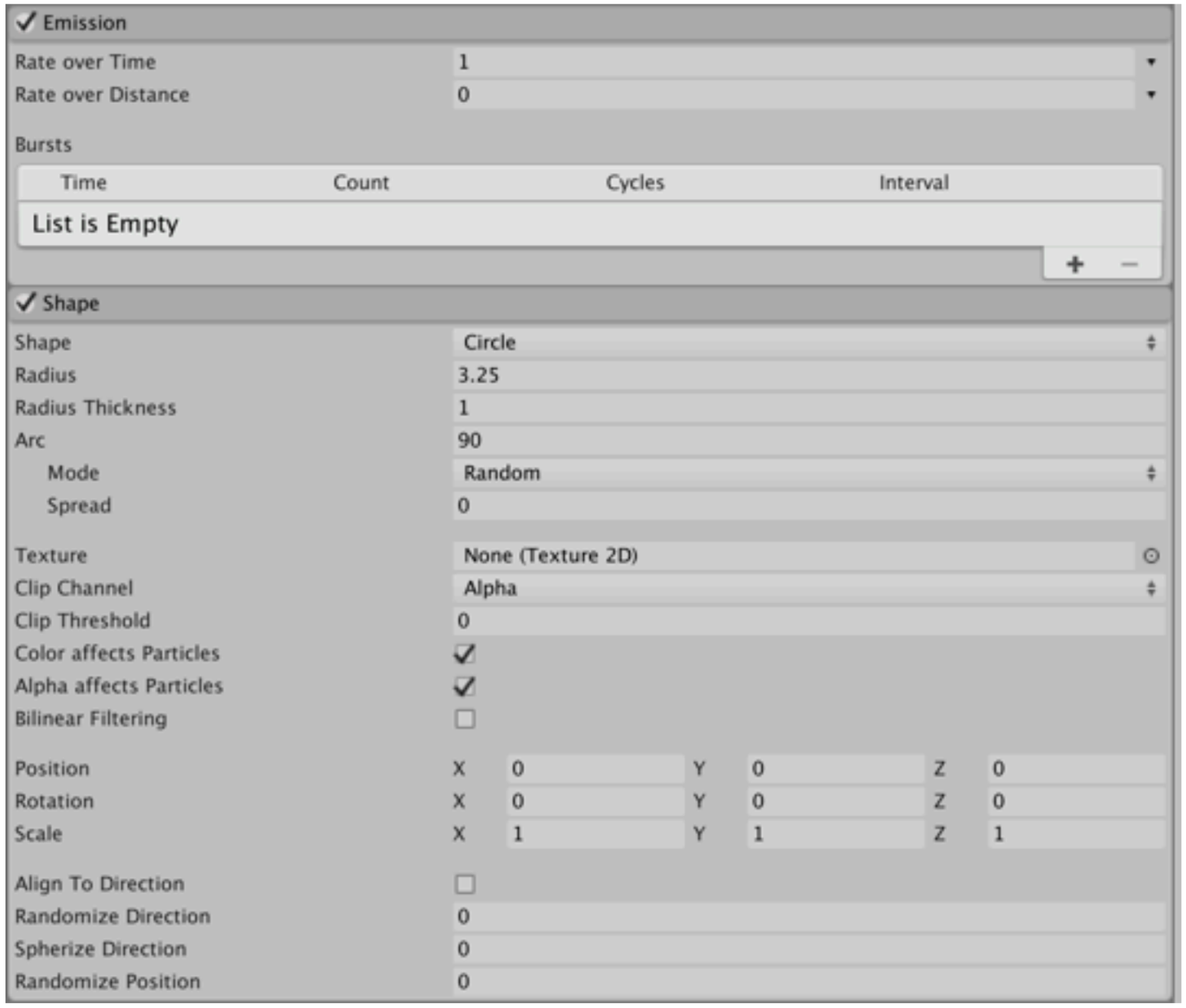
20.선 바람



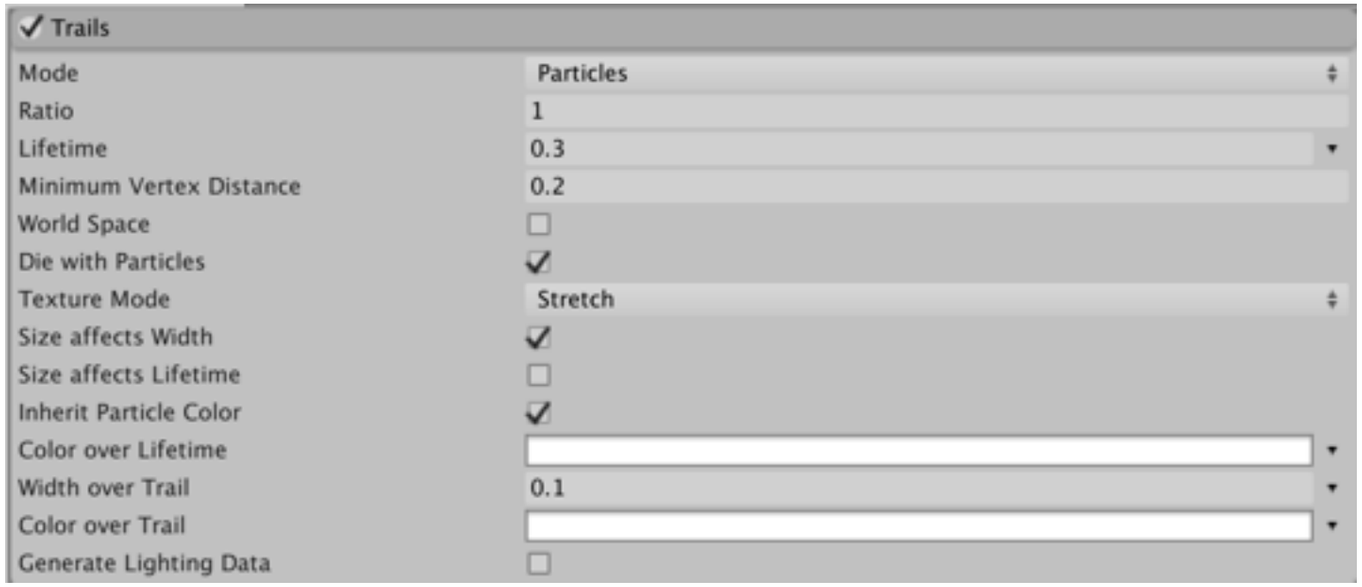
더작게 0.1

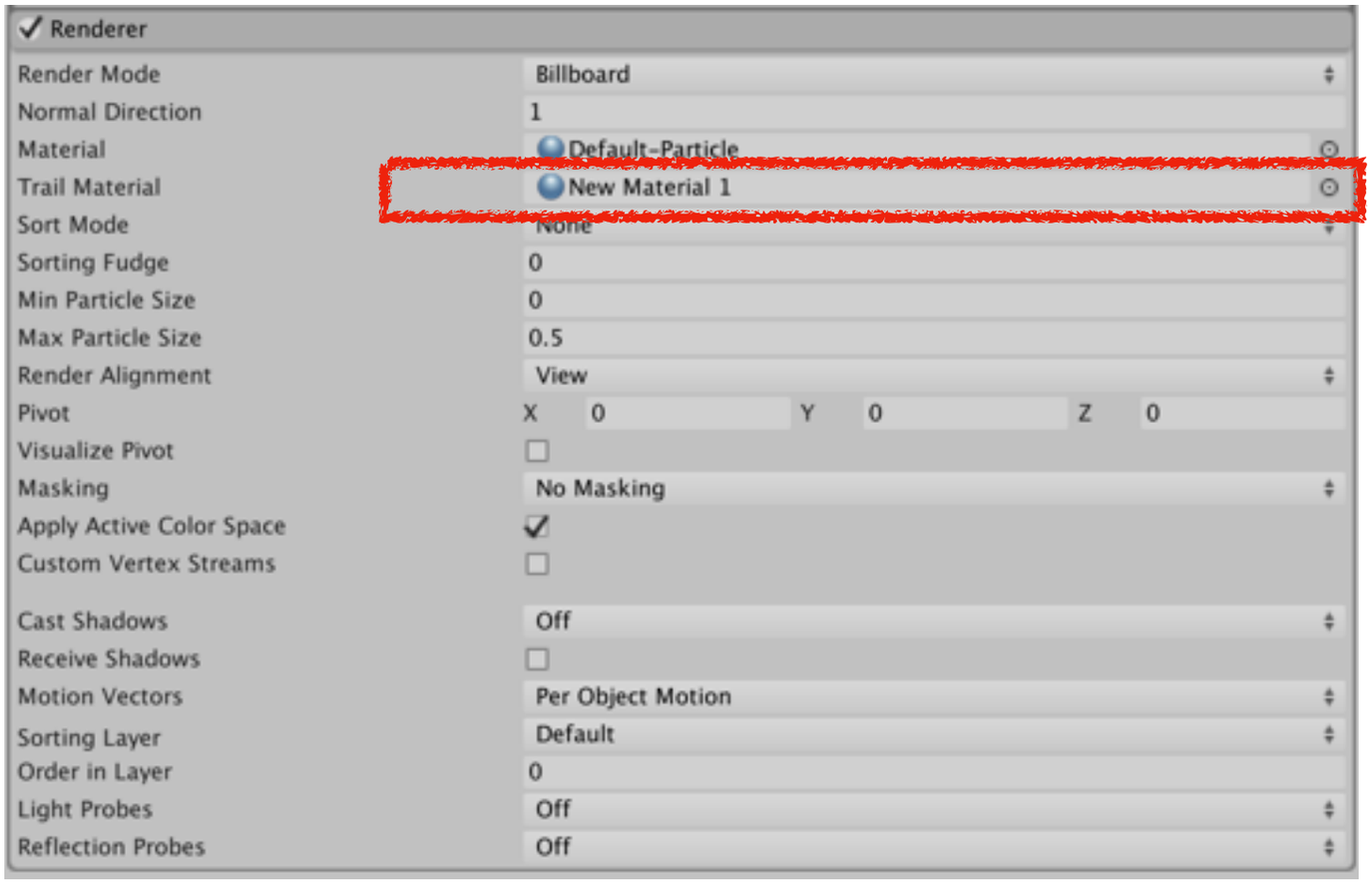
값 정리해 왔음

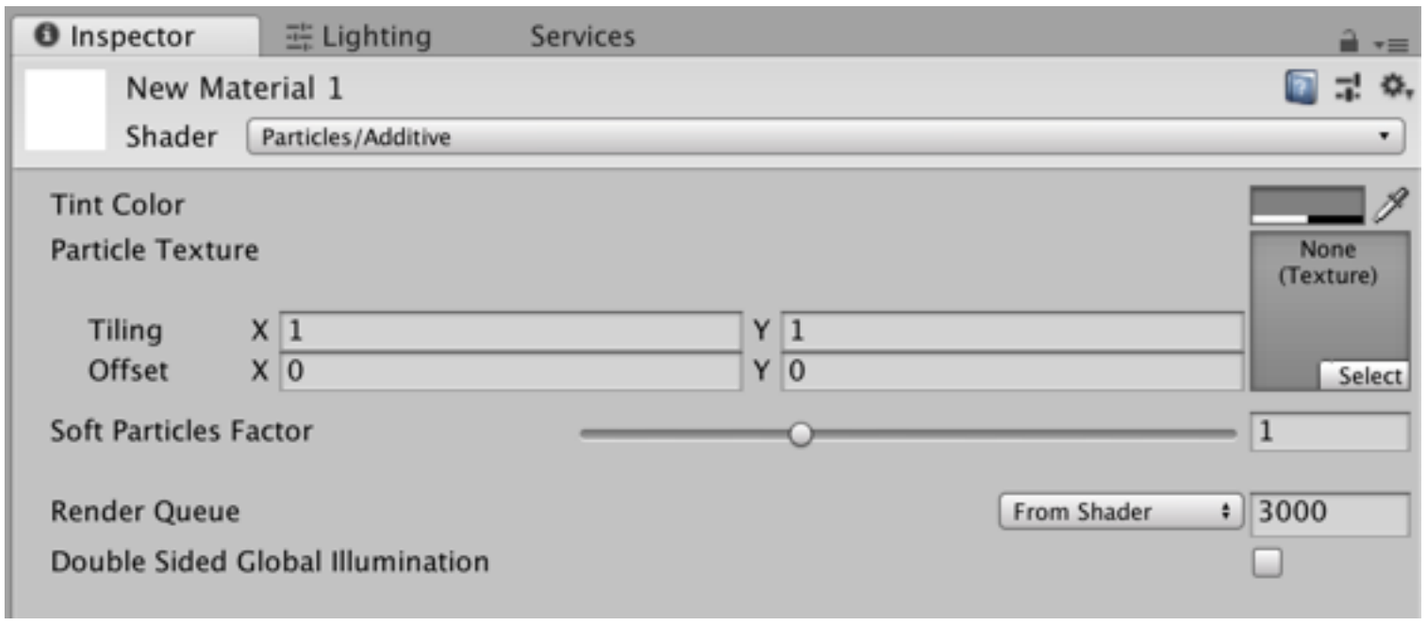
20.선 바람


Emission
Rate over Time 1
Rate over Distance 0
Bursts
Time Count Cycles Interval
List is Empty
Shape
Shape Circle
Radius 3.25
Radius Thickness 1
Arc 90
Mode Random
Spread 0
Texture None (Texture 2D)
Clip Channel Alpha
Clip Threshold 0
Color affects Particles
Alpha affects Particles
Bilinear Filtering
Position X 0 Y 0 Z 0
Rotation X 0 Y 0 Z 0
Scale X 1 Y 1 Z 1
Align To Direction
Randomize Direction 0
Spherize Direction 0
Randomize Position 0

20.선 바람


Trails
Mode
Particles
Ratio
1
Lifetime
0.3
Minimum Vertex Distance
0.2
World Space
Die with Particles
Texture Mode
Stretch
Size affects Width
Size affects Lifetime
Inherit Particle Color
Color over Lifetime
Width over Trail
0.1
Color over Trail
Generate Lighting Data

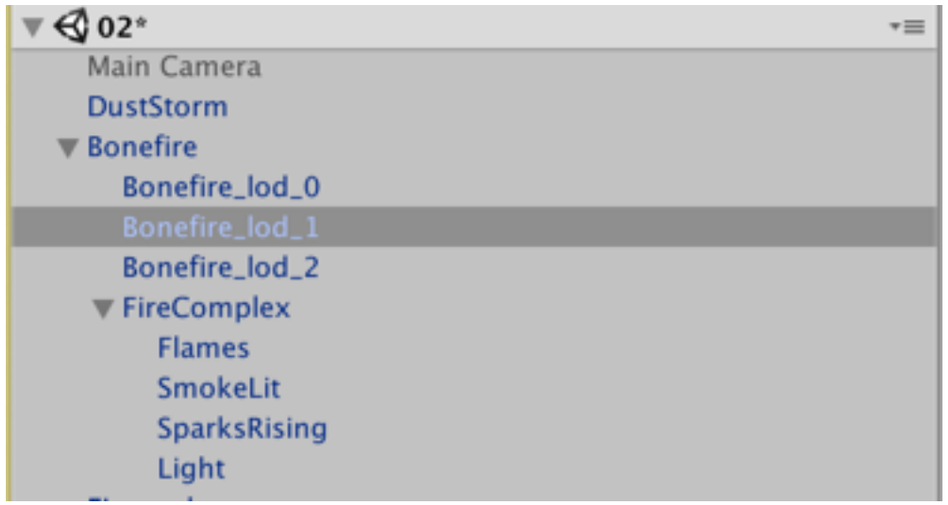

Renderer
Render Mode
Billboard
Normal Direction
1
Material
Default-Particle
Trail Material
New Material 1
Sort Mode
None
Sorting Fudge
0
Min Particle Size
0
Max Particle Size
0.5
Render Alignment
View
Pivot
X 0
Y 0
Z 0
Visualize Pivot
Masking
No Masking
Apply Active Color Space
Custom Vertex Streams
Cast Shadows
Off
Receive Shadows
Motion Vectors
Per Object Motion
Sorting Layer
Default
Order in Layer
0
Light Probes
Off
Reflection Probes
Off


Inspector
Lighting
Services
New Material 1
Shader
Particles/Additive
Tint Color
Particle Texture
None
(Texture)
Tiling
X 1
Y 1
Offset
X 0
Y 0
Select
Soft Particles Factor
1
Render Queue
From Shader
3000
Double Sided Global Illumination

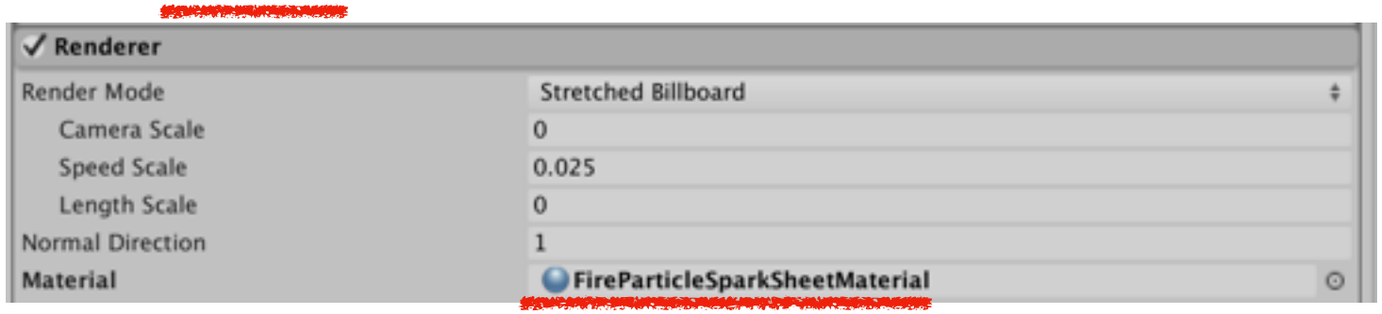
20.모닥불

https://www.youtube.com/watch?v=isd7PHwwnIs

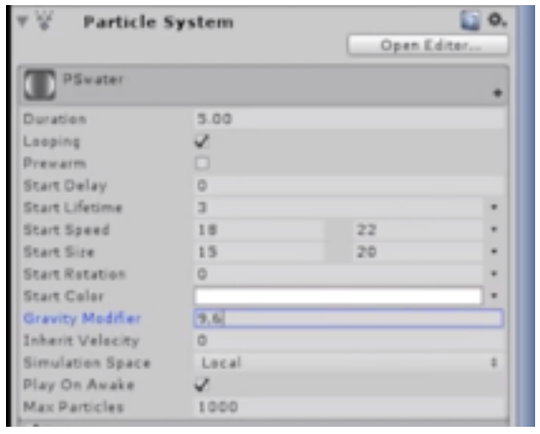
여기서 모닥불 나무 받으면 되구



이게 원래 스탠다드에셋에 있는건데, 지금 없어짐
근데 flame, smoke kit, sparks rising
: inspector ; renderer ; texture에 각각 넣어주면됨



21.폭포


Particle System
Open Editor...
PSwater
Duration 5.00
Looping
Prewarm
Start Delay 0
Start Lifetime 3
Start Speed 18 22
Start Size 15 20
Start Rotation 0
Start Color
Gravity Modifier 9.6
Inherit Velocity 0
Simulation Space Local
Play On Awake
Max Particles 1000

21.사막만들기 포토샵과　gimp로

https://www.youtube.com/watch?v=XhSp8nFLUi4&t=3s

<Gimp 2.8> download
File -> new -> w,h 1025 1025 (px)-> x,y 72000 (pix/in) color space ; grayscale ->
Filters-> render -> clouds -> solid noise -> x,y ; 5,5 -> new seed check**
Filters -> generic -> erode
Export -> name .png

<photoshop>
Import name.png
Filter -> blur -> gausiann blur 2
Image -> mode -> 16bit
Filter -> blur -> gausiann blur 2
Curve -> output 85왼쪽 키가 위에서 첫번째 점까지 오도록
Save as name. Raw->

<unity>
Edit -> project setting -> player ->(inspector) download icon - other setting - color space : linear ->
(Hierachy) create terrain -> setting terrain width, length 1000, height 600
brush -> edit texture - Add texture ->
(Inspector) terrain setting -> import name.raw -> byte order : Mac(자기 컴퓨터따라 + 포토샵에서 export 한거 따라서) -> terrain size x,y(height),z 1000, 600, 1000 (위에서 지정해 준 값대로)

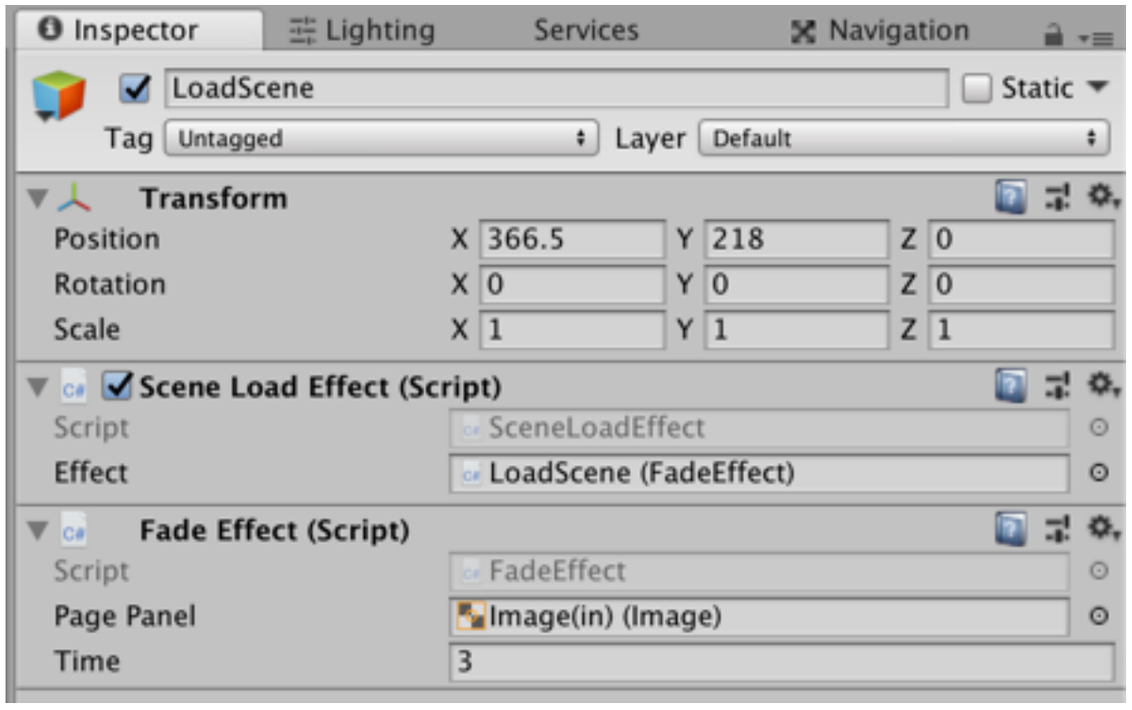
노말맵은 변환후 , 인스펙터창에서 노말맵으로 지정해줘야 쓸수있음

22. 트리거를 이용한 scene이동!

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

public class MoveScene : MonoBehaviour {

     [SerializeField] private string  loadLevel;
     private void OnTriggerEnter(Collider other)
     {
          if(other.gameObject.CompareTag("Player"))
          {
               SceneManager.LoadScene(loadLevel);
          }
     }
}
```

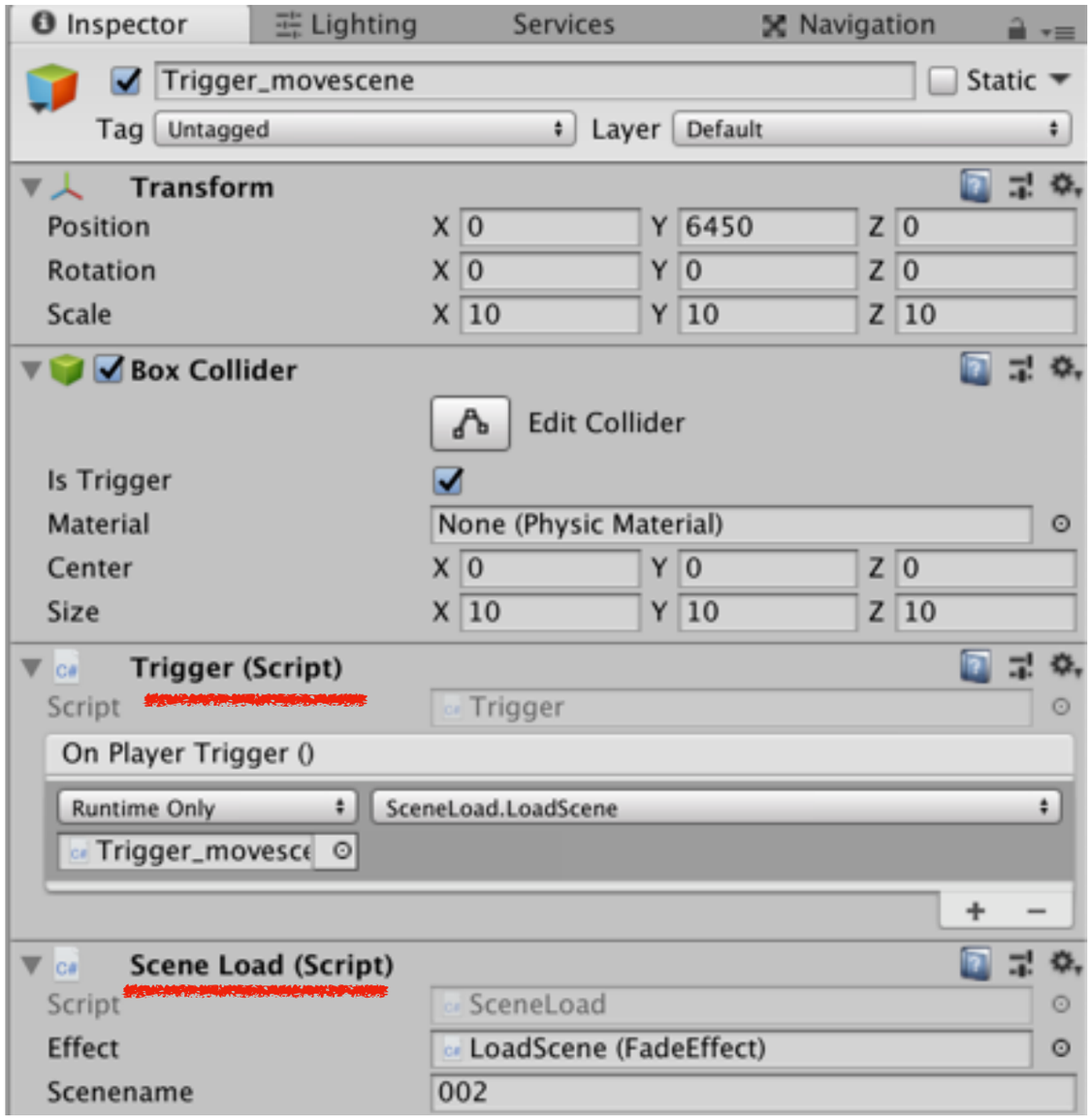
이거를 트리거 큐브에 넣어줌! 로드레벨 적어주고 / 빌드세팅에 추가 해주면 완성

22-1. 트리거를 이용한 scene이동! 다른방법(과외버전)+페이드아웃까지



이거는 이 씬에 들어올때 주는 페이드 아웃이다

22-1. 트리거를 이용한 scene이동! 다른방법(과외버전)

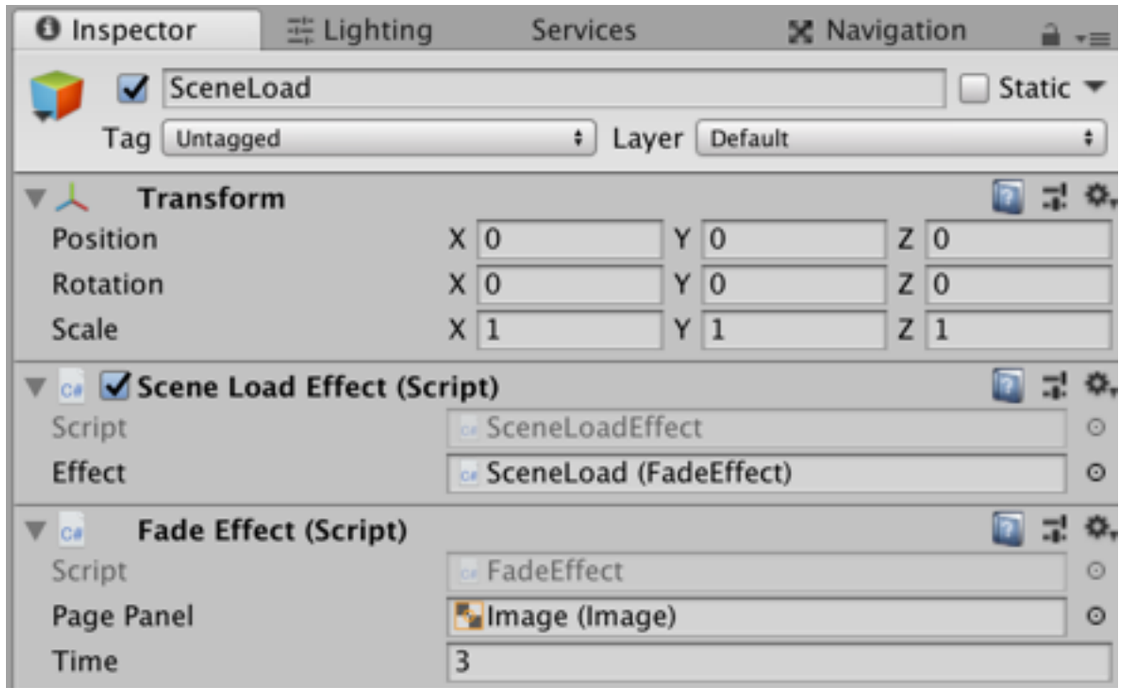



```
using System.Collections;
using System.Collections.Generic;
using UnityEngine;
using UnityEngine.Events;


public class Trigger : MonoBehaviour {

    public UnityEvent OnPlayerTrigger;
    private void OnTriggerEnter(Collider other)
    {
        if (other.transform.CompareTag("Player"))
        {
            OnPlayerTrigger.Invoke();
        }
    }

}
```

22-1. 트리거를 이용한 scene이동! 다른방법(과외버전)

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

public class SceneLoad : MonoBehaviour
{

    public FadeEffect effect;
    public string Scenename;

    public void LoadScene(string scenename)
    {
        effect.Action(false, () =>
        {
            SceneManager.LoadScene(scenename);
        });


    }

    public void LoadScene()
    {
        effect.Action(false, () =>
        {
            SceneManager.LoadScene(Scenename);
        });
    }
}
```

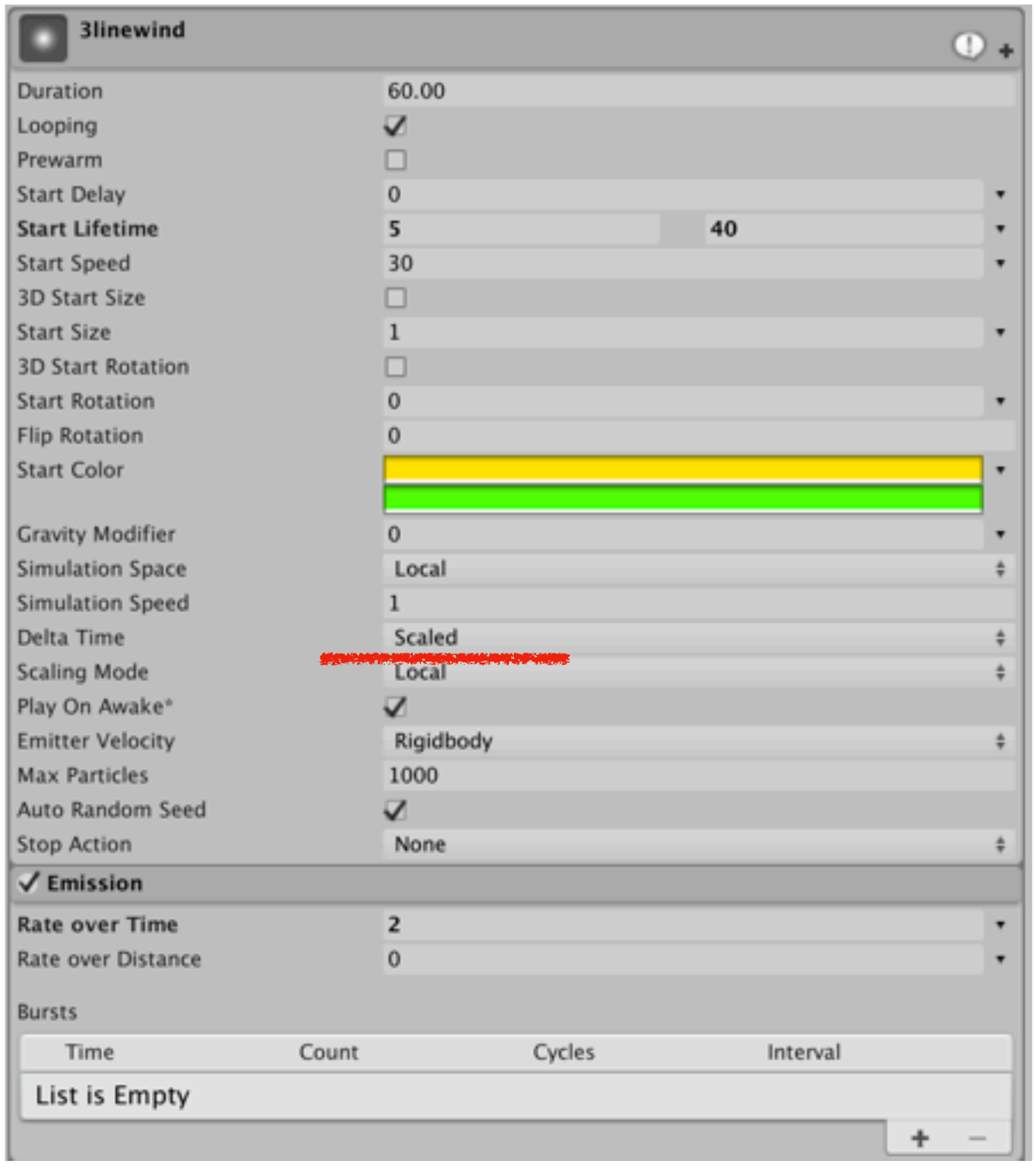
22-1. 트리거를 이용한 scene이동! 다른방법(과외버전)

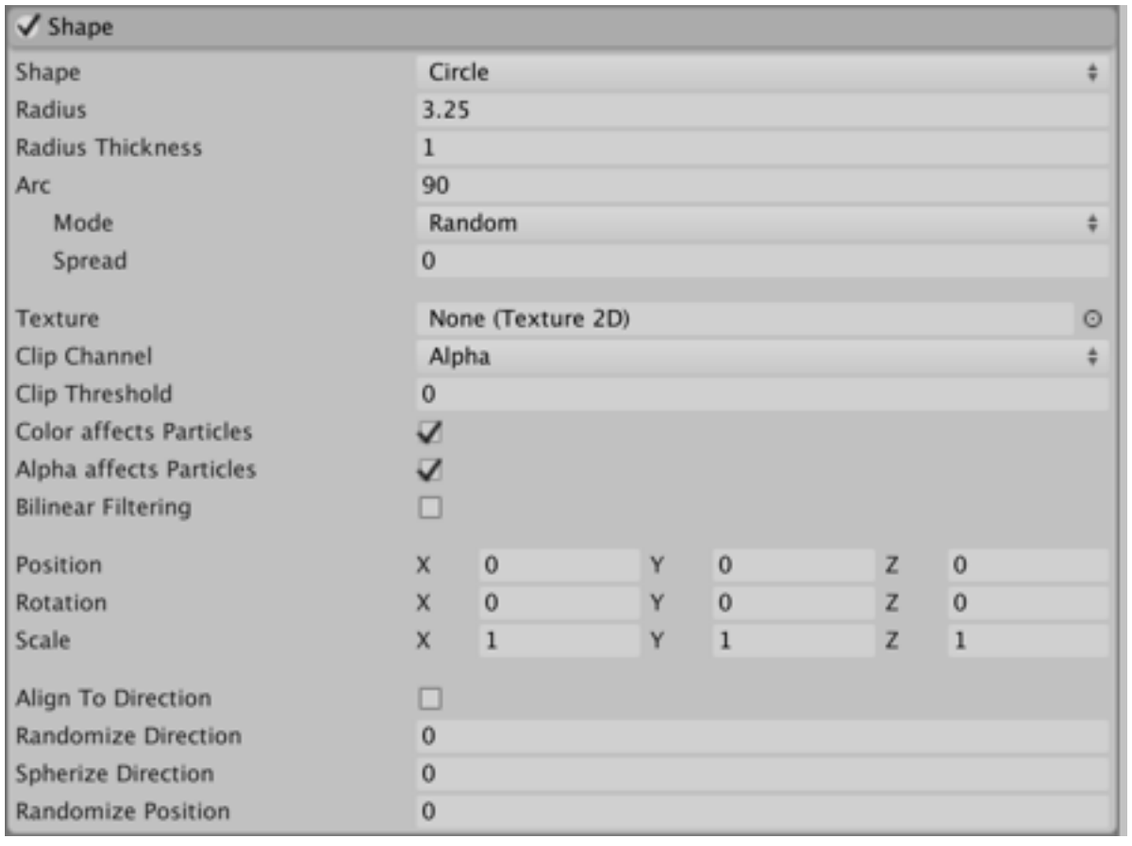


그리고 들어가는 씬에 load scene 만들어주기

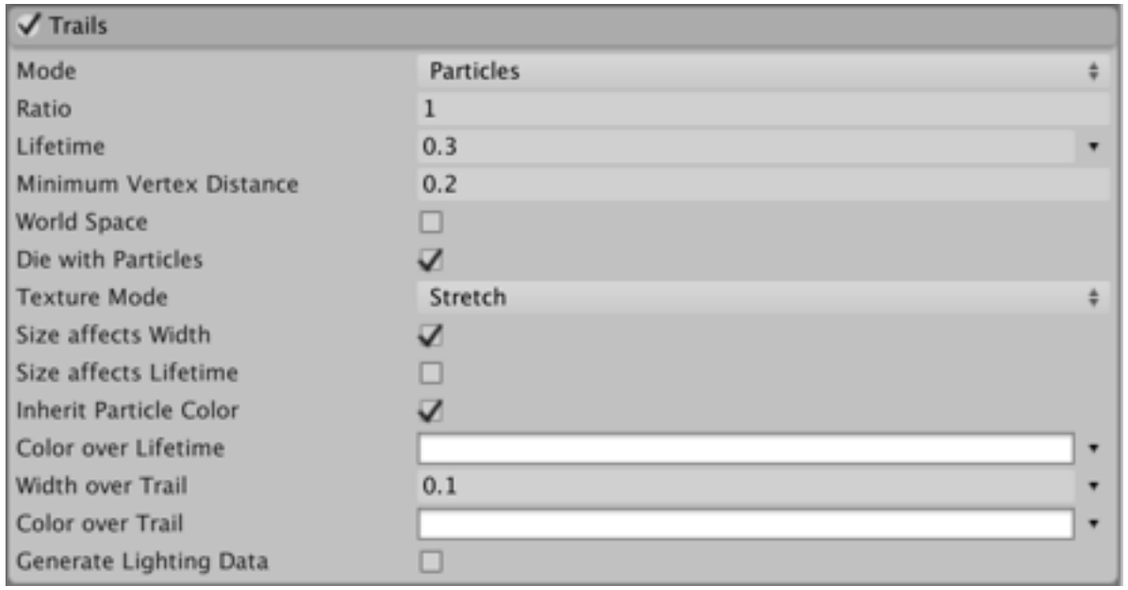
앞뒤로 붙어야 페이드 아웃효과가 난다.

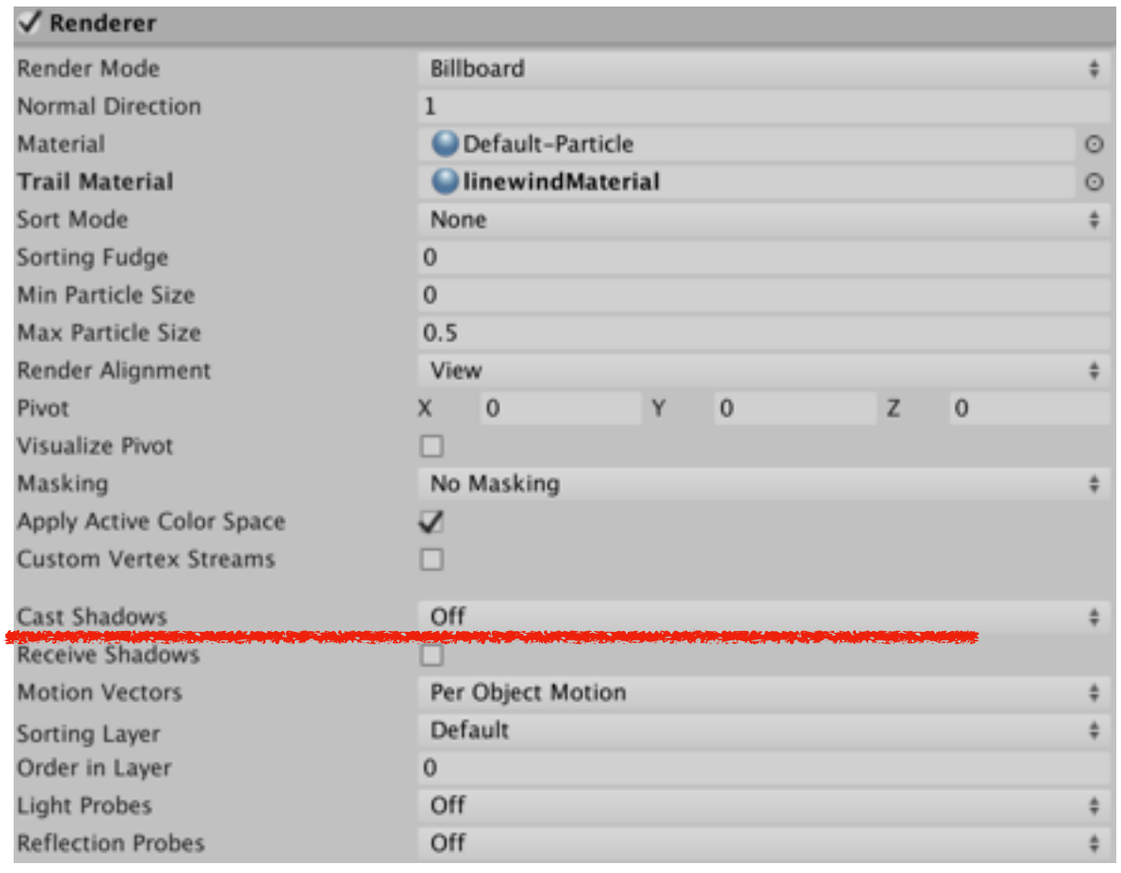
23. firework은 통과되는데 왜 선은 통과가 안될까




Shape
Shape
Circle
Radius
3.25
Radius Thickness
1
Arc
90
Mode
Random
Spread
0
Texture
None (Texture 2D)
Clip Channel
Alpha
Clip Threshold
0
Color affects Particles
Alpha affects Particles
Bilinear Filtering
Position
X 0
Y 0
Z 0
Rotation
X 0
Y 0
Z 0
Scale
X 1
Y 1
Z 1
Align To Direction
Randomize Direction
0
Spherize Direction
0
Randomize Position
0

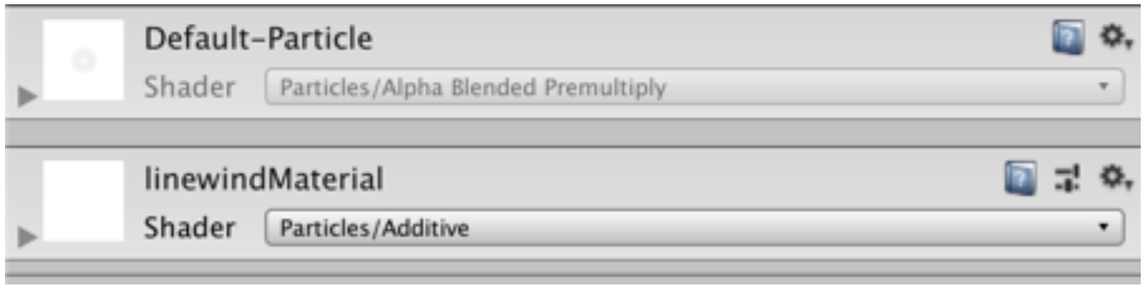
firework은 트레일 자체가 없네



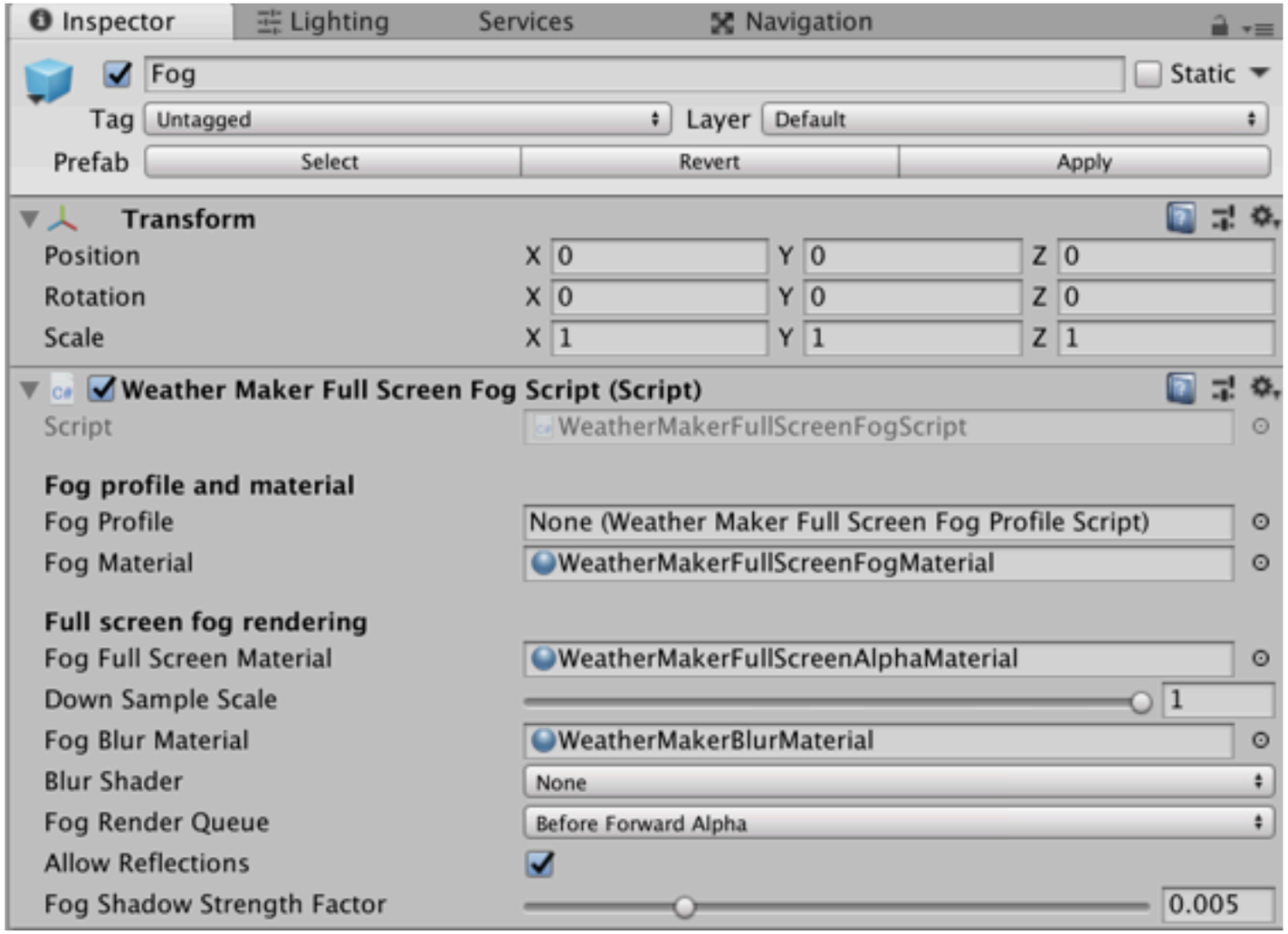


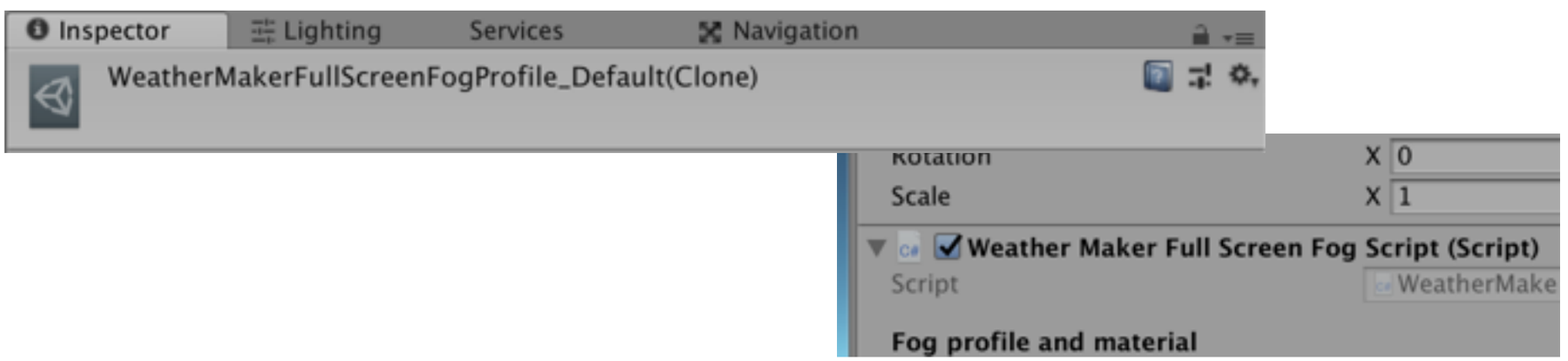
이 차이 였음!!!!

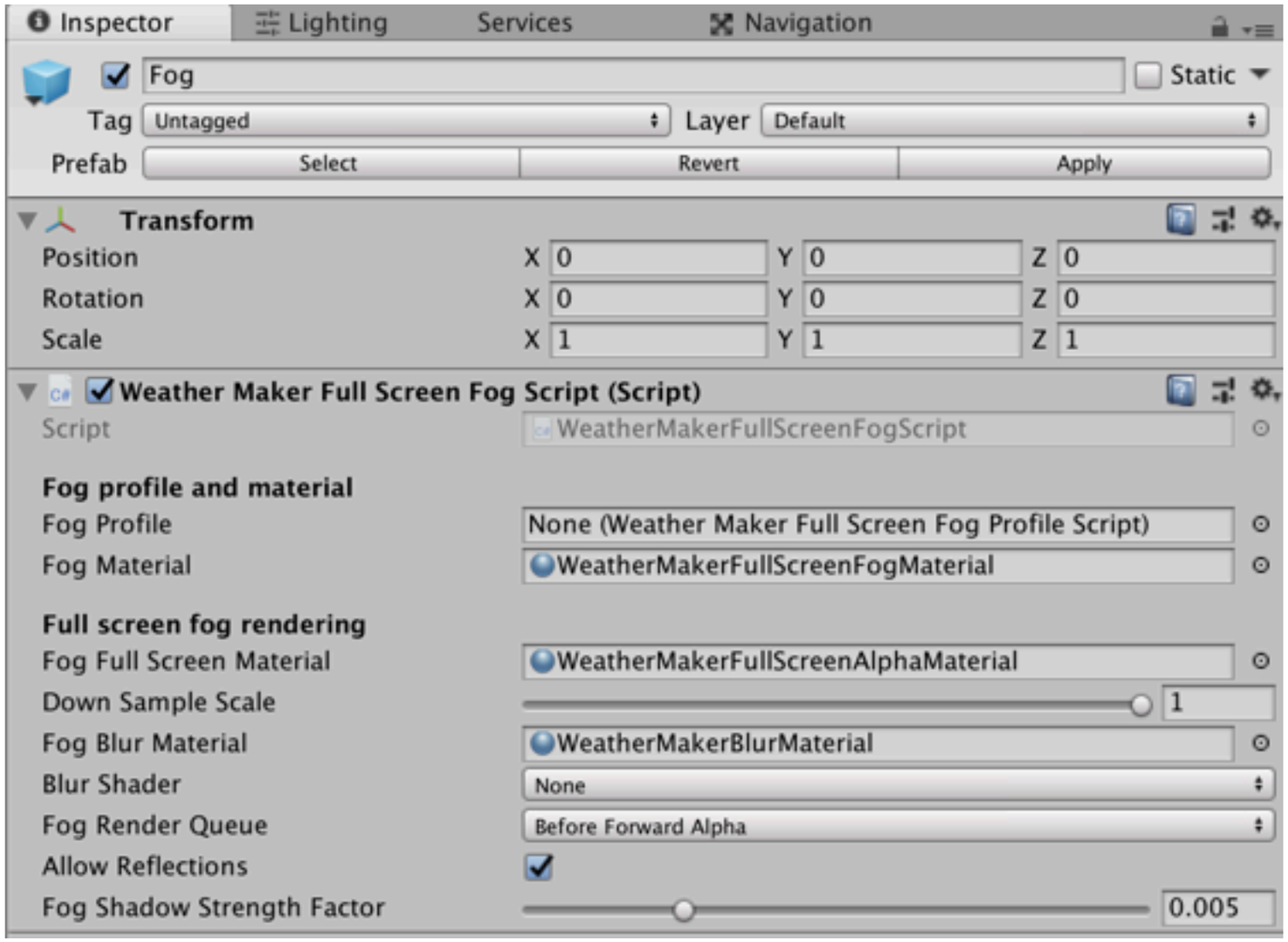
On 으로 해주면 통과됨


Default-Particle
Shader
Particles/Alpha Blended Premultiply
linewindMaterial
Shader
Particles/Additive

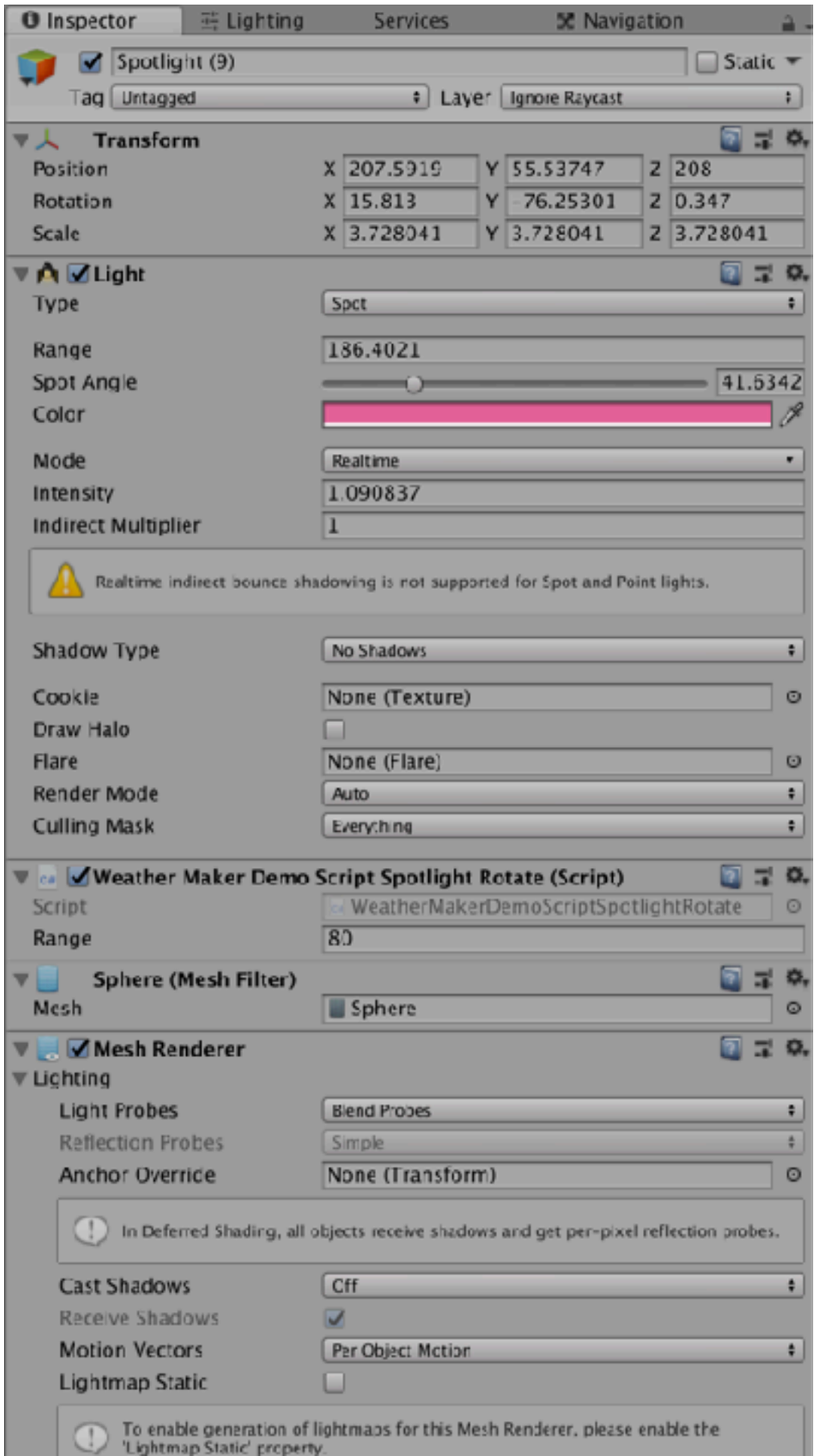
24. .....안개...시발....


Inspector
Lighting
Services
Navigation
Fog
Static
Tag
Untagged
Layer
Default
Prefab
Select
Revert
Apply
Transform
Position
X 0
Y 0
Z 0
Rotation
X 0
Y 0
Z 0
Scale
X 1
Y 1
Z 1
Weather Maker Full Screen Fog Script (Script)
Script
WeatherMakerFullScreenFogScript
Fog profile and material
Fog Profile
None (Weather Maker Full Screen Fog Profile Script)
Fog Material
WeatherMakerFullScreenFogMaterial
Full screen fog rendering
Fog Full Screen Material
WeatherMakerFullScreenAlphaMaterial
Down Sample Scale
1
Fog Blur Material
WeatherMakerBlurMaterial
Blur Shader
None
Fog Render Queue
Before Forward Alpha
Allow Reflections
Fog Shadow Strength Factor
0.005


Inspector
Lighting
Services
Navigation
WeatherMakerFullScreenFogProfile_Default(Clone)
Rotation
X 0
Scale
X 1
Weather Maker Full Screen Fog Script (Script)
Script
WeatherMake
Fog profile and material


Inspector
Lighting
Services
Navigation
Fog
Static
Tag
Untagged
Layer
Default
Prefab
Select
Revert
Apply
Transform
Position
X 0
Y 0
Z 0
Rotation
X 0
Y 0
Z 0
Scale
X 1
Y 1
Z 1
Weather Maker Full Screen Fog Script (Script)
Script
WeatherMakerFullScreenFogScript
Fog profile and material
Fog Profile
None (Weather Maker Full Screen Fog Profile Script)
Fog Material
WeatherMakerFullScreenFogMaterial
Full screen fog rendering
Fog Full Screen Material
WeatherMakerFullScreenAlphaMaterial
Down Sample Scale
1
Fog Blur Material
WeatherMakerBlurMaterial
Blur Shader
None
Fog Render Queue
Before Forward Alpha
Allow Reflections
Fog Shadow Strength Factor
0.005

24. 서치라이트 만들기

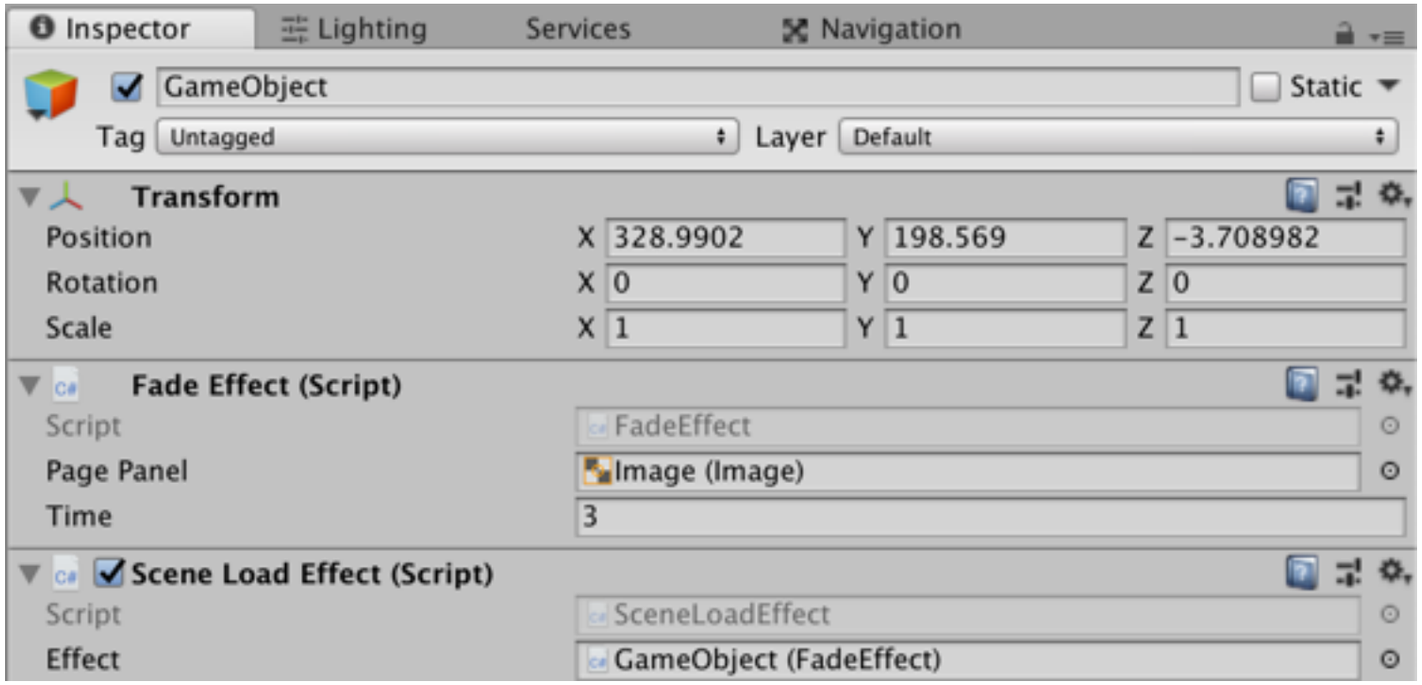

Inspector
Lighting
Services
Navigation
Spotlight (9)
Static
Tag
Untagged
Layer
Ignore Raycast
Transform
Position
X 207.5919
Y 55.53747
Z 208
Rotation
X 15.813
Y -76.25301
Z 0.347
Scale
X 3.728041
Y 3.728041
Z 3.728041
Light
Type
Spot
Range
186.4021
Spot Angle
41.6342
Color
Mode
Realtime
Intensity
1.090837
Indirect Multiplier
1
Realtime indirect bounce shadowing is not supported for Spot and Point lights.
Shadow Type
No Shadows
Cookie
None (Texture)
Draw Halo
Flare
None (Flare)
Render Mode
Auto
Culling Mask
Everything
Weather Maker Demo Script Spotlight Rotate (Script)
Script
WeatherMakerDemoScriptSpotlightRotate
Range
80
Sphere (Mesh Filter)
Mesh
Sphere
Mesh Renderer
Lighting
Light Probes
Blend Probes
Reflection Probes
Simple
Anchor Override
None (Transform)
In Deferred Shading, all objects receive shadows and get per-pixel reflection probes.
Cast Shadows
Off
Receive Shadows
Motion Vectors
Per Object Motion
Lightmap Static
To enable generation of lightmaps for this Mesh Renderer, please enable the 'Lightmap Static' property.

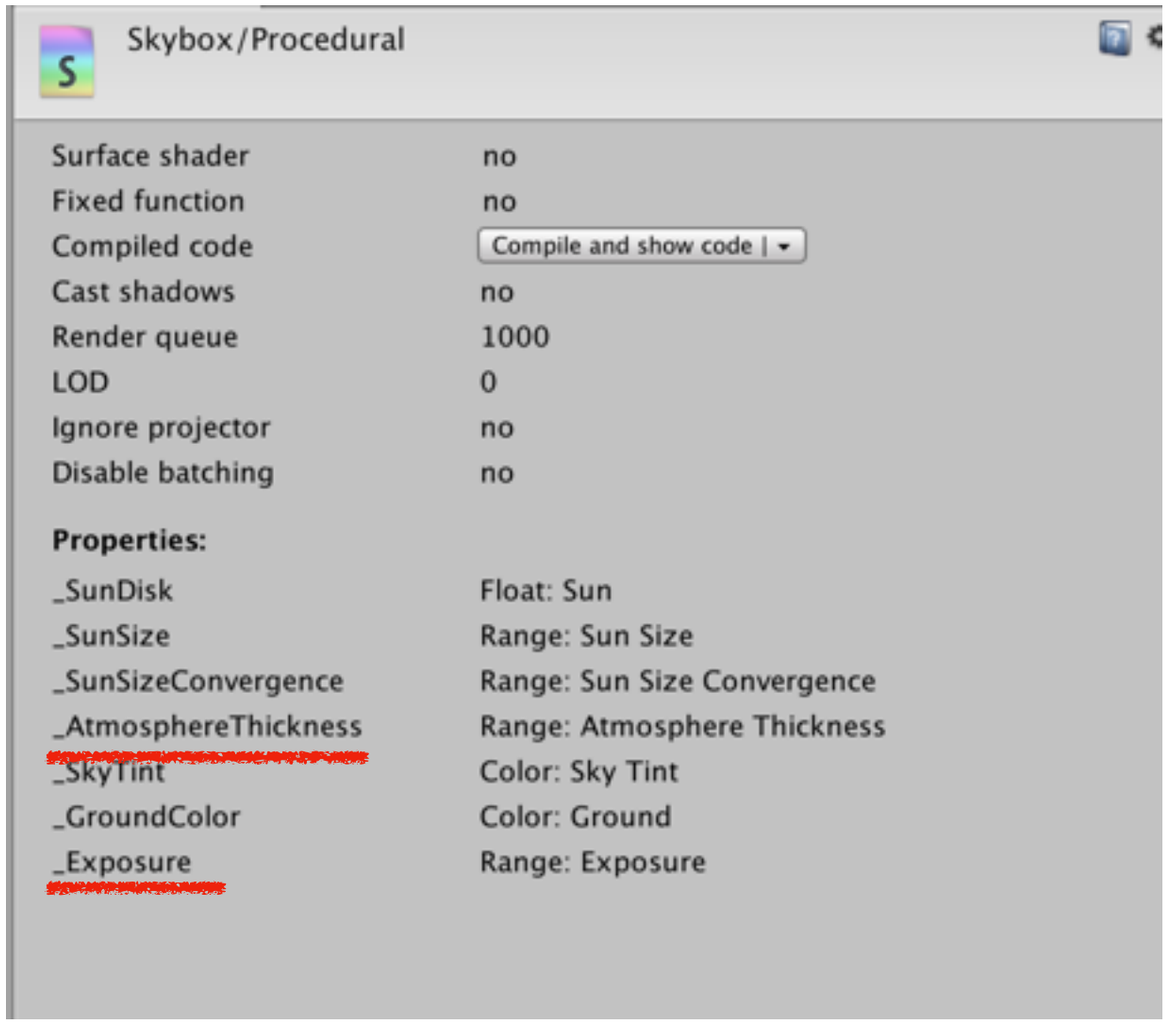
두번째 과외

27.skybox exposure 값 조정하기

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

public class skyboxController : MonoBehaviour {

    public float exposure;


    // Use this for initialization
    void Start () {

    }

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

       RenderSettings.skybox.SetFloat("_HdrExposure", exposure);


    }
}
```

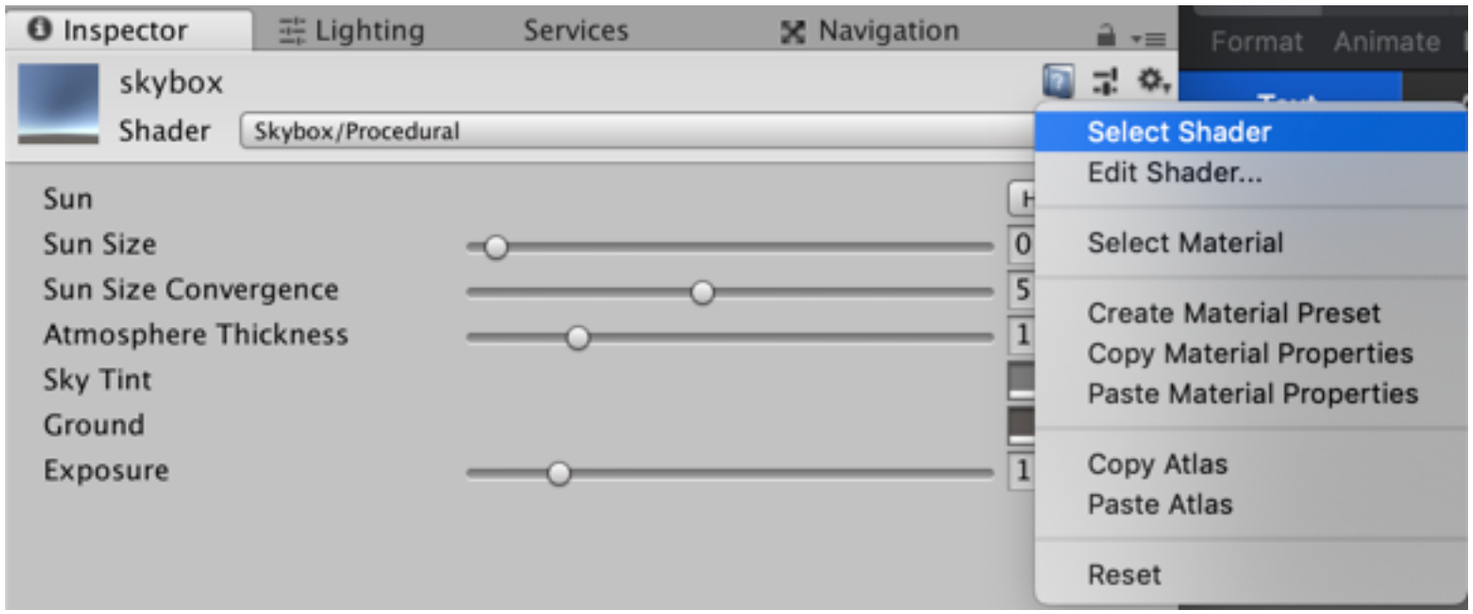
쉐이더 셋팅값에서 보고 똑같이 해줘야돼

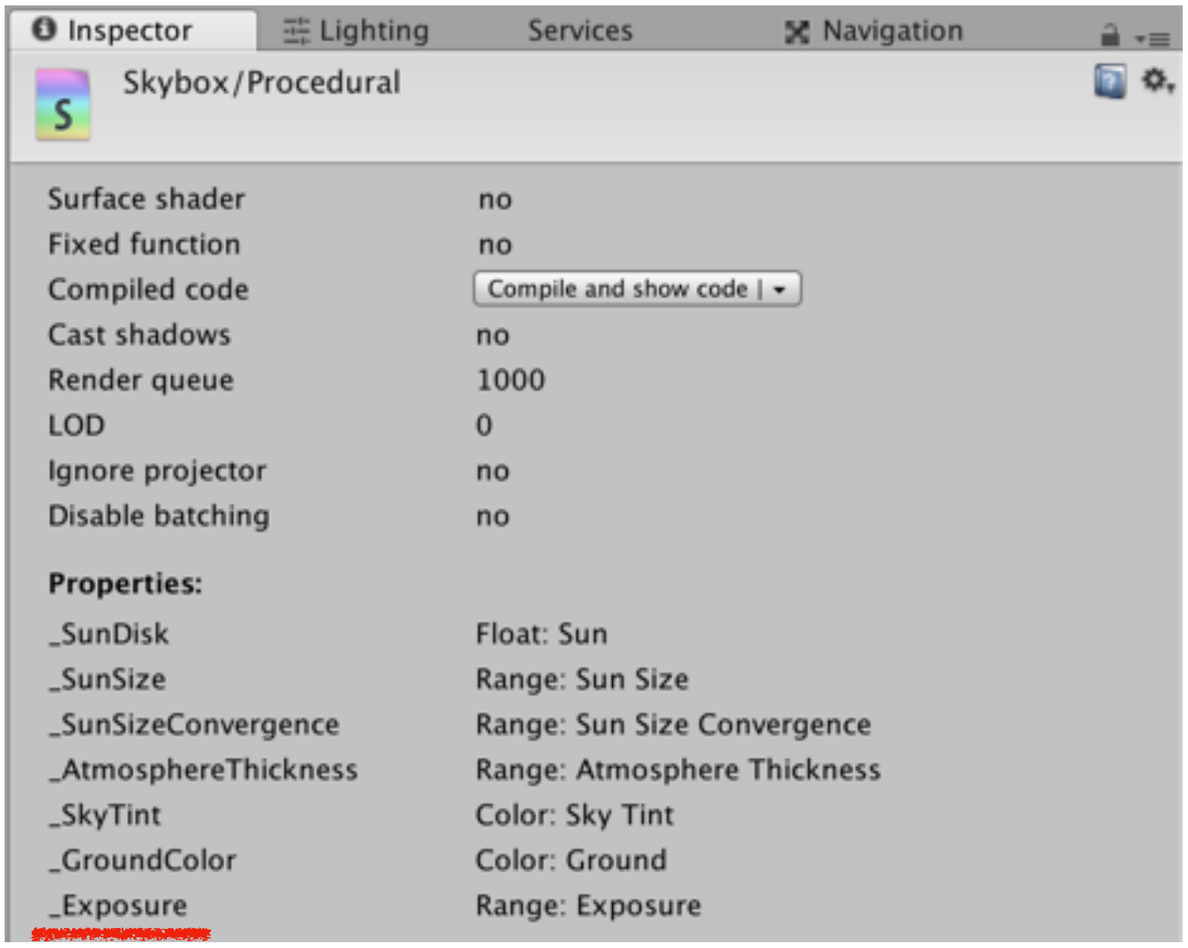

Inspector
Lighting
Services
Navigation
GameObject
Static
Tag
Untagged
Layer
Default
Transform
Position
X 328.9902
Y 198.569
Z -3.708982
Rotation
X 0
Y 0
Z 0
Scale
X 1
Y 1
Z 1
Fade Effect (Script)
Script
FadeEffect
Page Panel
Image (Image)
Time
3
Scene Load Effect (Script)
Script
SceneLoadEffect
Effect
GameObject (FadeEffect)


Skybox/Procedural
Surface shader
no
Fixed function
no
Compiled code
Compile and show code
Cast shadows
no
Render queue
1000
LOD
0
Ignore projector
no
Disable batching
no
Properties:
_SunDisk
Float: Sun
_SunSize
Range: Sun Size
_SunSizeConvergence
Range: Sun Size Convergence
_AtmosphereThickness
Range: Atmosphere Thickness
_SkyTint
Color: Sky Tint
_GroundColor
Color: Ground
_Exposure
Range: Exposure

27.skybox_exposure 값 조정하기

스카이박스 만들고 라이팅 스카이박스에 넣고,
하이라키에 엠프티만들고 만든 씨샵넣어주고, 애니메이션 잡기……!
헹헹헹**


Inspector
Lighting
Services
Navigation
Format
Animate
skybox
Shader
Skybox/Procedural
Sun
Sun Size
Sun Size Convergence
Atmosphere Thickness
Sky Tint
Ground
Exposure
Select Shader
Edit Shader...
Select Material
Create Material Preset
Copy Material Properties
Paste Material Properties
Copy Atlas
Paste Atlas
Reset

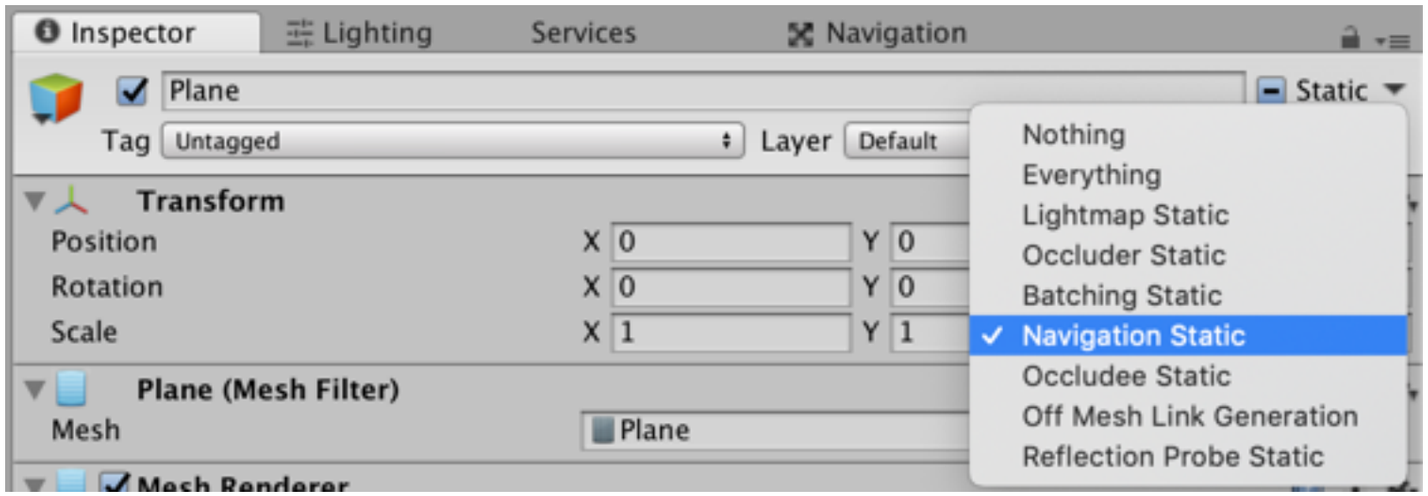

Inspector
Lighting
Services
Navigation
Skybox/Procedural
Surface shader
no
Fixed function
no
Compiled code
Compile and show code
Cast shadows
no
Render queue
1000
LOD
0
Ignore projector
no
Disable batching
no
Properties:
_SunDisk
Float: Sun
_SunSize
Range: Sun Size
_SunSizeConvergence
Range: Sun Size Convergence
_AtmosphereThickness
Range: Atmosphere Thickness
_SkyTint
Color: Sky Tint
_GroundColor
Color: Ground
_Exposure
Range: Exposure

28. 움직이는 물체 nav mesh renderer 적용하기 + 9번코드 수정

```
using System.Collections;
using UnityEngine;
using UnityEngine.AI;

public class MoveRandomly : MonoBehaviour {


    NavMeshAgent navMeshAgent;
    NavMeshPath path;
    public float timeForNewPath;
    bool inCoRoutine;
    Vector3 target;
    bool validPath;

    // Use this for initialization
    void Start () {

        navMeshAgent = GetComponent<NavMeshAgent>();
        path = new NavMeshPath();

       }

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

        if (!inCoRoutine)
            StartCoroutine(DoSomething());
       }

    Vector3 getNewRandomPosition()
    {
        float x = Random.Range(-20, 20);
        float y = Random.Range(-20, 20);

        Vector3 pos = new Vector3(x, 0, y);
        return pos;
    }

    IEnumerator DoSomething ()
    {
        inCoRoutine = true;
        yield return new WaitForSeconds(timeForNewPath);
        GetNewPath();
        validPath = navMeshAgent.CalculatePath(target, path);
        if (!validPath) Debug.Log("Found an invalid Path");

        while (!validPath)
        {
            yield return new WaitForSeconds(0.01f);
            GetNewPath();
            validPath = navMeshAgent.CalculatePath(target, path);
        }
        inCoRoutine = false;
    }

    void GetNewPath()
    {
        target = getNewRandomPosition();
        navMeshAgent.SetDestination(target);
    }
}
```

```
using System.Collections;
using UnityEngine;
using UnityEngine.AI;

public class MoveRandomly : MonoBehaviour {


    NavMeshAgent navMeshAgent;
    NavMeshPath path;
    public float timeForNewPath;
    bool inCoRoutine;
    Vector3 target;
    bool validPath;

    // Use this for initialization
    void Start () {

        navMeshAgent = GetComponent<NavMeshAgent>();
        path = new NavMeshPath();

       }

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

        if (!inCoRoutine)
            StartCoroutine(DoSomething());
       }

    Vector3 getNewRandomPosition()
    {
        float x = Random.Range(-20, 20);
        float y = Random.Range(-20, 20);

        Vector3 pos = new Vector3(x, 0, y);
        return transform.position+pos;
    }

    IEnumerator DoSomething ()
    {
        inCoRoutine = true;
        yield return new WaitForSeconds(timeForNewPath);
        GetNewPath();
        validPath = navMeshAgent.CalculatePath(target, path);
        if (!validPath) Debug.Log("Found an invalid Path");

        while (!validPath)
        {
            yield return new WaitForSeconds(0.01f);
            GetNewPath();
            validPath = navMeshAgent.CalculatePath(target, path);
        }
        inCoRoutine = false;
    }

    void GetNewPath()
    {
        target = getNewRandomPosition();
        navMeshAgent.SetDestination(target);
    }
}
```

28. 움직이는 물체 nav mesh renderer 적용하기 + 9번코드 수정

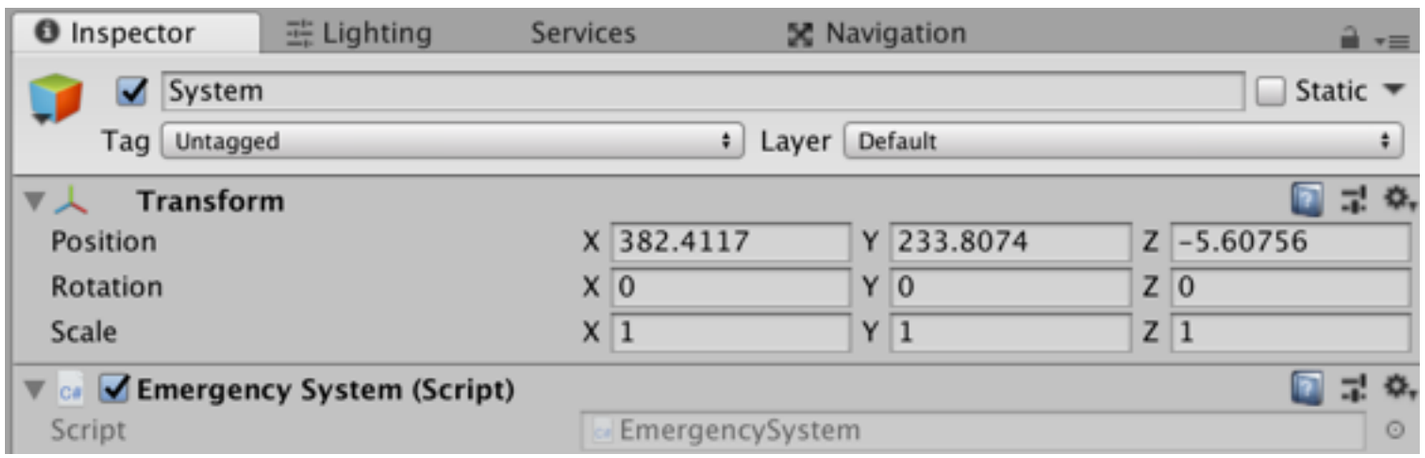


중요한거는 navigation bake할 땅에 navigation static이 다 설정 되어 있어야해

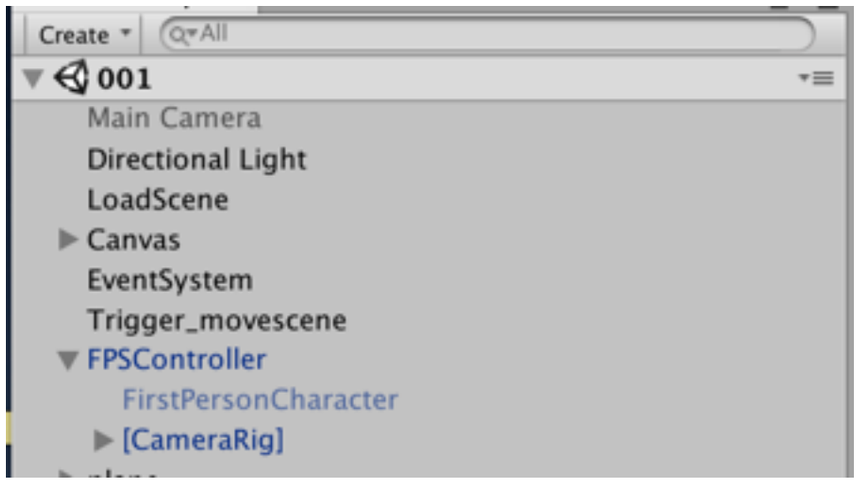
30. 시스템강제종료 버튼 만들기

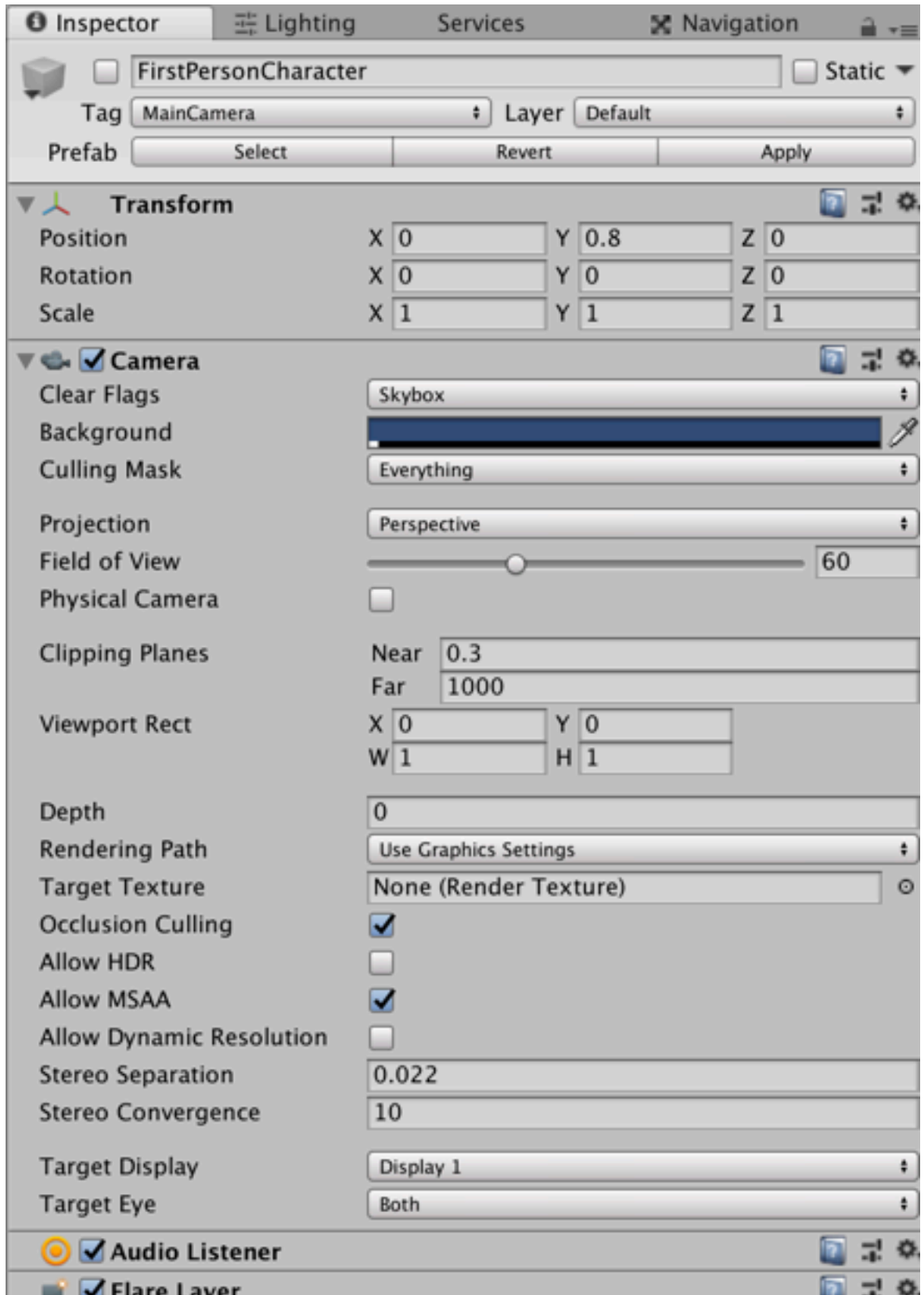
```
using System.Collections;
using System.Collections.Generic;
using UnityEngine;
using UnityEngine.SceneManagement;

public class EmergencySystem : MonoBehaviour {

     // Use this for initialization
     void Start () {

        DontDestroyOnLoad(gameObject);

     }

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

        if(Input.GetKeyDown(KeyCode.Q))
        {
            SceneManager.LoadScene("01");
        }

     }
}
```

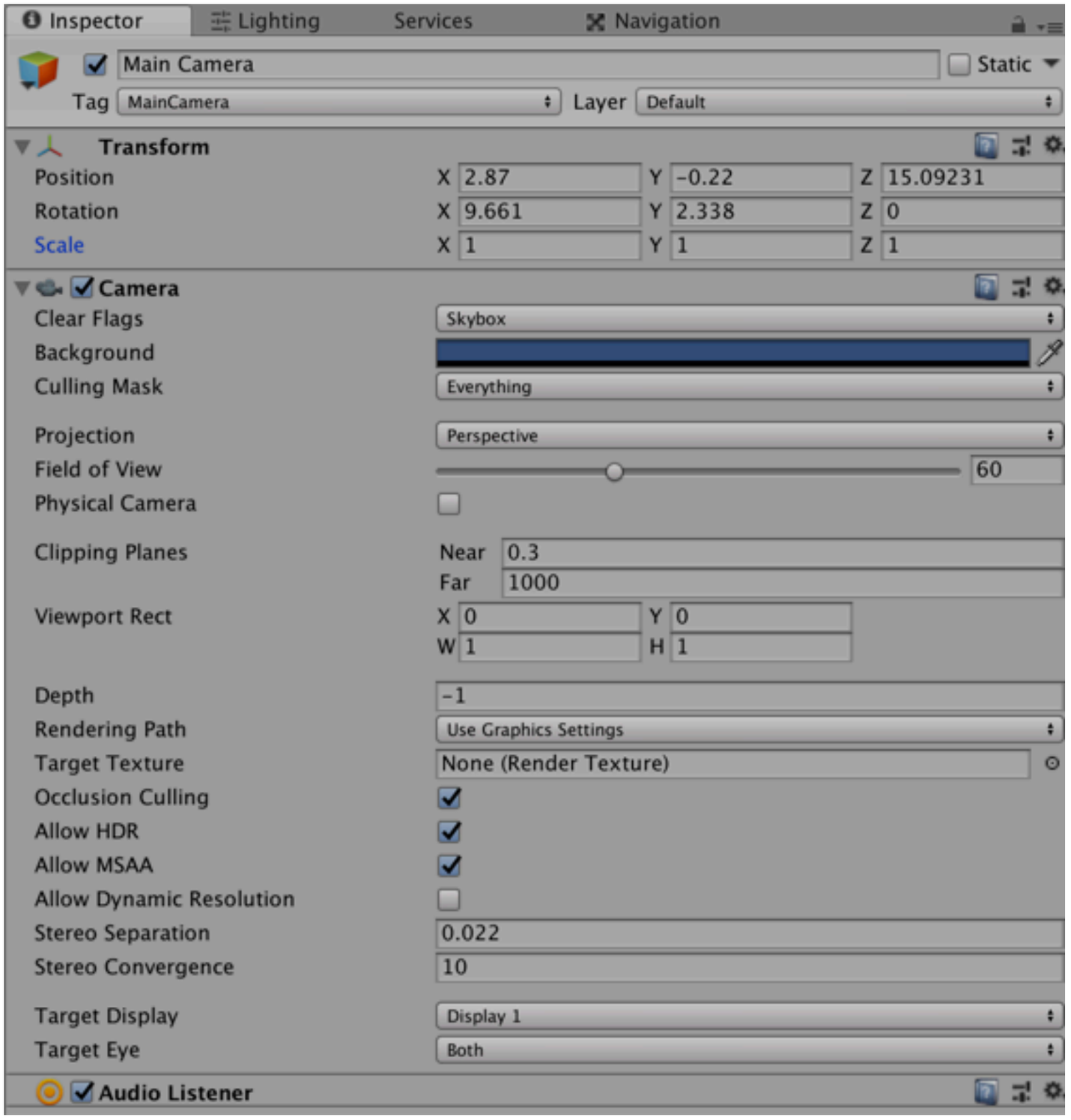
첫번째 씬에 게임오브젝트 만들고, c#넣어준다

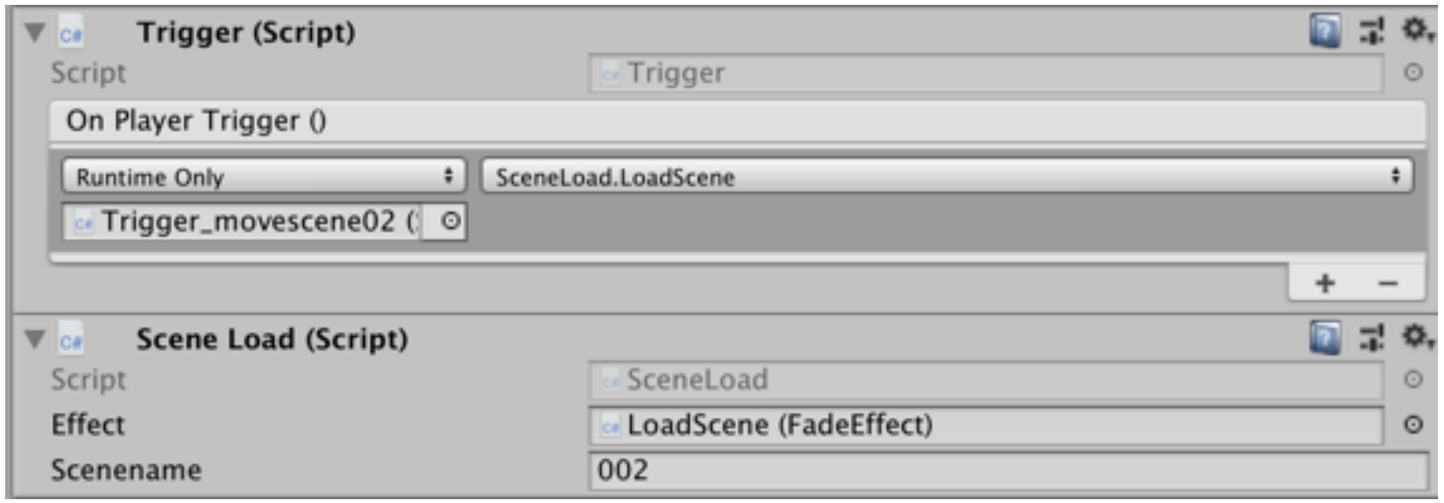


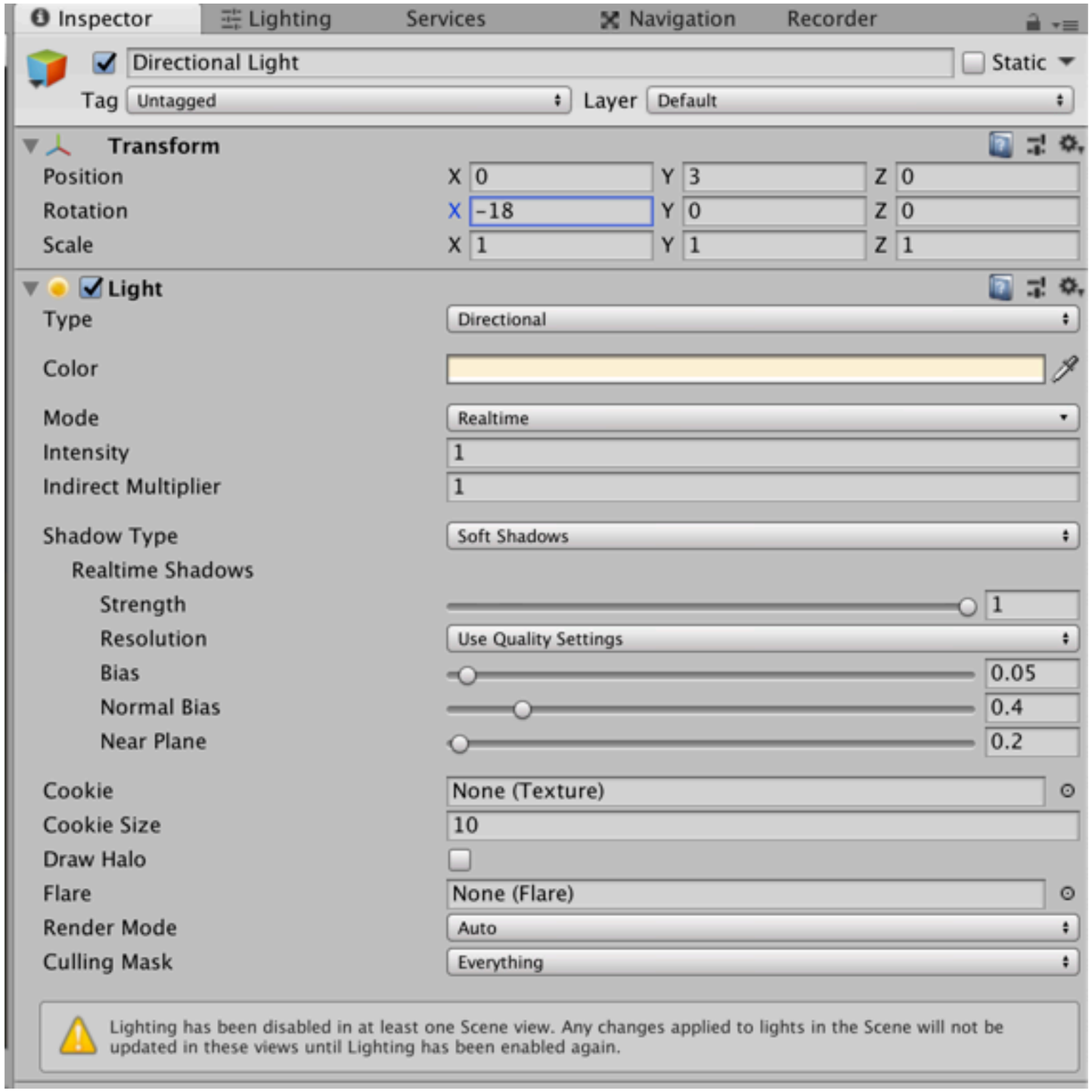
30. Vr setting





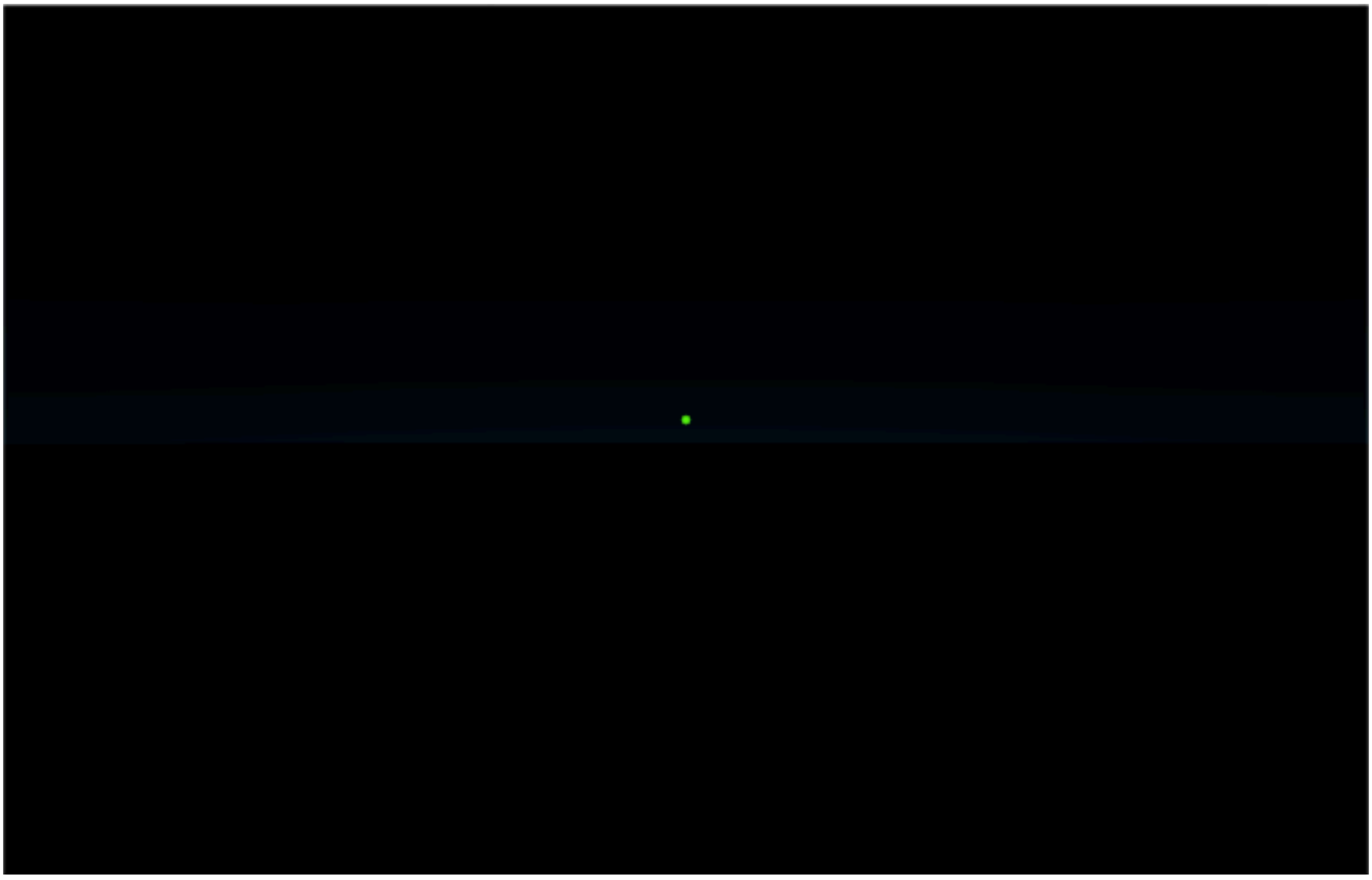

Inspector
Lighting
Services
Navigation
Main Camera
Static
Tag
MainCamera
Layer
Default
Transform
Position
X 2.87
Y -0.22
Z 15.09231
Rotation
X 9.661
Y 2.338
Z 0
Scale
X 1
Y 1
Z 1
Camera
Clear Flags
Skybox
Background
Culling Mask
Everything
Projection
Perspective
Field of View
60
Physical Camera
Clipping Planes
Near 0.3
Far 1000
Viewport Rect
X 0
Y 0
W 1
H 1
Depth
-1
Rendering Path
Use Graphics Settings
Target Texture
None (Render Texture)
Occlusion Culling
Allow HDR
Allow MSAA
Allow Dynamic Resolution
Stereo Separation
0.022
Stereo Convergence
10
Target Display
Display 1
Target Eye
Both
Audio Listener

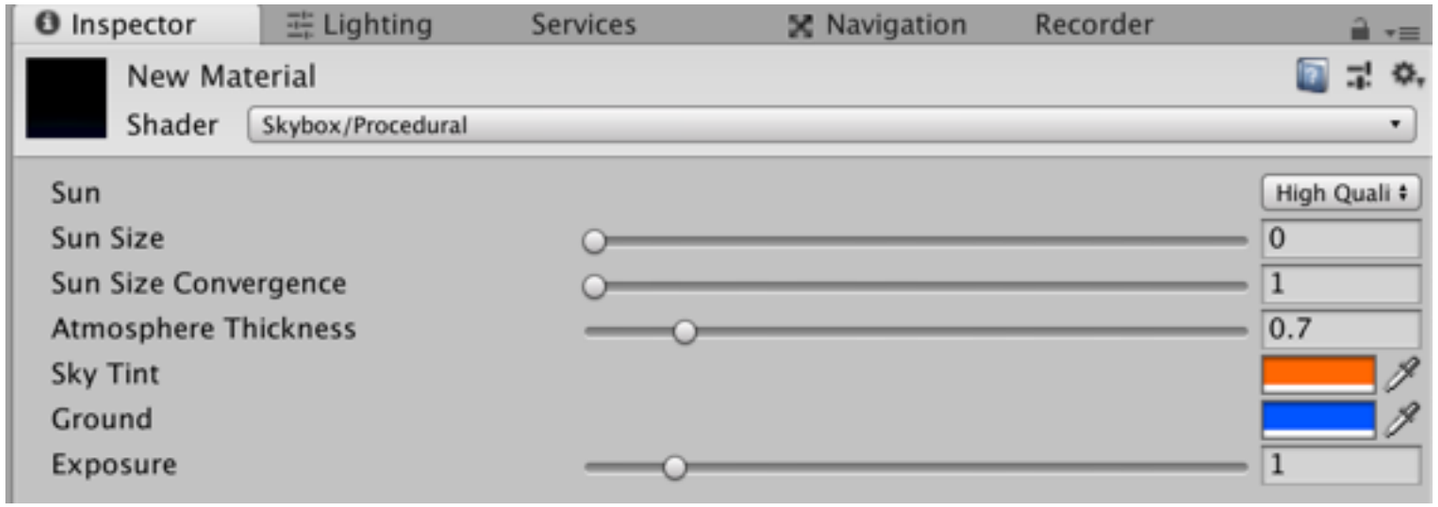

Trigger (Script)
Script
Trigger
On Player Trigger ()
Runtime Only
SceneLoad.LoadScene
Trigger_movescene02 (
Scene Load (Script)
Script
SceneLoad
Effect
LoadScene (FadeEffect)
Scenename
002


Inspector
Lighting
Services
Navigation
Recorder
Directional Light
Static
Tag
Untagged
Layer
Default
Transform
Position
X 0
Y 3
Z 0
Rotation
X -18
Y 0
Z 0
Scale
X 1
Y 1
Z 1
Light
Type
Directional
Color
Mode
Realtime
Intensity
1
Indirect Multiplier
1
Shadow Type
Soft Shadows
Realtime Shadows
Strength
1
Resolution
Use Quality Settings
Bias
0.05
Normal Bias
0.4
Near Plane
0.2
Cookie
None (Texture)
Cookie Size
10
Draw Halo
Flare
None (Flare)
Render Mode
Auto
Culling Mask
Everything
Lighting has been disabled in at least one Scene view. Any changes applied to lights in the Scene will not be updated in these views until Lighting has been enabled again.

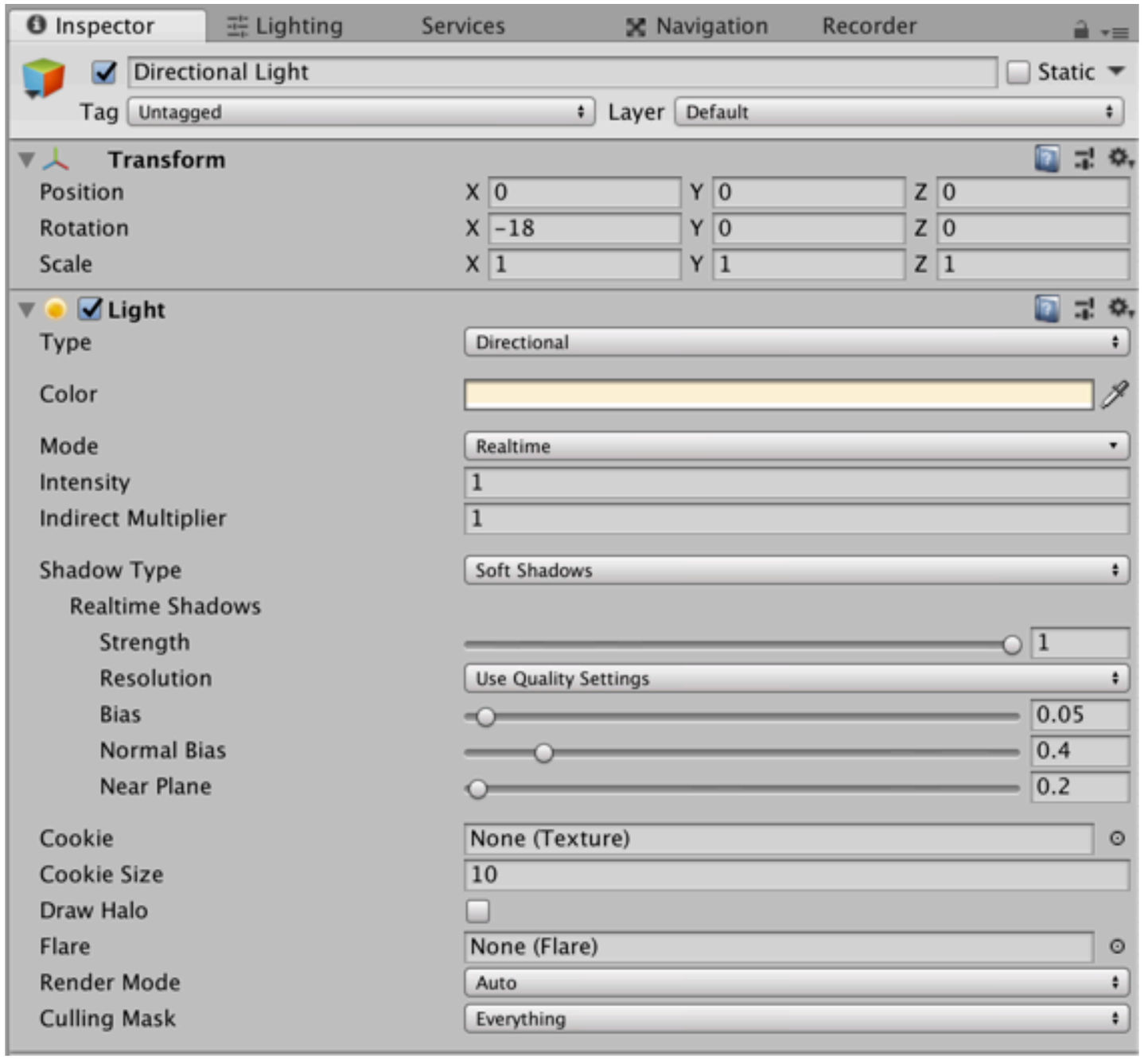
31. Skybox setting values

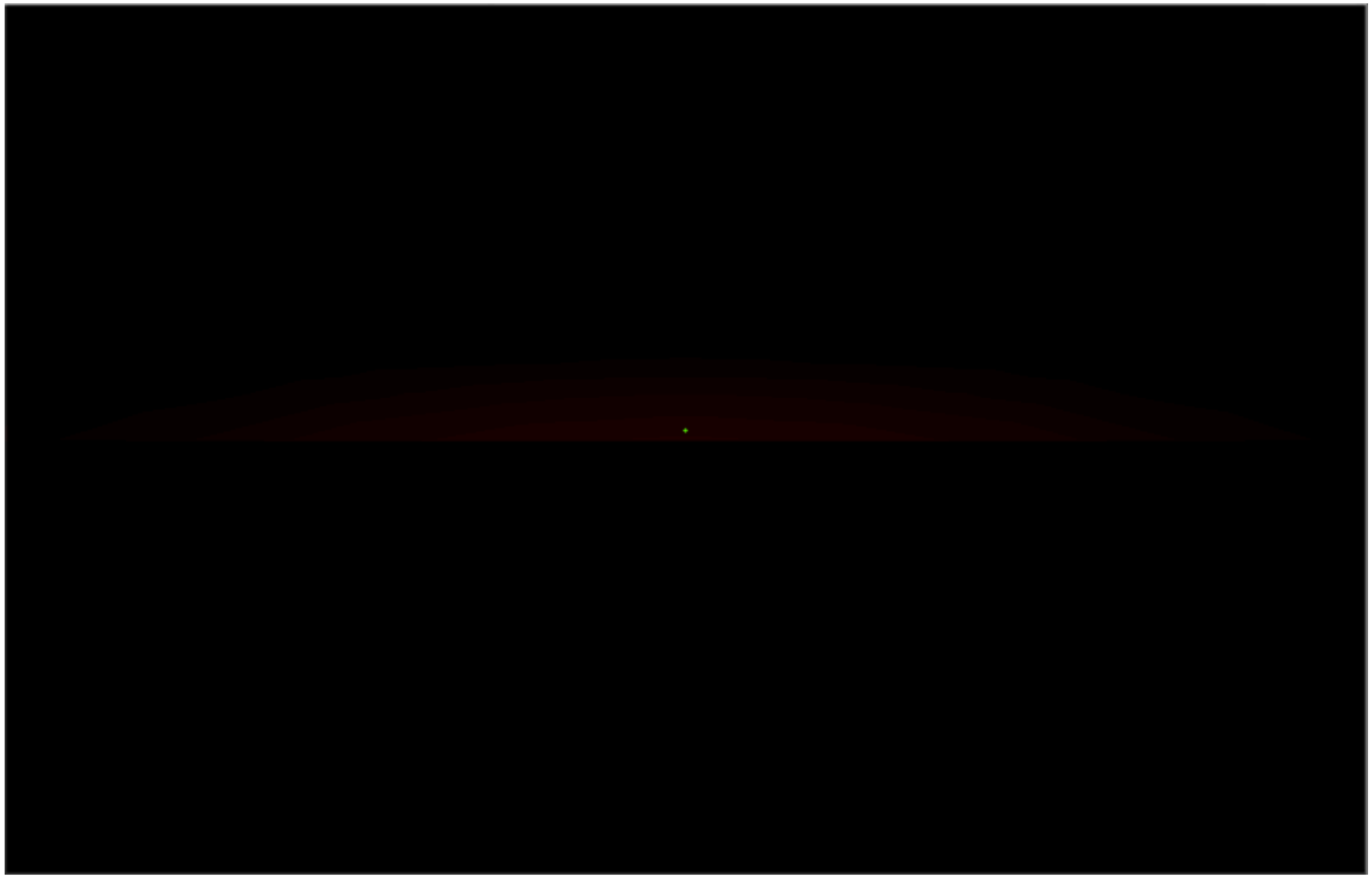
1





FF6700
0055FF





Inspector | Lighting | Services | Navigation | Recorder

Directional Light — Static

Tag: Untagged — Layer: Default

Transform

	X	Y	Z
Position	0	0	0
Rotation	-30	-180	0
Scale	1	1	1

Light

Type: Directional

Color: **FFF4D6**

Mode: Realtime

Intensity: 0

Indirect Multiplier: 1

Shadow Type: Soft Shadows

Realtime Shadows

- Strength: 1
- Resolution: Use Quality Settings
- Bias: 0.05
- Normal Bias: 0.4
- Near Plane: 0.2

Cookie: None (Texture)

Cookie Size: 10

Draw Halo: ☐

Flare: None (Flare)

Render Mode: Auto

Culling Mask: Everything

Inspector | Lighting | Services | Navigation | Recorder

lastSkybox

Shader: Skybox/Procedural

Sun: High Quali

Sun Size: 0.057

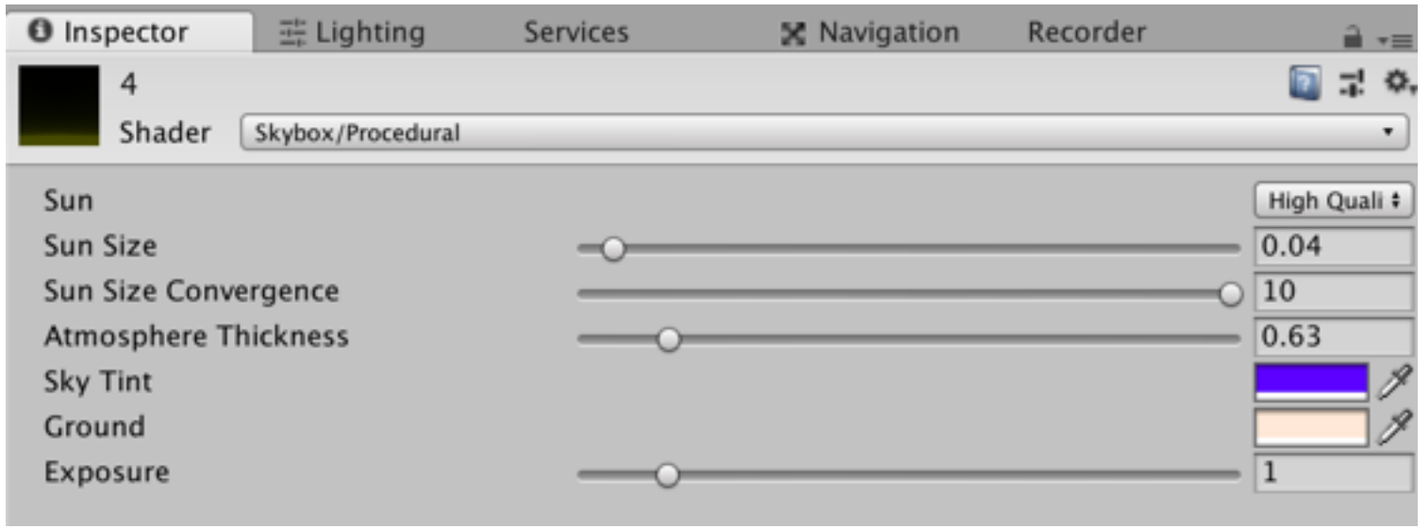
Sun Size Convergence: 5

Atmosphere Thickness: 0.7

Sky Tint

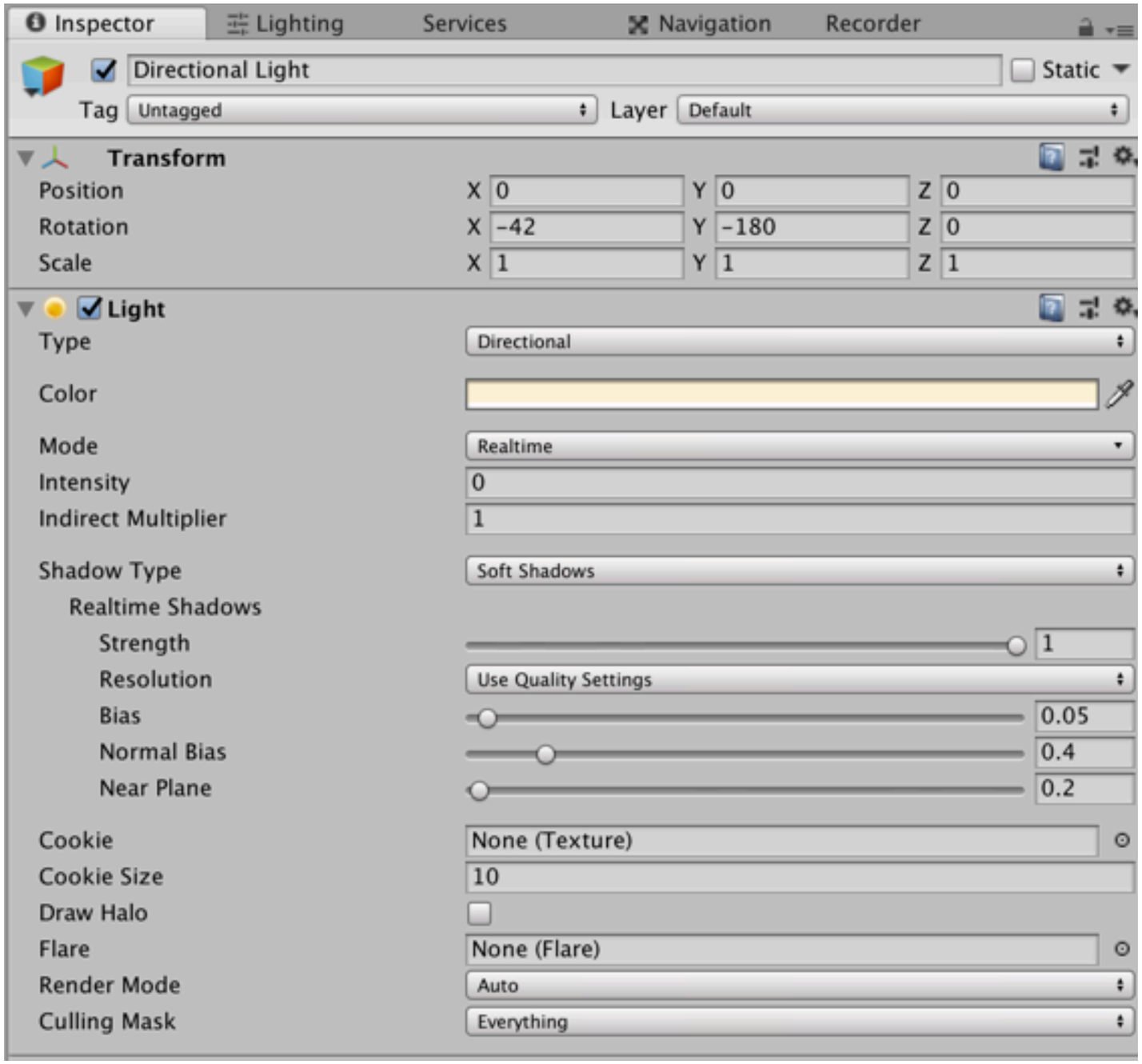
Ground

Exposure: 1

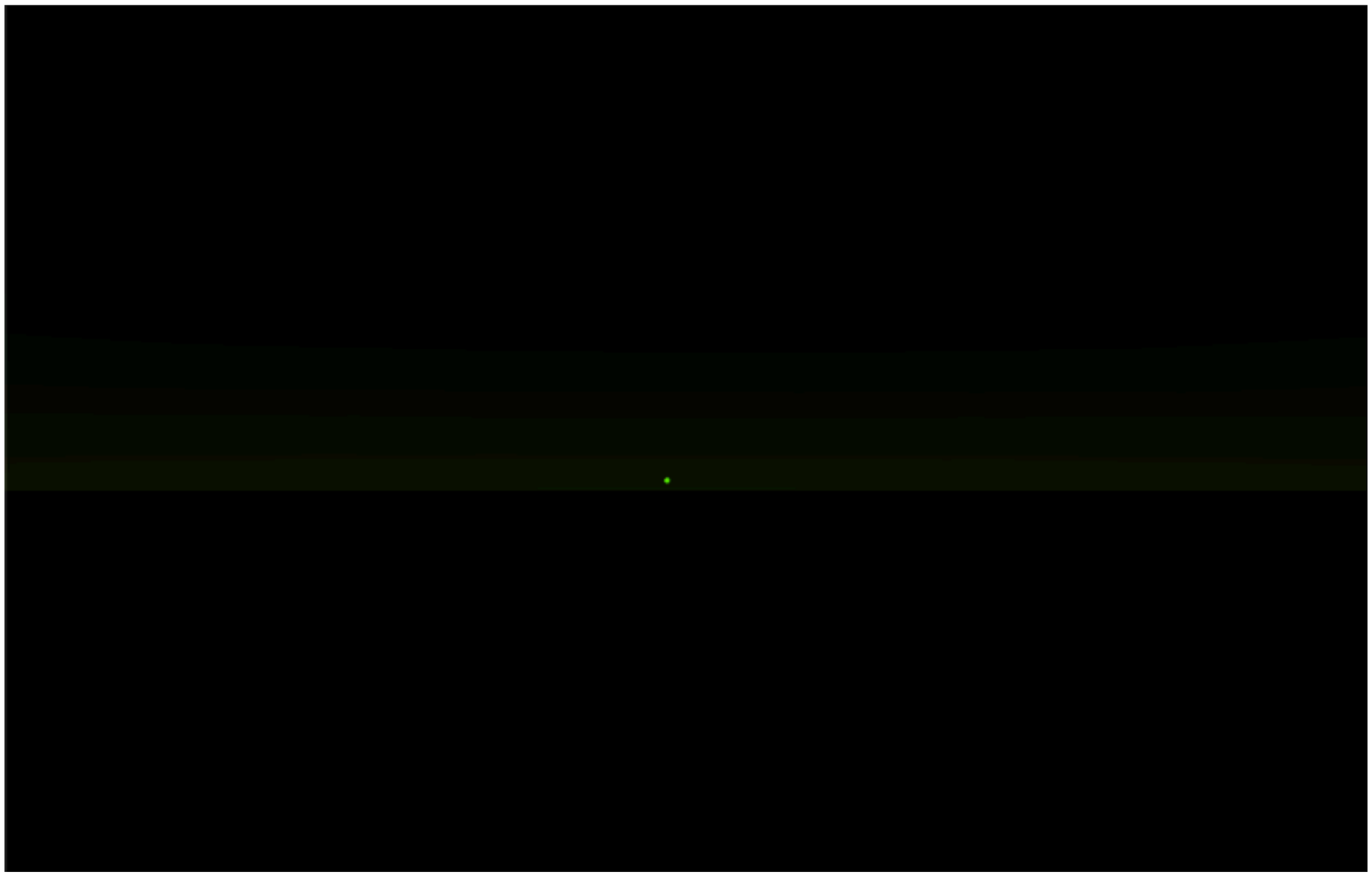


5D00FF

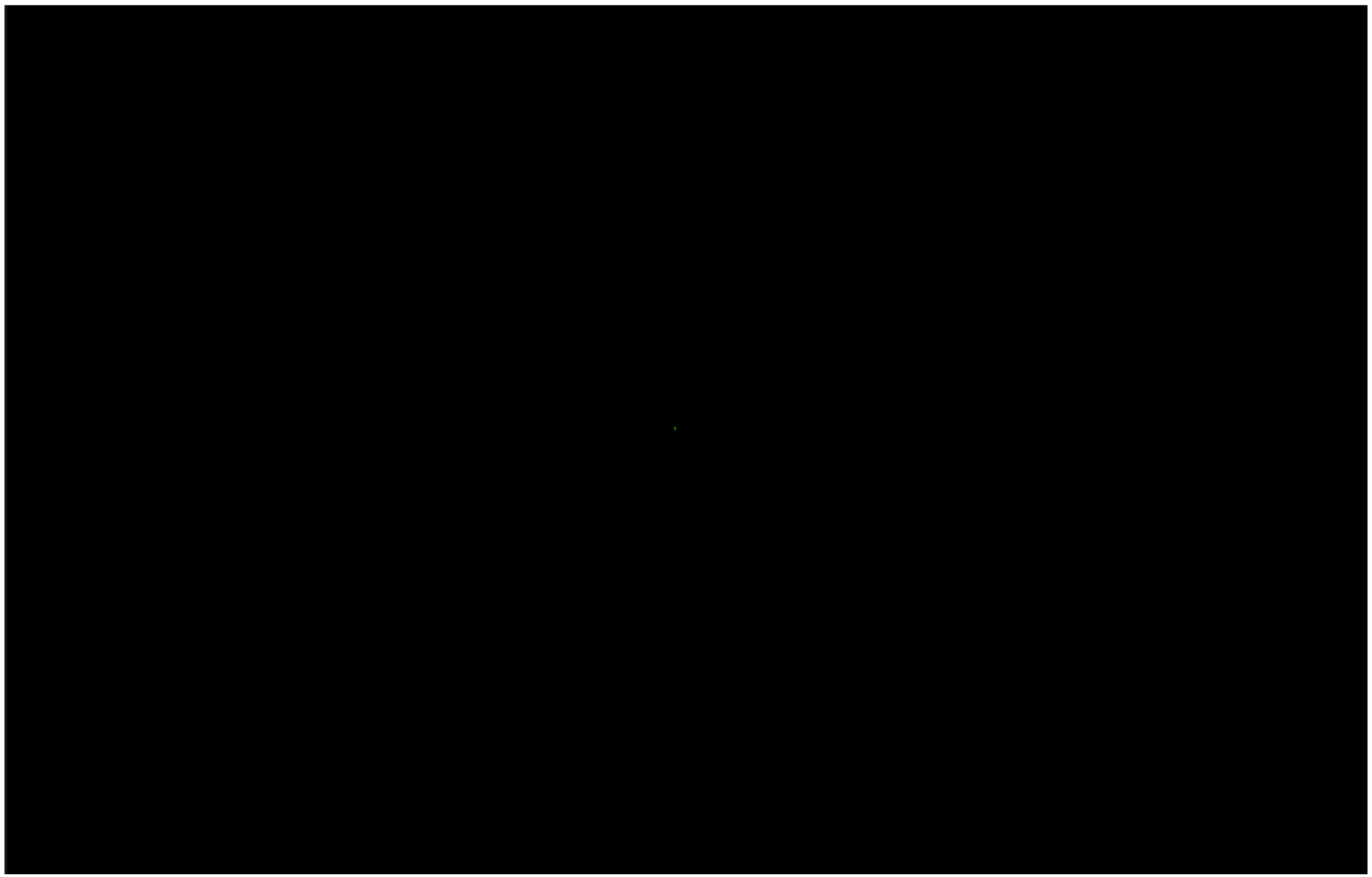
FFE9D7



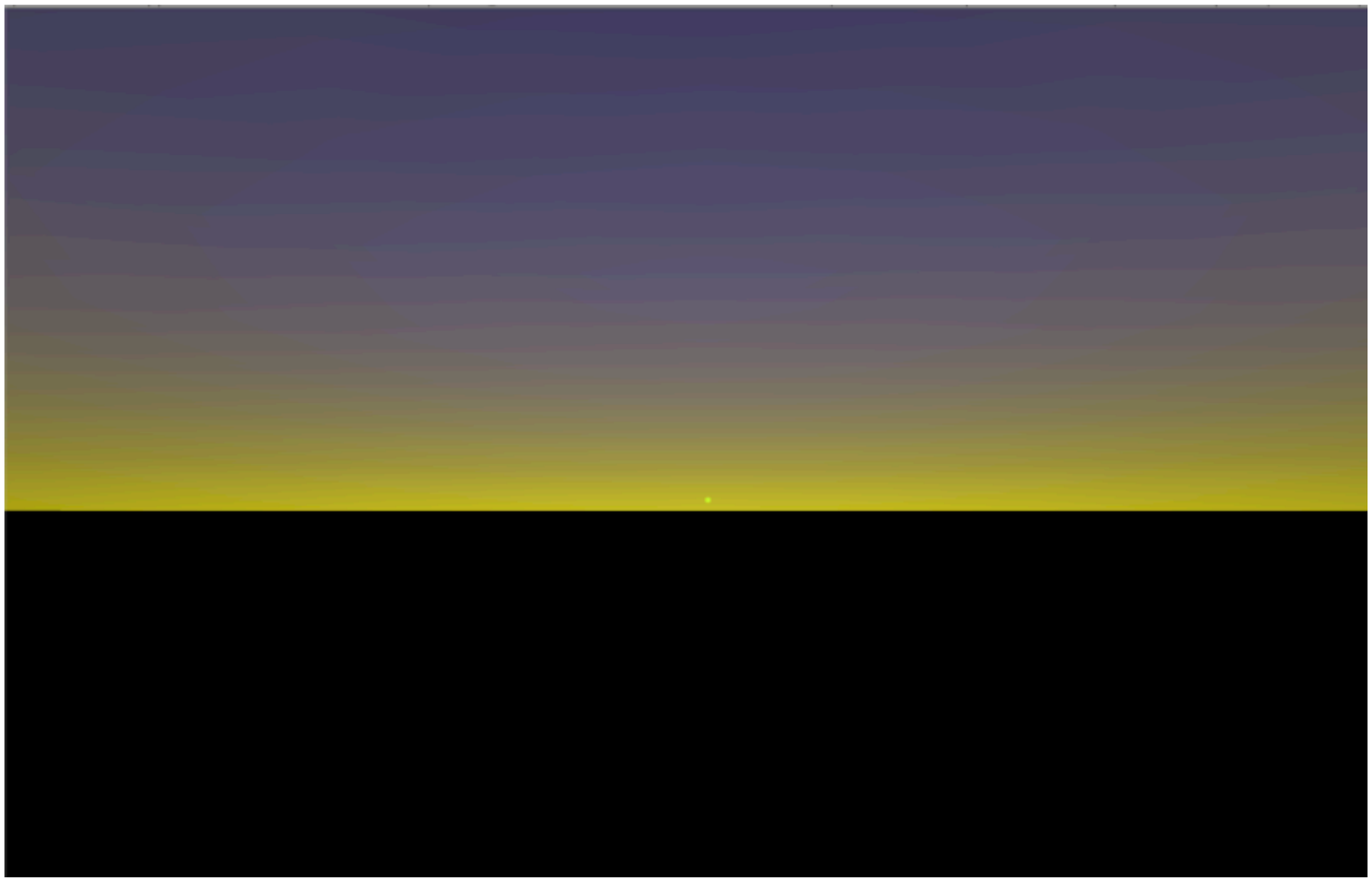
FFF4D6



Atmosphere : 0.84
Exposure : 1
Directional Light : (-40, -180, 0)



Atmosphere : 0.84
Exposure : 0
Directional Light : (-40, -180, 0)



Atmosphere : 0.84
Exposure : 0
Directional Light : (0, -180, 0)

Inspector | Lighting | Services | Navigation | Recorder

Scene | Global Maps | Object Maps

Environment

- Skybox Material: 4
- Sun Source: None (Light)

Environment Lighting

- Source: Skybox
- Intensity Multiplier: 1
- Ambient Mode: Realtime

Environment Reflections

- Source: Skybox
- Resolution: 128
- Compression: Auto
- Intensity Multiplier: 1
- Bounces: 1

Realtime Lighting

- Realtime Global Illumination: ☑

Mixed Lighting

- Baked Global Illumination: ☑
- Lighting Mode: Shadowmask

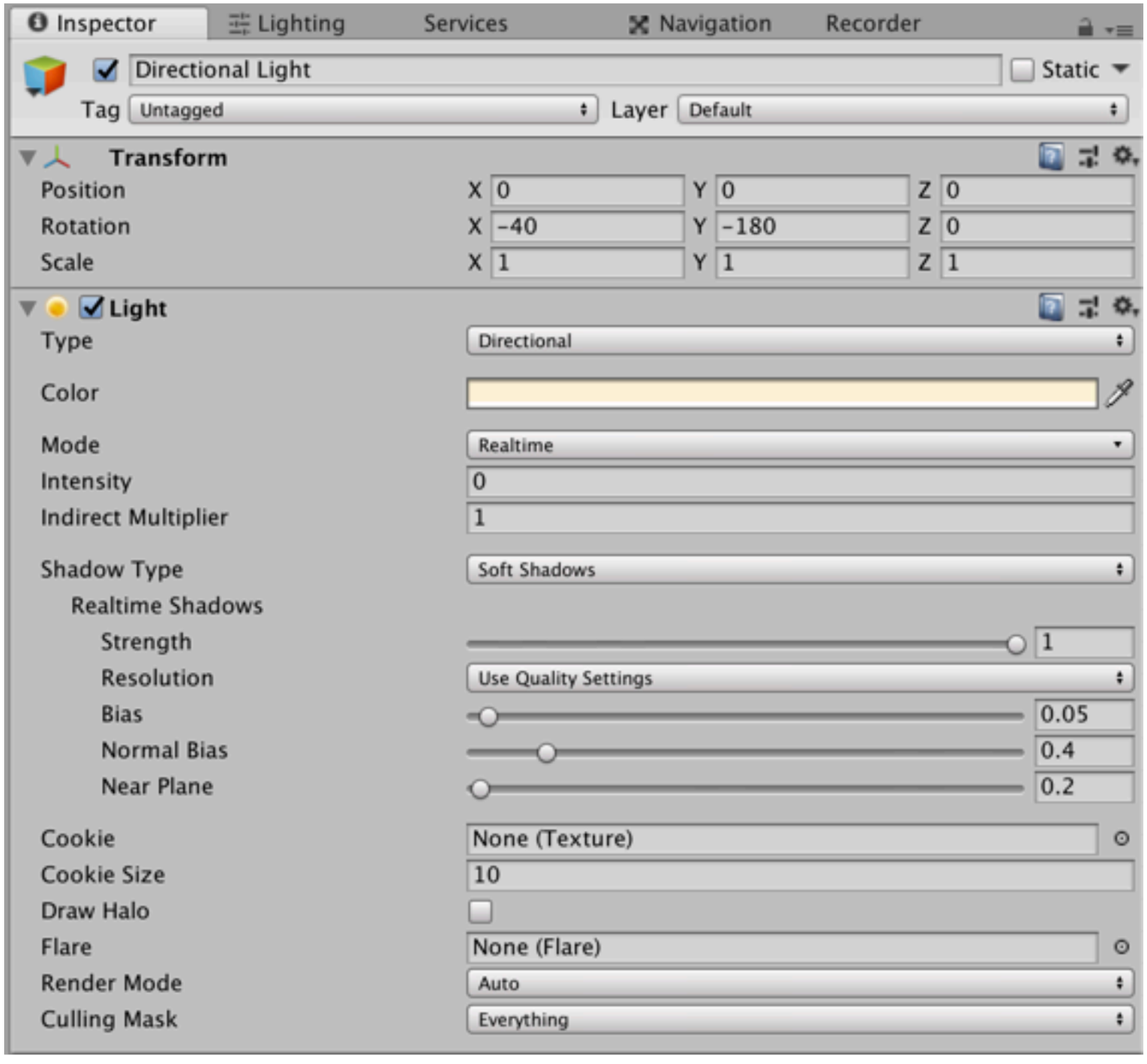
Mixed lights provide realtime direct lighting. Indirect lighting gets baked into lightmaps and light probes. Shadowmasks and light probes occlusion get generated for baked shadows. The Shadowmask Mode used at run time can be set in the Quality Settings panel.

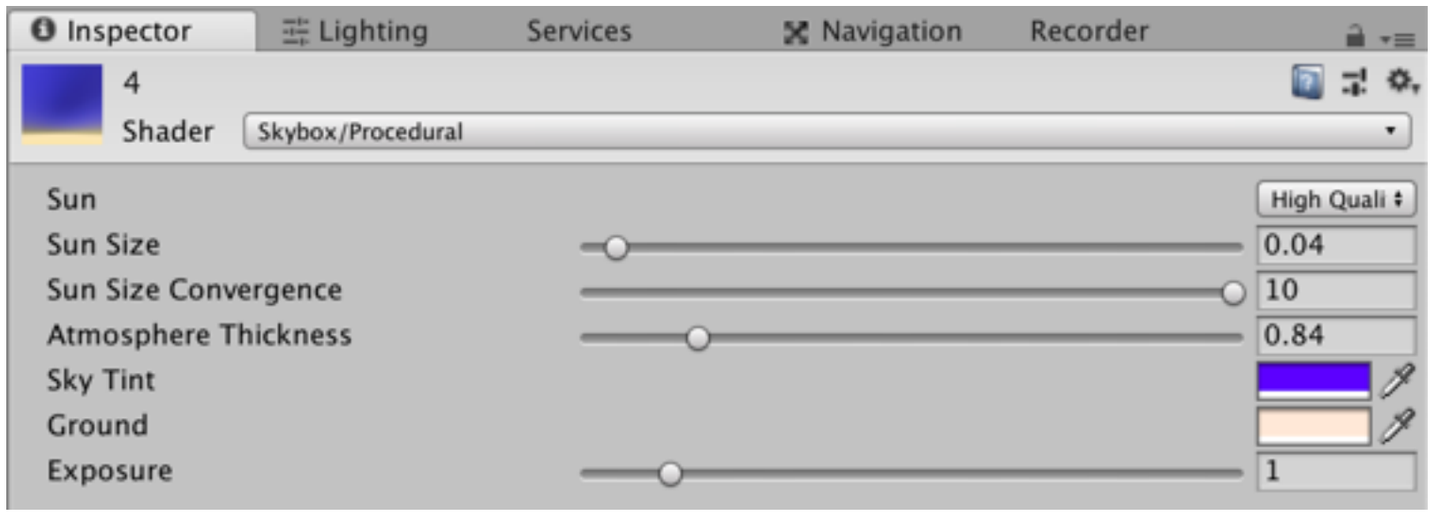
Lightmapping Settings

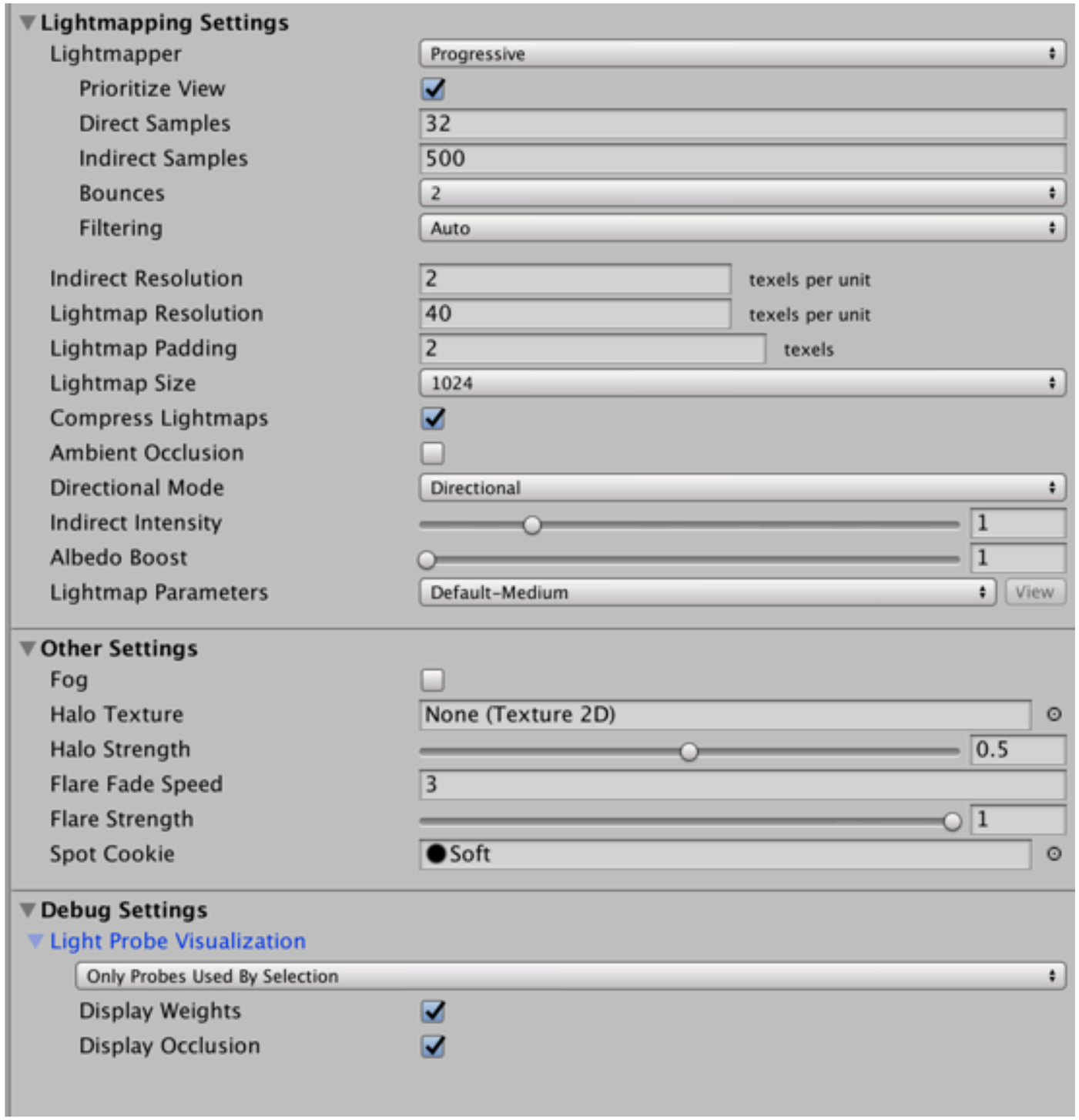
- Lightmapper: Progressive
- Prioritize View: ☑
- Direct Samples: 32
- Indirect Samples: 500
- Bounces: 2
- Filtering: Auto

- Indirect Resolution: 2 texels per unit
- Lightmap Resolution: 40 texels per unit
- Lightmap Padding: 2 texels
- Lightmap Size: 1024
- Compress Lightmaps: ☑
- Ambient Occlusion: ☐
- Directional Mode: Directional
- Indirect Intensity: 1

☐ Auto Generate | Generate Lighting

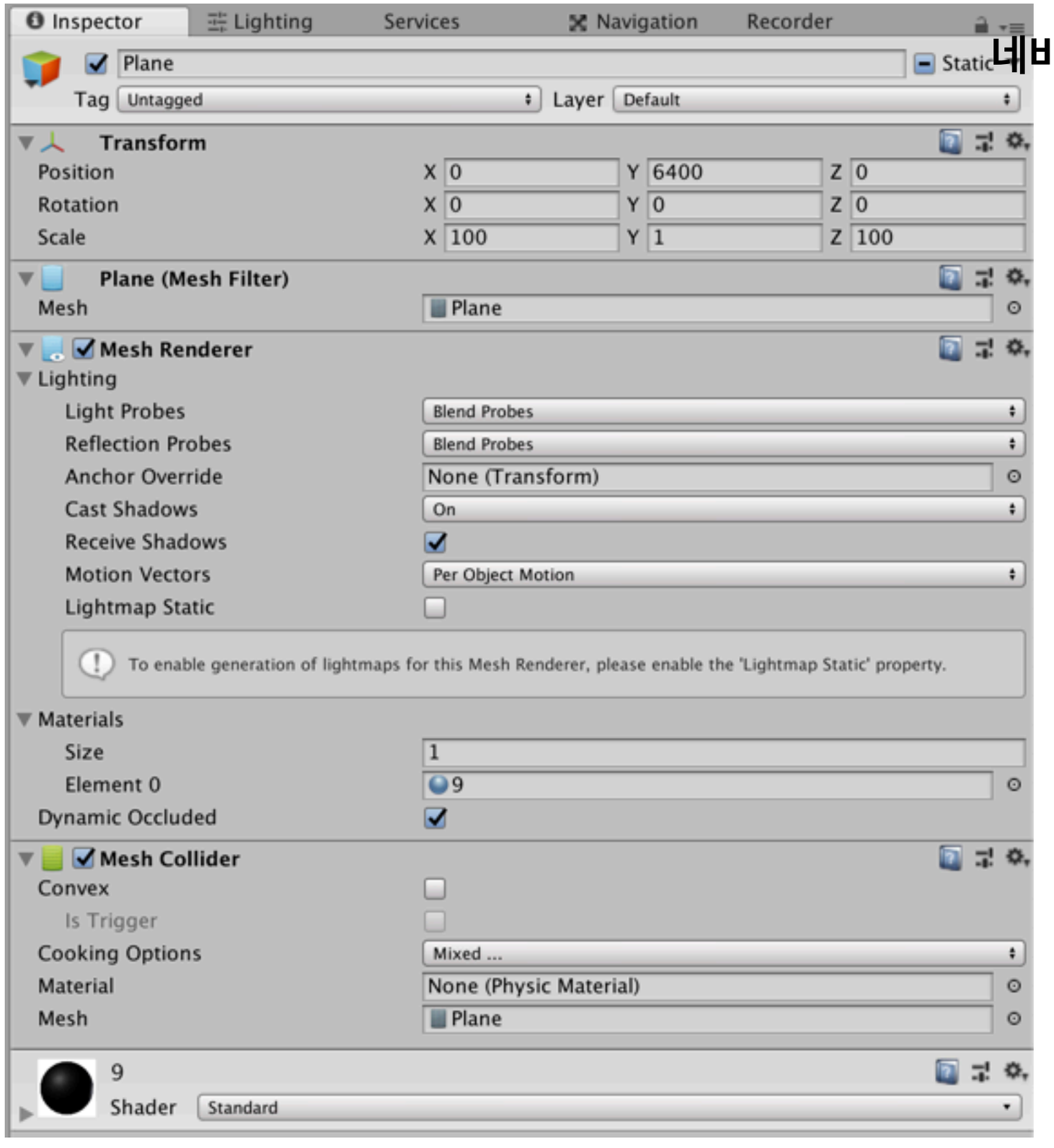

Inspector
Lighting
Services
Navigation
Recorder
Directional Light
Static
Tag
Untagged
Layer
Default
Transform
Position
X 0
Y 0
Z 0
Rotation
X -40
Y -180
Z 0
Scale
X 1
Y 1
Z 1
Light
Type
Directional
Color
Mode
Realtime
Intensity
0
Indirect Multiplier
1
Shadow Type
Soft Shadows
Realtime Shadows
Strength
1
Resolution
Use Quality Settings
Bias
0.05
Normal Bias
0.4
Near Plane
0.2
Cookie
None (Texture)
Cookie Size
10
Draw Halo
Flare
None (Flare)
Render Mode
Auto
Culling Mask
Everything

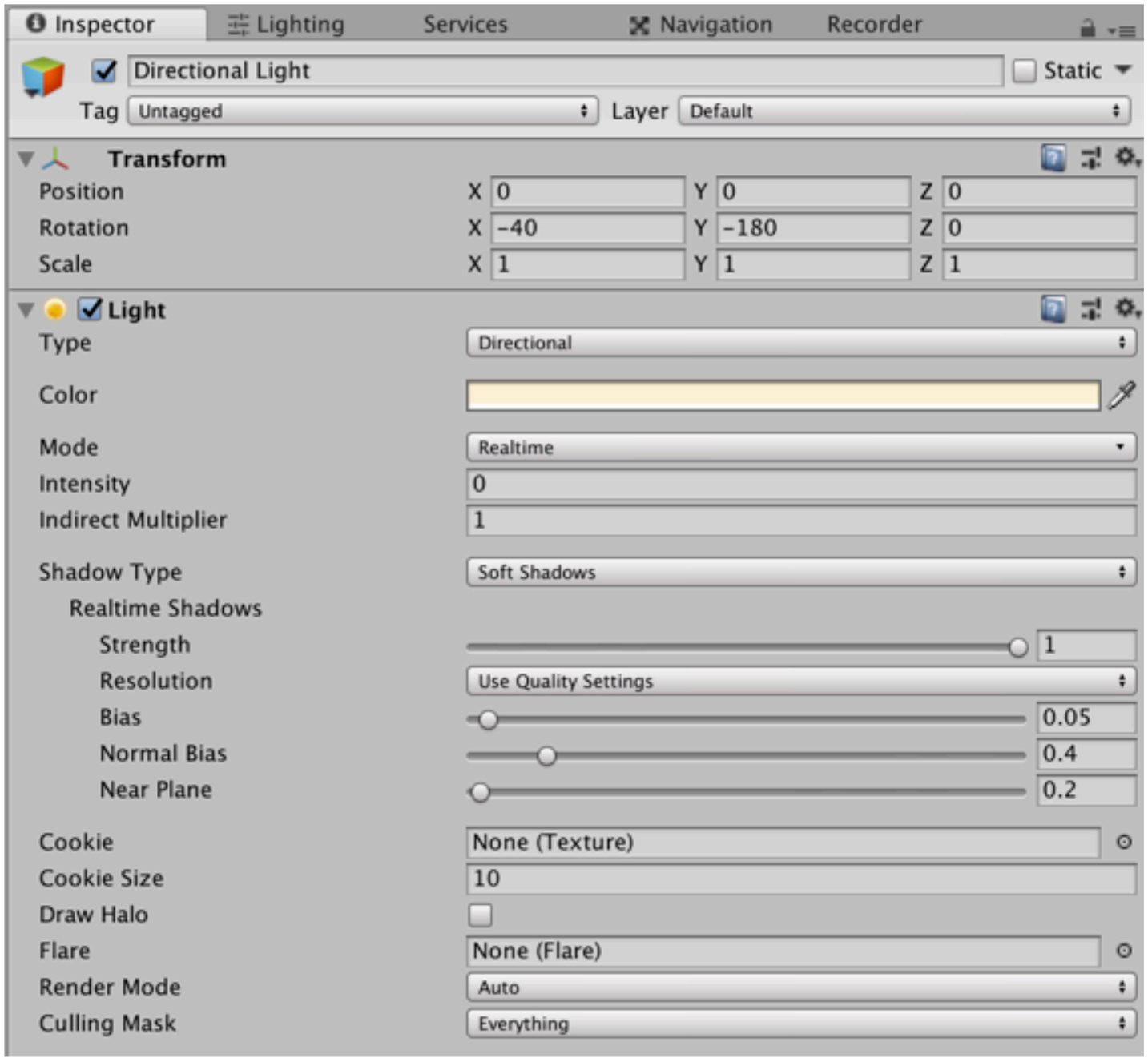

Inspector
Lighting
Services
Navigation
Recorder
4
Shader
Skybox/Procedural
Sun
High Quali
Sun Size
0.04
Sun Size Convergence
10
Atmosphere Thickness
0.84
Sky Tint
Ground
Exposure
1

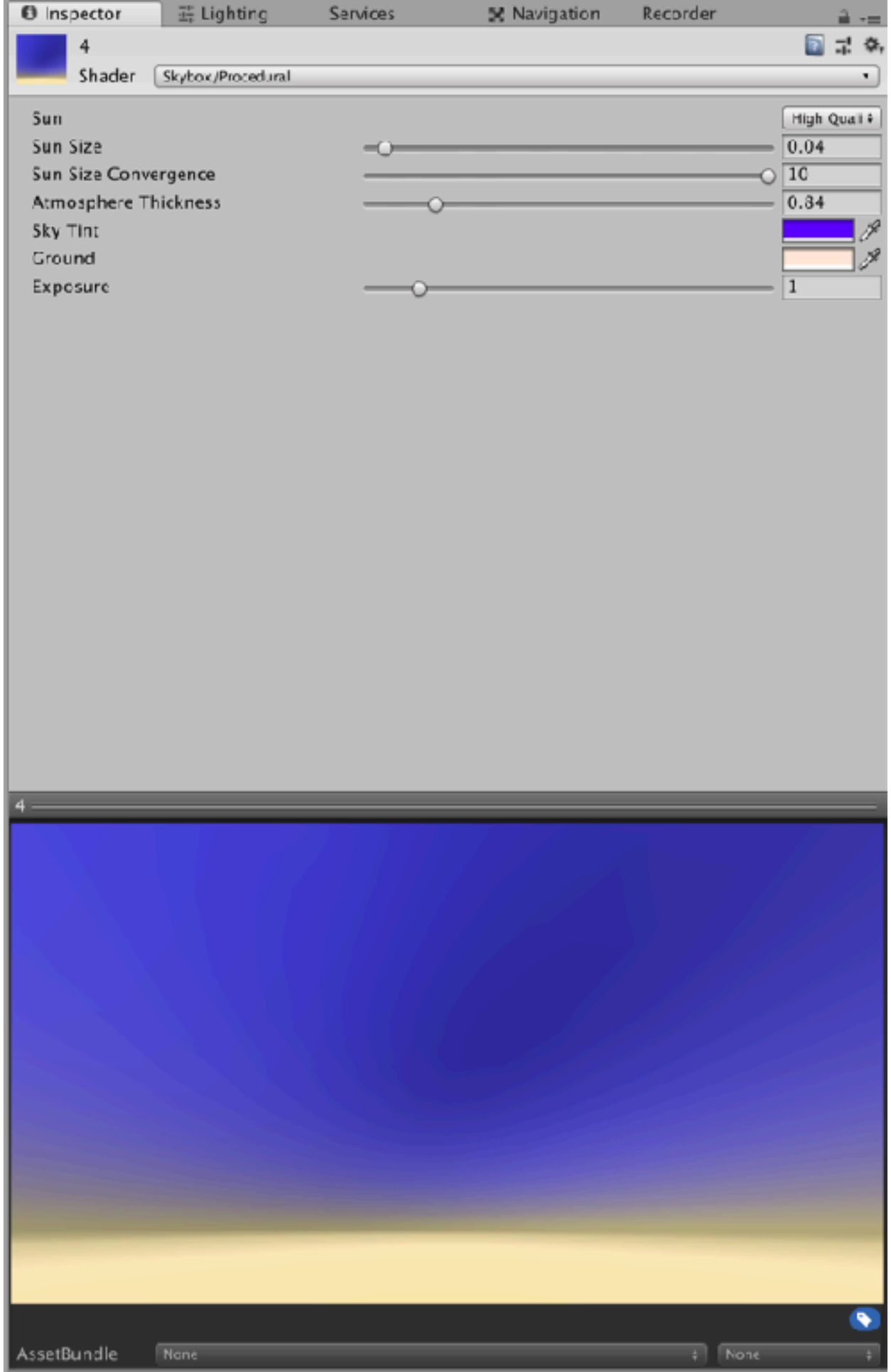

Lightmapping Settings
Lightmapper
Progressive
Prioritize View
Direct Samples
32
Indirect Samples
500
Bounces
2
Filtering
Auto
Indirect Resolution
2
texels per unit
Lightmap Resolution
40
texels per unit
Lightmap Padding
2
texels
Lightmap Size
1024
Compress Lightmaps
Ambient Occlusion
Directional Mode
Directional
Indirect Intensity
1
Albedo Boost
1
Lightmap Parameters
Default-Medium
View
Other Settings
Fog
Halo Texture
None (Texture 2D)
Halo Strength
0.5
Flare Fade Speed
3
Flare Strength
1
Spot Cookie
Soft
Debug Settings
Light Probe Visualization
Only Probes Used By Selection
Display Weights
Display Occlusion

문제가 뭘까.....이셋팅 똑같이!!!!!

네비체크




Inspector
Lighting
Services
Navigation
Recorder
Directional Light
Static
Tag
Untagged
Layer
Default
Transform
Position
X 0
Y 0
Z 0
Rotation
X -40
Y -180
Z 0
Scale
X 1
Y 1
Z 1
Light
Type
Directional
Color
Mode
Realtime
Intensity
0
Indirect Multiplier
1
Shadow Type
Soft Shadows
Realtime Shadows
Strength
1
Resolution
Use Quality Settings
Bias
0.05
Normal Bias
0.4
Near Plane
0.2
Cookie
None (Texture)
Cookie Size
10
Draw Halo
Flare
None (Flare)
Render Mode
Auto
Culling Mask
Everything


Inspector
Lighting
Services
Navigation
Recorder
4
Shader
Skybox/Procedural
Sun
High Quali
Sun Size
0.04
Sun Size Convergence
10
Atmosphere Thickness
0.84
Sky Tint
Ground
Exposure
1
4
AssetBundle
None
None

Inspector | Lighting | Services | Navigation | Recorder

Scene | Global Maps | Object Maps

Environment

- Skybox Material: 4
- Sun Source: None (Light)

Environment Lighting

- Source: Skybox
- Intensity Multiplier: 1
- Ambient Mode: Realtime

Environment Reflections

- Source: Skybox
- Resolution: 128
- Compression: Auto
- Intensity Multiplier: 1
- Bounces: 1

Realtime Lighting

- Realtime Global Illumination: ☑

Mixed Lighting

- Baked Global Illumination: ☑
- Lighting Mode: Shadowmask

Mixed lights provide realtime direct lighting. Indirect lighting gets baked into lightmaps and light probes. Shadowmasks and light probes occlusion get generated for baked shadows. The Shadowmask Mode used at run time can be set in the Quality Settings panel.

Lightmapping Settings

- Lightmapper: Progressive
- Prioritize View: ☑
- Direct Samples: 32
- Indirect Samples: 500
- Bounces: 2
- Filtering: Auto
- Indirect Resolution: 2 texels per unit
- Lightmap Resolution: 40 texels per unit
- Lightmap Padding: 2 texels
- Lightmap Size: 1024
- Compress Lightmaps: ☑
- Ambient Occlusion: ☑
- Max Distance: 1
- Indirect Contribution: 1

Debug Settings

- Light Probe Visualization

Auto Generate | Generate Lightin

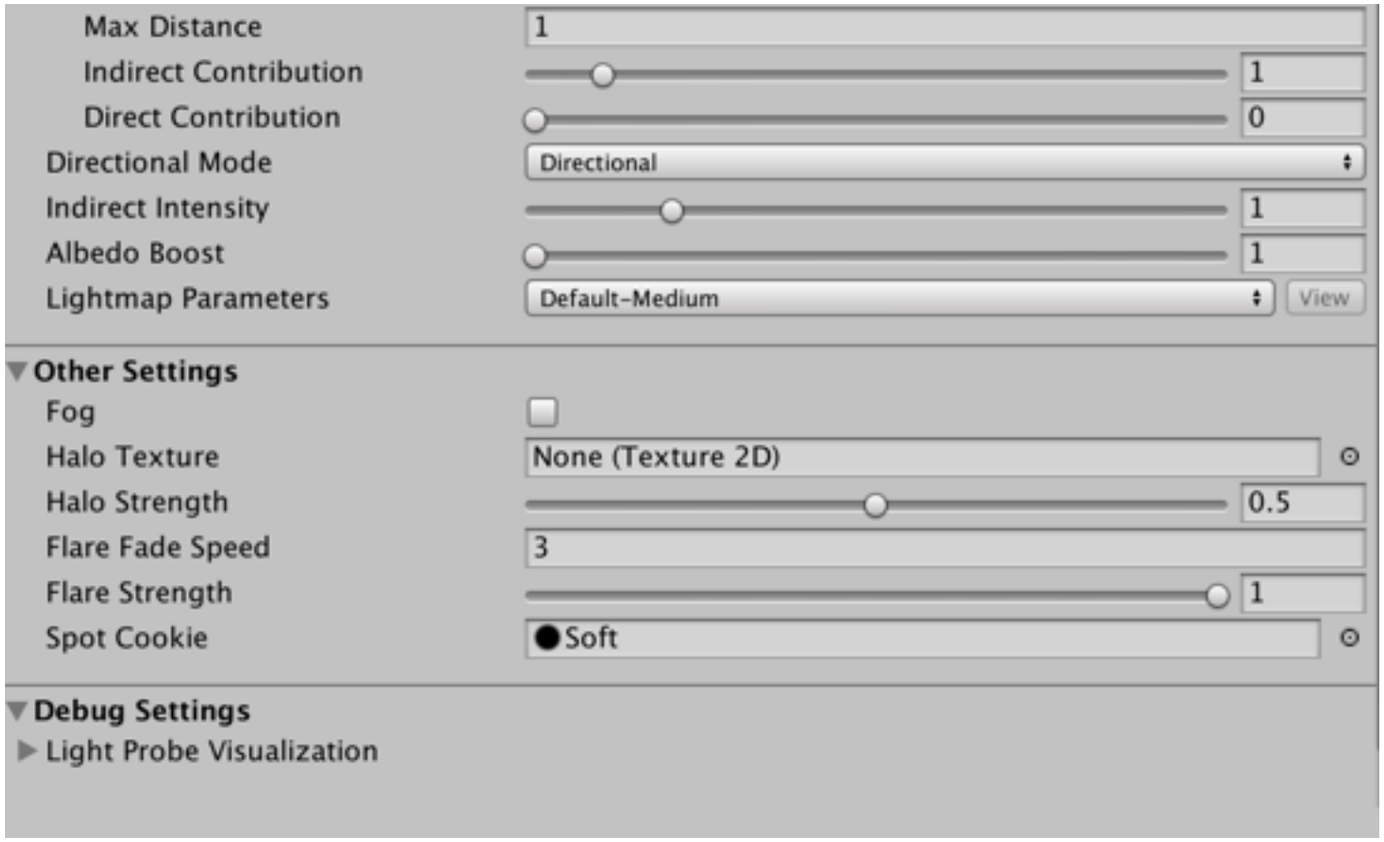
0 Non-Directional Lightmaps — 0 B

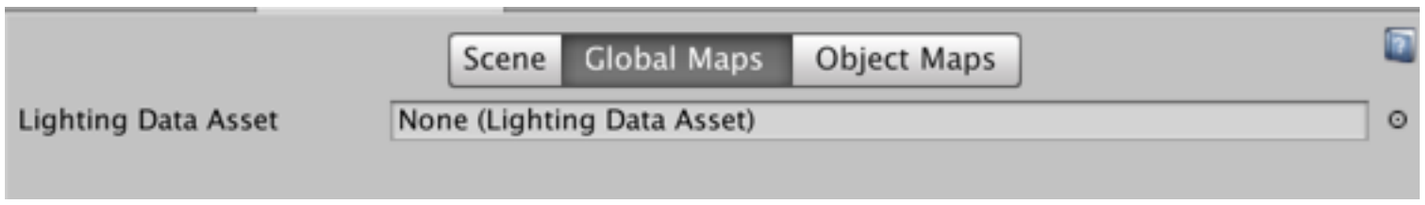
No Lightmaps

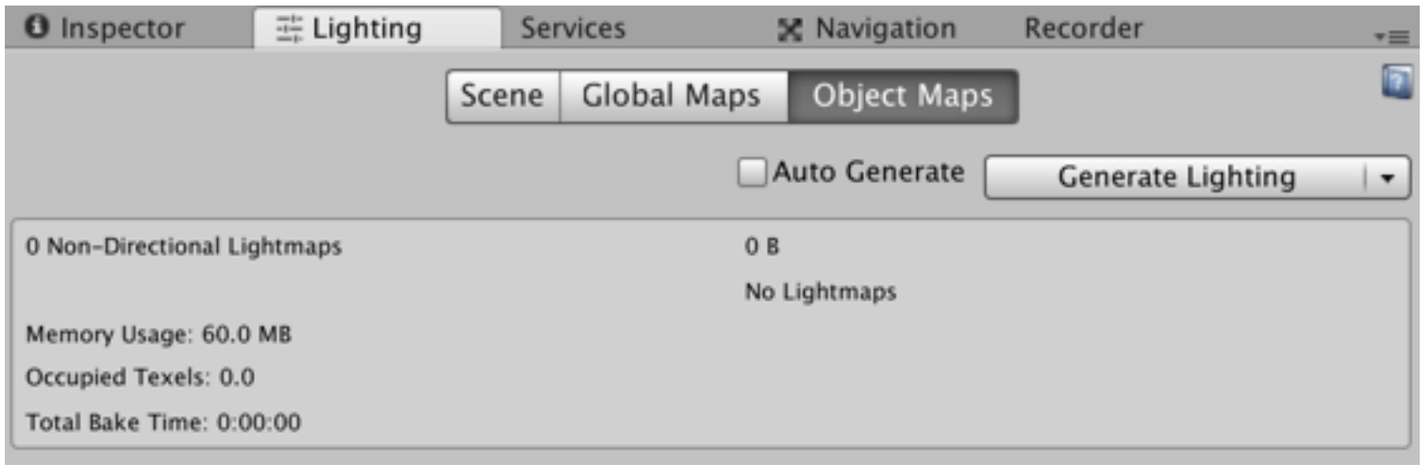
Memory Usage: 60.0 MB

Occupied Texels: 0.0

Total Bake Time: 0:00:00


Max Distance
1
Indirect Contribution
1
Direct Contribution
0
Directional Mode
Directional
Indirect Intensity
1
Albedo Boost
1
Lightmap Parameters
Default-Medium
View
Other Settings
Fog
Halo Texture
None (Texture 2D)
Halo Strength
0.5
Flare Fade Speed
3
Flare Strength
1
Spot Cookie
Soft
Debug Settings
Light Probe Visualization


Scene
Global Maps
Object Maps
Lighting Data Asset
None (Lighting Data Asset)


Inspector
Lighting
Services
Navigation
Recorder
Scene
Global Maps
Object Maps
Auto Generate
Generate Lighting
0 Non-Directional Lightmaps
0 B
No Lightmaps
Memory Usage: 60.0 MB
Occupied Texels: 0.0
Total Bake Time: 0:00:00

Inspector | Lighting | Services | Navigation

ThunderAndLightning — Static

Tag: Untagged — Layer: TransparentFX

Prefab: Select | Revert | Apply

Transform

	X	Y	Z
Position	0	0	0
Rotation	0	0	0
Scale	1	1	1

Weather Maker Thunder And Lightning Script 3D (Scr

Script: WeatherMakerThunderAndLightningScrip

Script and Camera

Lightning Bolt Script: LightningBoltPrefab (WeatherMakerLightn

Enable Lightning: ☑

Timing

Lightning Interval Time Ran: Min 10 Max 25

Intensity

Lightning Intense Probabilit: 0.2

Audio

▶ Thunder Sounds Normal

▶ Thunder Sounds Intense

Positioning

Start Y Base	Min 350	Max 400
Start X Variance	Min -200	Max 200
Start Y Variance	Min -50	Max 50
Start Z Variance	Min -200	Max 200
End X Variance	Min -200	Max 200
End Y Variance	Min -10	Max -100
End Z Variance	Min -200	Max 200

Lightning Forced Visibility P: 0.5

Ground Lightning Chance: 0.3

Cloud Lightning Chance: 0.4

External Intensity Multiplier: 1

3D settings

Normal Distance	Min 1200	Max 1500
Intense Distance	Min 300	Max 500

Audio Source

AudioClip: None (Audio Clip)

Output: None (Audio Mixer Group)

Mute: ☐

Bypass Effects: ☐

Bypass Listener Effects: ☐

Bypass Reverb Zones: ☐

Play On Awake: ☐

Loop: ☐

Priority: 128 (High — Low)

Volume: 1

Inspector | Lighting | Services | Navigation

LightningBoltPrefab — Static

Tag: Untagged — Layer: TransparentFX

Prefab: Select | Revert | Apply

Transform

	X	Y	Z
Position	0	0	0
Rotation	0	0	0
Scale	1	1	1

Weather Maker Lightning Bolt Prefab Script (Script)

Script: WeatherMakerLightningBoltPrefabScript

Lightning General Properties

Camera: MainCamera (Camera)

Camera Mode: Auto

Use World Space: ☑

Compensate For Parent Trar: ☐

Quality Setting: Use Script

Multi Threaded: ☑

Lightning 2D Settings

Sort Layer Name:

Sort Order In Layer: 0

Lightning Rendering Properties

Soft Particles Factor: 3

Render Queue: -1

Lightning Material Mesh: WeatherMakerLightningBoltMaterial

Lightning Material Mesh No: WeatherMakerLightningBoltMaterialNoGlo

Lightning Texture: None (Texture 2D)

Lightning Glow Texture: None (Texture 2D)

Lightning Origin Particle Sys: None (Particle System)

Lightning Destination Partic: None (Particle System)

Lightning Tint Color:

Glow Tint Color:

Source Blend Mode: Src Alpha

Destination Blend Mode: One

Lightning Movement Properties

Jitter Multiplier: 10

Turbulence: 1

Turbulence Velocity: X 0 Y 0 Z 0

▼ Intensity Flicker

X: -1

Y: 3

Z: 2

W: 0.1

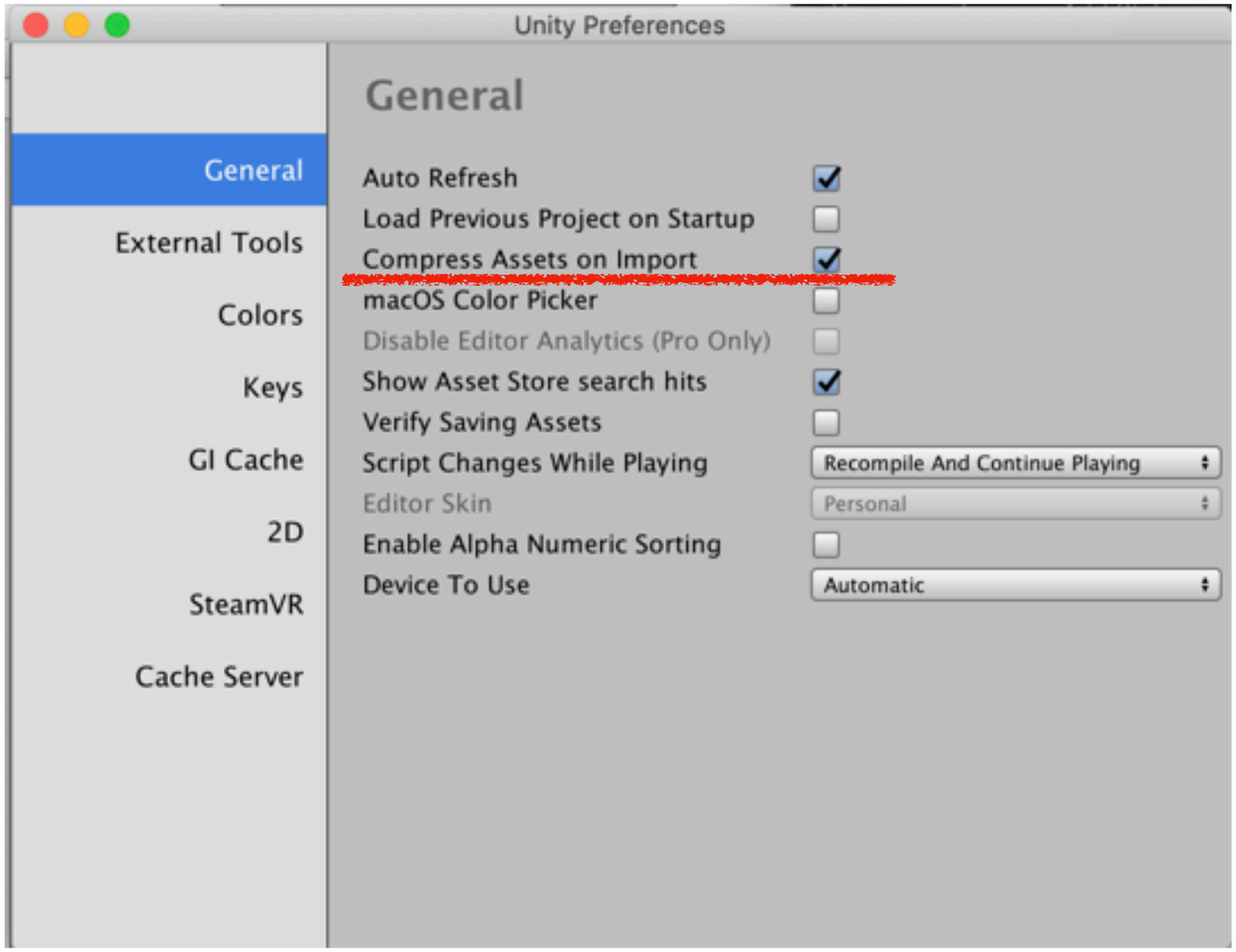
Intensity Flicker Texture: WeatherMakerNoiseTextureWorley1

Lightning Spawn Properties

Interval Range	Min 0.2	Max 0.5
Count Range	Min 1	Max 4

Count Probability Modifier: 0.5

Delay Range: Min 0 Max 0.2


Unity Preferences
General
External Tools
Colors
Keys
GI Cache
2D
SteamVR
Cache Server
General
Auto Refresh
Load Previous Project on Startup
Compress Assets on Import
macOS Color Picker
Disable Editor Analytics (Pro Only)
Show Asset Store search hits
Verify Saving Assets
Script Changes While Playing
Recompile And Continue Playing
Editor Skin
Personal
Enable Alpha Numeric Sorting
Device To Use
Automatic

빌드 크기 축소를 위한 제안

텍스처

텍스처는 일반적으로 빌드에서 가장 많은 공간을 차지합니다. 이 문제를 해결하는 첫 번째 방법으로, 압축 텍스처 포맷을 사용할 수 있습니다. 자세한 내용은 플랫폼별 텍스처 압축을 참조하십시오.

이 방법으로 파일 크기가 충분히 작아지지 않으면 텍스처 이미지의 물리적 크기(픽셀 단위)를 줄여보십시오. 실제 소스 콘텐츠를 수정하지 않고 이렇게 하려면 프로젝트 뷰에서 텍스처를 선택하고 인스펙터 창에서 **Max Size** 를 줄입니다. 그 결과가 게임에 어떻게 나타나는지 보려면 텍스처를 사용하는 게임 오브젝트를 확대한 다음 씬 뷰에서 더 안 좋게 보이기 시작할 때까지 **Max Size** 를 조정합니다. 최대 텍스처 크기를 변경해도 텍스처 에셋에는 영향이 없고 게임에서 표시되는 해상도에만 영향이 있습니다.

최대 텍스처 크기를 변경해도 텍스처 에셋에는 영향이 없고 게임에서 표시되는 해상도에만 영향이 있습니다.

Inspector | Lighting | Services | Navigation

WeatherMakerWaterPrefab — Static

Tag: Untagged — Layer: Water

Prefab: Select | Revert | Apply

Transform

	X	Y	Z
Position	280.5	0	198.2
Rotation	0	0	0
Scale	1024	1024	1024

Weather Maker Water Script (Script)

Script: WeatherMakerWaterScript

Profile

Water Profile: WeatherMakerWaterProfileClear (WeatherMakerWaterProfileSc

Underwater

Underwater Audio Source: WeatherMakerWaterPrefab (Audio Source)

Splash Audio Source: WeatherMakerWaterPrefab (Audio Source)

Weather Maker Reflection Script (Script)

Script: WeatherMakerReflectionScript

Reflect Renderer: WeatherMakerWaterPrefab (Mesh Renderer)

Reflection Mask: Mixed ...

Reflection Mask Recursion

Reflect Skybox

Reflection Sampler Name

Maximum Per Pixel Lights To Reflect

Clip Plane Offset

Render Texture Size

Reflection Camera Rendering Path

Normal Is Forward

Aspect Ratio: 0

Field Of View: 0

Near Plane: 0

Far Plane: 0

Recursion Limit: 0

Recursion Render Texture Size Reducer Pov: 0.75

Render Texture Format: ARGB32

- Nothing
- Everything
- ✓ Default
- TransparentFX
- ✓ Ignore Raycast
- Water
- ✓ UI
- ✓ PostProcessing

Weather Maker Plane Creator Script (Script)

Script: WeatherMakerPlaneCreatorScript

Plane generation

Plane Rows: 96

Plane Columns: 96

Plane Scale: 1

Plane Forward Is Z Axis

Cube Depth: 1

Weather Maker Null Zone Script (Script)

Script: WeatherMakerNullZoneScript

Null Zone Profile: WeatherMakerNullZoneProfile_Underwater (WeatherMakerNul

Weather Maker Dampening Zone Script (Script)

Script: WeatherMakerDampeningZoneScript

Intensity Dampening: 1

Weather Maker Reflection Script (Script)

Script: WeatherMakerReflectionS

Reflect Renderer: WeatherMakerWaterPrefa

Reflection Mask: Mixed ...

Reflection Mask Recursion: Nothing

Reflect Skybox

Reflection Sampler Name: _WeatherMakerWaterReflect

Maximum Per Pixel Lights To Reflect

Clip Plane Offset: 2

Render Texture Size

Reflection Camera Rendering Path: Vertex Lit

Normal Is Forward

Aspect Ratio

Field Of View

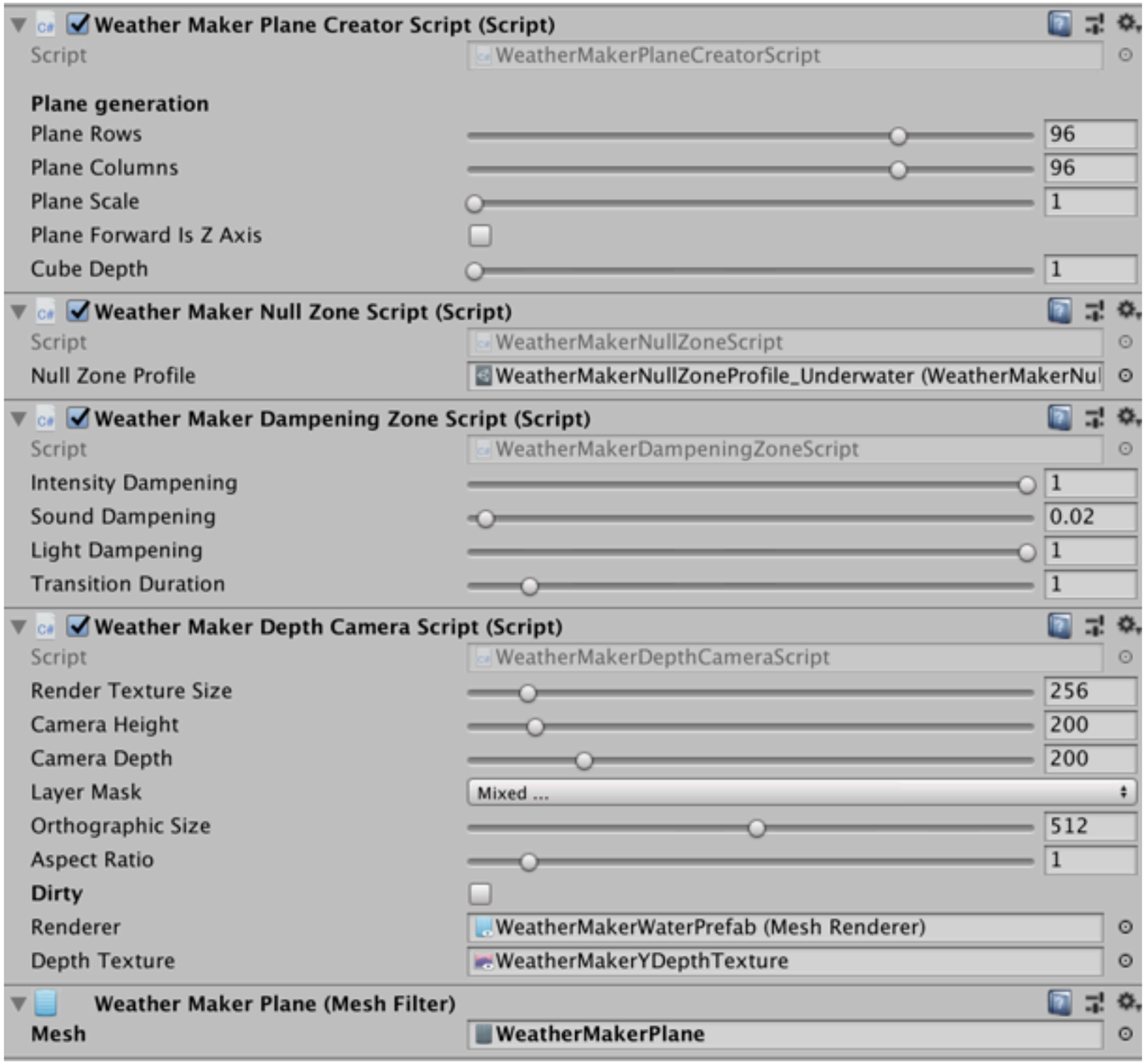
Near Plane: 0

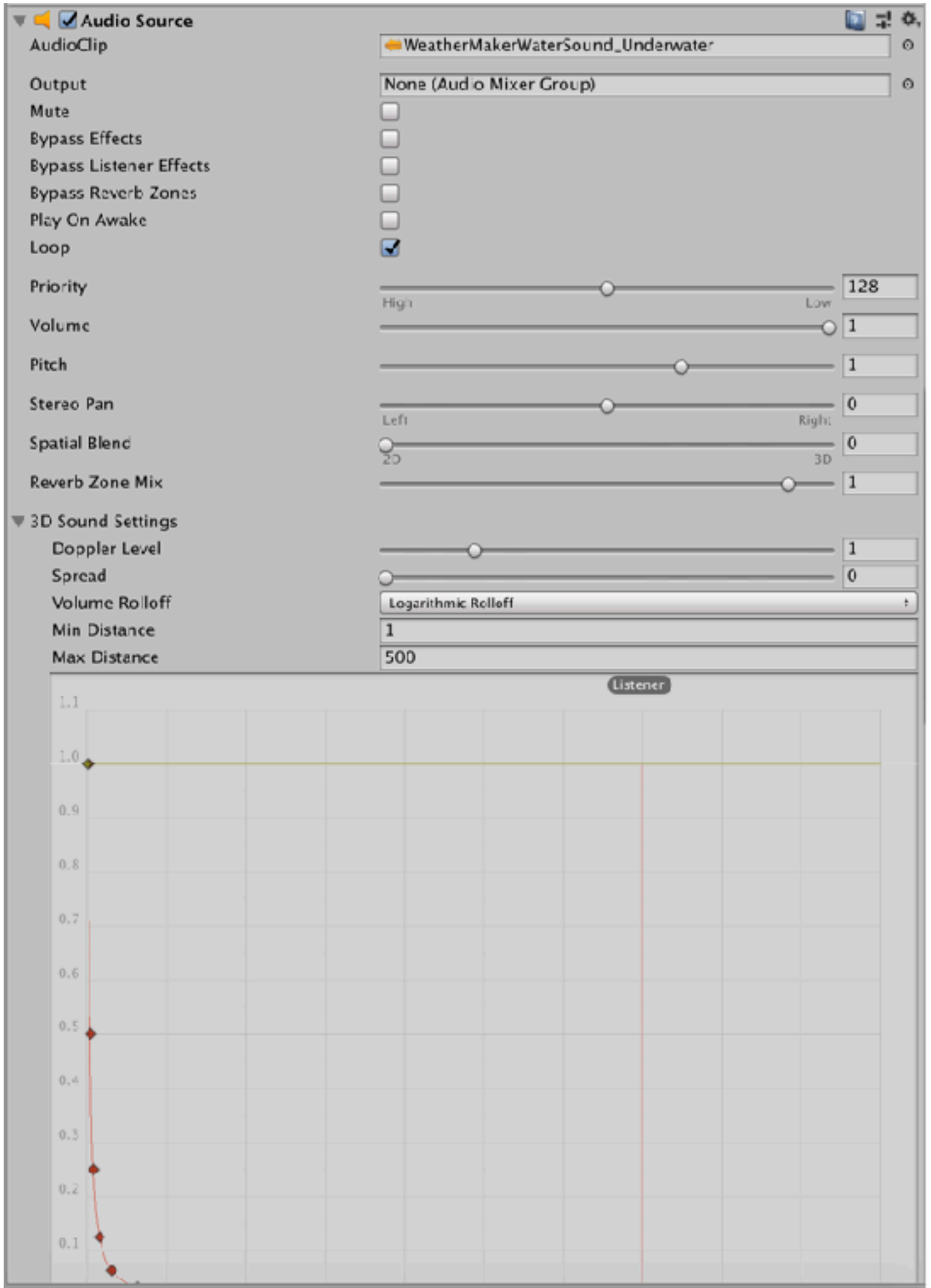
Far Plane: 0

Recursion Limit

Recursion Render Texture Size Reducer Pov

Render Texture Format: ARGB32


Weather Maker Plane Creator Script (Script)
Script
WeatherMakerPlaneCreatorScript
Plane generation
Plane Rows
96
Plane Columns
96
Plane Scale
1
Plane Forward Is Z Axis
Cube Depth
1
Weather Maker Null Zone Script (Script)
Script
WeatherMakerNullZoneScript
Null Zone Profile
WeatherMakerNullZoneProfile_Underwater (WeatherMakerNul
Weather Maker Dampening Zone Script (Script)
Script
WeatherMakerDampeningZoneScript
Intensity Dampening
1
Sound Dampening
0.02
Light Dampening
1
Transition Duration
1
Weather Maker Depth Camera Script (Script)
Script
WeatherMakerDepthCameraScript
Render Texture Size
256
Camera Height
200
Camera Depth
200
Layer Mask
Mixed ...
Orthographic Size
512
Aspect Ratio
1
Dirty
Renderer
WeatherMakerWaterPrefab (Mesh Renderer)
Depth Texture
WeatherMakerYDepthTexture
Weather Maker Plane (Mesh Filter)
Mesh
WeatherMakerPlane


Audio Source
AudioClip
WeatherMakerWaterSound_Underwater
Output
None (Audio Mixer Group)
Mute
Bypass Effects
Bypass Listener Effects
Bypass Reverb Zones
Play On Awake
Loop
Priority
128
High
Low
Volume
1
Pitch
1
Stereo Pan
0
Left
Right
Spatial Blend
0
2D
3D
Reverb Zone Mix
1
3D Sound Settings
Doppler Level
1
Spread
0
Volume Rolloff
Logarithmic Rolloff
Min Distance
1
Max Distance
500
Listener
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1

Audio Source

AudioClip: WeatherMakerWaterSound_Splash

Output: None (Audio Mixer Group)

Mute

Bypass Effects

Bypass Listener Effects

Bypass Reverb Zones

Play On Awake

Loop

Priority: 128 (High / Low)

Volume: 1

Pitch: 1

Stereo Pan: 0 (Left / Right)

Spatial Blend: 0 (2D / 3D)

Reverb Zone Mix: 1

3D Sound Settings

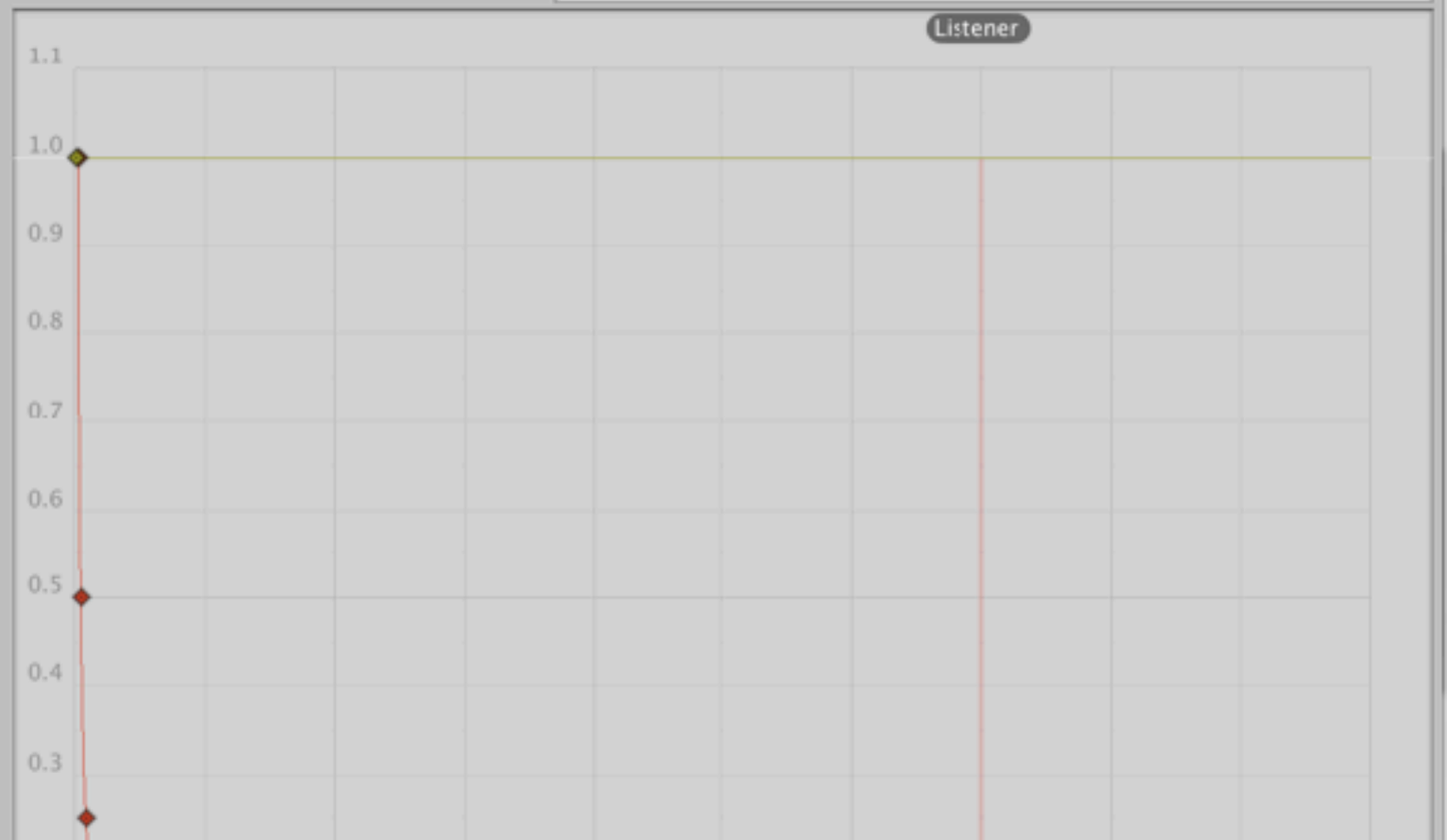
Doppler Level: 1

Spread: 0

Volume Rolloff: Logarithmic Rolloff

Min Distance: 1

Max Distance: 500



Weather Maker Dampening Zone Script (Script)

Script	WeatherMakerDampeningZoneScript
Intensity Dampening	1
Sound Dampening	0.02
Light Dampening	1
Transition Duration	1

Weather Maker Depth Camera Script (Script)

Script	WeatherMakerDepthCameraScript
Render Texture Size	256
Camera Height	200
Camera Depth	200
Layer Mask	Mixed ...
Orthographic Size	512
Aspect Ratio	1
Dirty	
Renderer	WeatherMakerWaterPrefab (Mesh Rence
Depth Texture	WeatherMakerYDepthTexture

Weather Maker Plane (Mesh Filter)

Mesh	WeatherMakerPlane

Audio Source

AudioClip	WeatherMakerWaterSound_Underwater
Output	None (Audio Mixer Group)
Mute	
Bypass Effects	
Bypass Listener Effects	
Bypass Reverb Zones	
Play On Awake	
Loop	✓
Priority	128 (High – Low)
Volume	1
Pitch	1
Stereo Pan	0 (Left – Right)
Spatial Blend	0 (2D – 3D)
Reverb Zone Mix	1

3D Sound Settings

Doppler Level	1
Spread	0
Volume Rolloff	Logarithmic Rolloff
Min Distance	1
Max Distance	500

Inspector | Lighting | Services | Navigation | Recorder

WeatherMakerWaterPrefab — Static

Tag: Untagged — Layer: Water

Prefab: Select | Revert | Apply

Transform

Position	X 280.5	Y 0	Z 198.2
Rotation	X 0	Y 0	Z 0
Scale	X 1024	Y 1024	Z 1024

Weather Maker Water Script (Script)

Script	WeatherMakerWaterScript

Profile

Water Profile	WeatherMakerWaterProfileClear (Weathe

Underwater

Underwater Audio Source	WeatherMakerWaterPrefab (Audio Sourc
Splash Audio Source	WeatherMakerWaterPrefab (Audio Sourc

Weather Maker Reflection Script (Script)

Script	WeatherMakerReflectionScript
Reflect Renderer	WeatherMakerWaterPrefab (Mesh Rende
Reflection Mask	Mixed ...
Reflection Mask Recursion	Nothing
Reflect Skybox	✓
Reflection Sampler Name	_WeatherMakerWaterReflectionTex
Maximum Per Pixel Lights	8
Clip Plane Offset	2
Render Texture Size	1024
Reflection Camera Render	Vertex Lit
Normal Is Forward	
Aspect Ratio	0
Field Of View	0
Near Plane	0
Far Plane	0
Recursion Limit	0
Recursion Render Texture	0.75
Render Texture Format	ARGB32

Weather Maker Plane Creator Script (Script)

Script	WeatherMakerPlaneCreatorScript

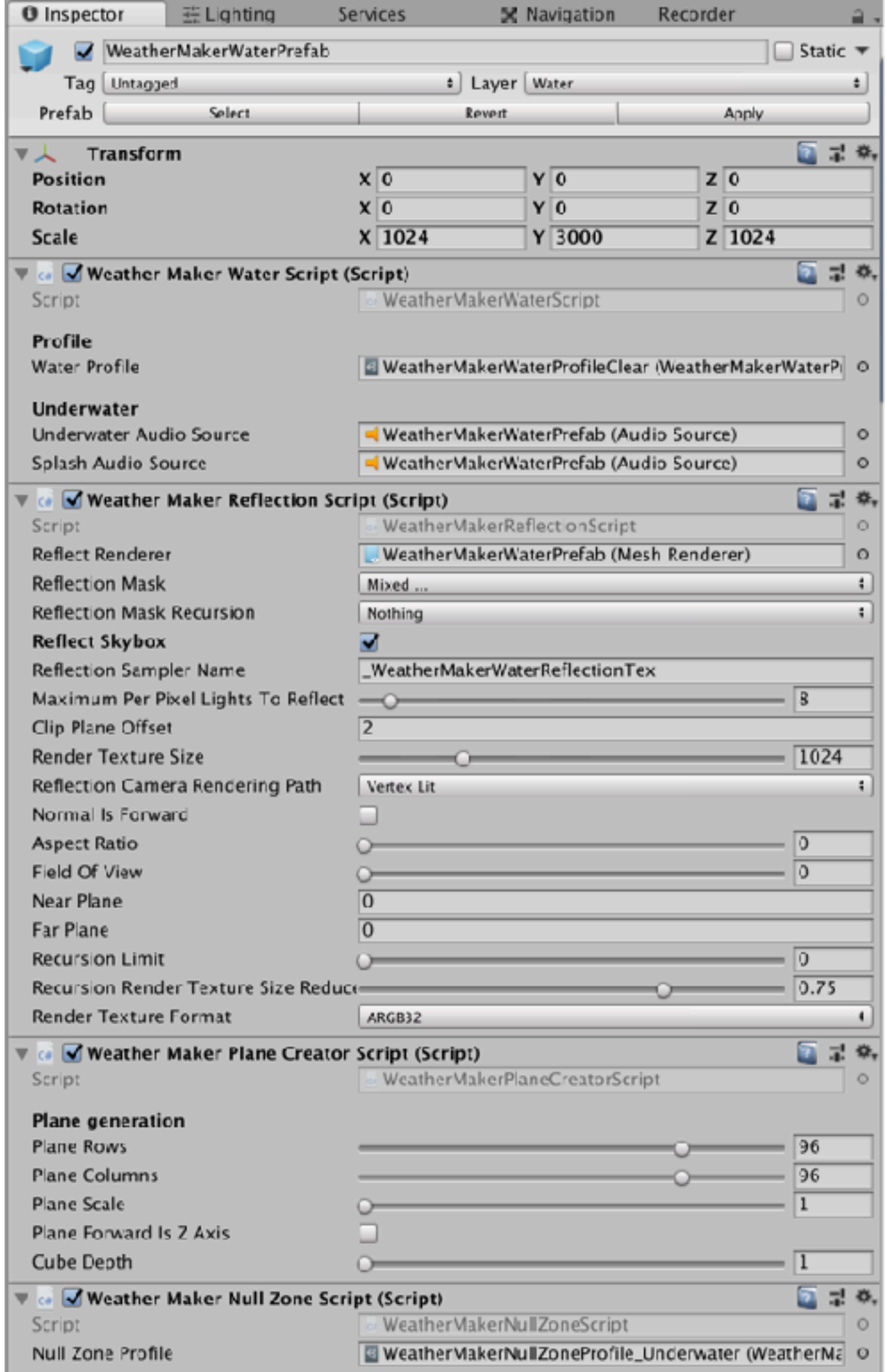
Plane generation

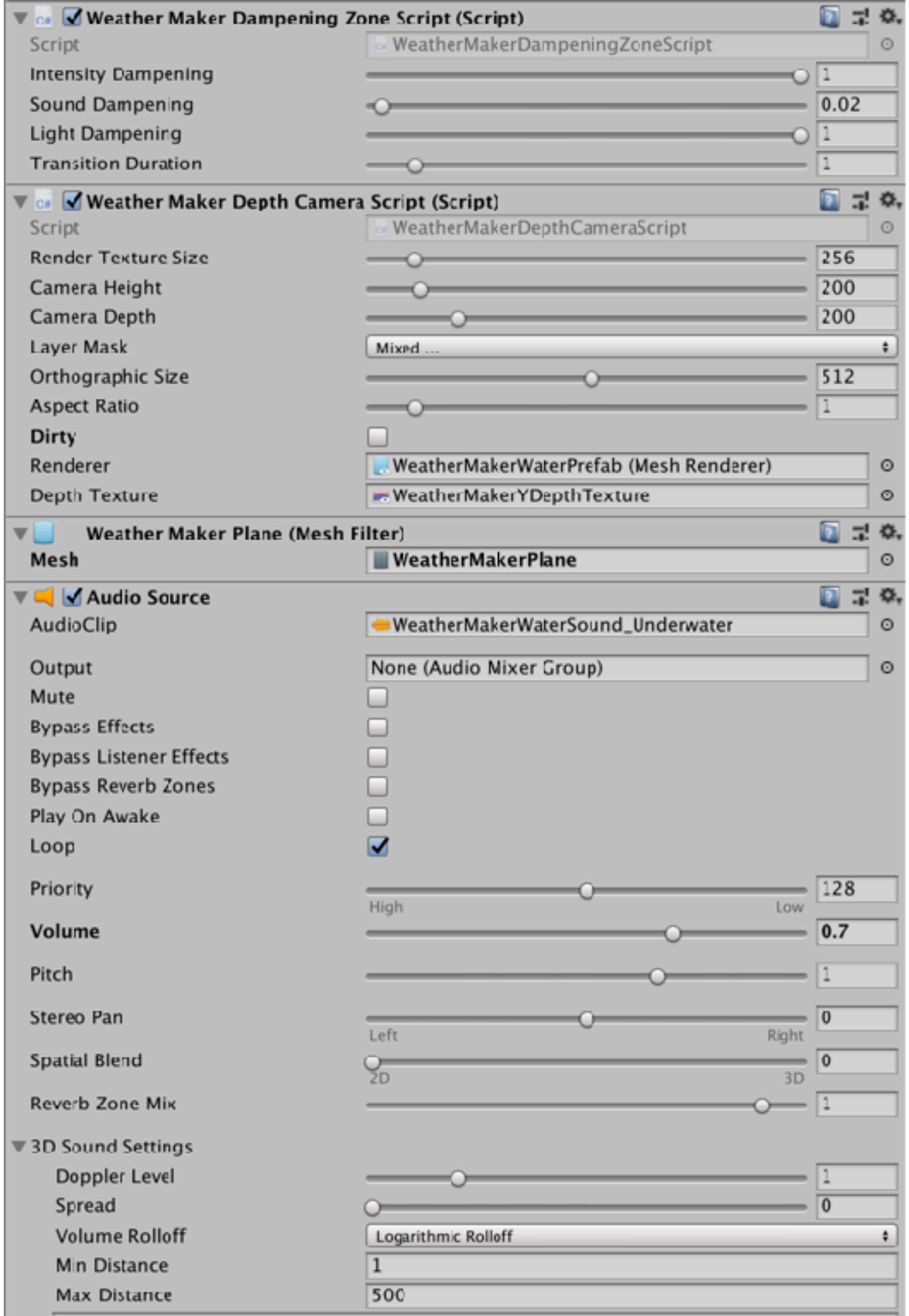
Plane Rows	96
Plane Columns	96
Plane Scale	1
Plane Forward is Z Axis	
Cube Depth	1

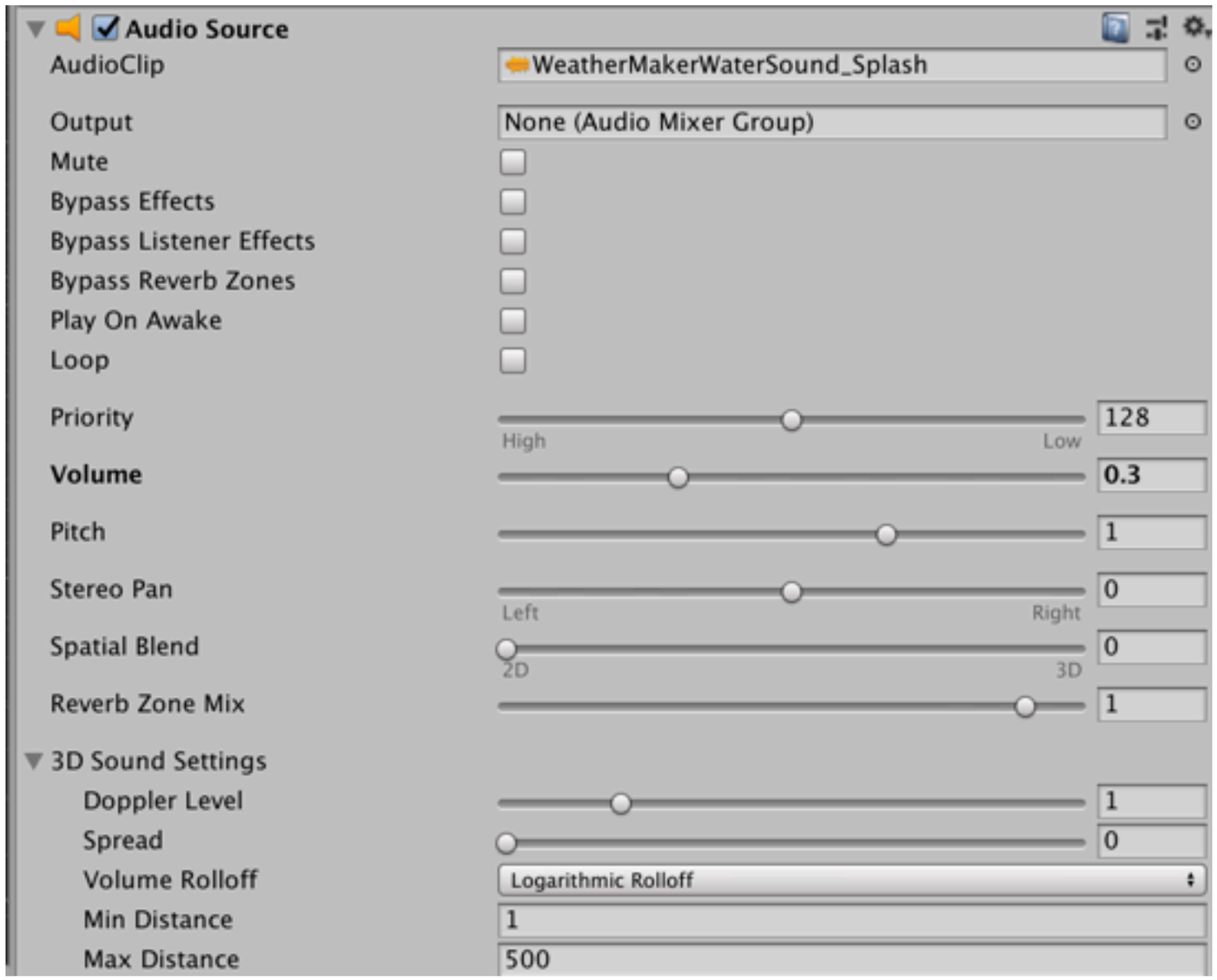
Weather Maker Null Zone Script (Script)

Script	WeatherMakerNullZoneScript
Null Zone Profile	WeatherMakerNullZoneProfile_Underwa

Weather Maker Dampening Zone Script (Script)


Inspector
Lighting
Services
Navigation
Recorder
WeatherMakerWaterPrefab
Static
Tag
Untagged
Layer
Water
Prefab
Select
Revert
Apply
Transform
Position
X 0
Y 0
Z 0
Rotation
X 0
Y 0
Z 0
Scale
X 1024
Y 3000
Z 1024
Weather Maker Water Script (Script)
Script
WeatherMakerWaterScript
Profile
Water Profile
WeatherMakerWaterProfileClear (WeatherMakerWaterP
Underwater
Underwater Audio Source
WeatherMakerWaterPrefab (Audio Source)
Splash Audio Source
WeatherMakerWaterPrefab (Audio Source)
Weather Maker Reflection Script (Script)
Script
WeatherMakerReflectionScript
Reflect Renderer
WeatherMakerWaterPrefab (Mesh Renderer)
Reflection Mask
Mixed ...
Reflection Mask Recursion
Nothing
Reflect Skybox
Reflection Sampler Name
_WeatherMakerWaterReflectionTex
Maximum Per Pixel Lights To Reflect
8
Clip Plane Offset
2
Render Texture Size
1024
Reflection Camera Rendering Path
Vertex Lit
Normal Is Forward
Aspect Ratio
0
Field Of View
0
Near Plane
0
Far Plane
0
Recursion Limit
0
Recursion Render Texture Size Reduc
0.75
Render Texture Format
ARGB32
Weather Maker Plane Creator Script (Script)
Script
WeatherMakerPlaneCreatorScript
Plane generation
Plane Rows
96
Plane Columns
96
Plane Scale
1
Plane Forward Is Z Axis
Cube Depth
1
Weather Maker Null Zone Script (Script)
Script
WeatherMakerNullZoneScript
Null Zone Profile
WeatherMakerNullZoneProfile_Underwater (WeatherMa


Weather Maker Dampening Zone Script (Script)
Script
WeatherMakerDampeningZoneScript
Intensity Dampening
1
Sound Dampening
0.02
Light Dampening
1
Transition Duration
1
Weather Maker Depth Camera Script (Script)
Script
WeatherMakerDepthCameraScript
Render Texture Size
256
Camera Height
200
Camera Depth
200
Layer Mask
Mixed ...
Orthographic Size
512
Aspect Ratio
1
Dirty
Renderer
WeatherMakerWaterPrefab (Mesh Renderer)
Depth Texture
WeatherMakerYDepthTexture
Weather Maker Plane (Mesh Filter)
Mesh
WeatherMakerPlane
Audio Source
AudioClip
WeatherMakerWaterSound_Underwater
Output
None (Audio Mixer Group)
Mute
Bypass Effects
Bypass Listener Effects
Bypass Reverb Zones
Play On Awake
Loop
Priority
128
High
Low
Volume
0.7
Pitch
1
Stereo Pan
0
Left
Right
Spatial Blend
0
2D
3D
Reverb Zone Mix
1
3D Sound Settings
Doppler Level
1
Spread
0
Volume Rolloff
Logarithmic Rolloff
Min Distance
1
Max Distance
500


Audio Source
AudioClip
WeatherMakerWaterSound_Splash
Output
None (Audio Mixer Group)
Mute
Bypass Effects
Bypass Listener Effects
Bypass Reverb Zones
Play On Awake
Loop
Priority
128
High
Low
Volume
0.3
Pitch
1
Stereo Pan
0
Left
Right
Spatial Blend
0
2D
3D
Reverb Zone Mix
1
3D Sound Settings
Doppler Level
1
Spread
0
Volume Rolloff
Logarithmic Rolloff
Min Distance
1
Max Distance
500

32. 트리거 눈끄고 크기 최종버전!****이걸로 써야됨

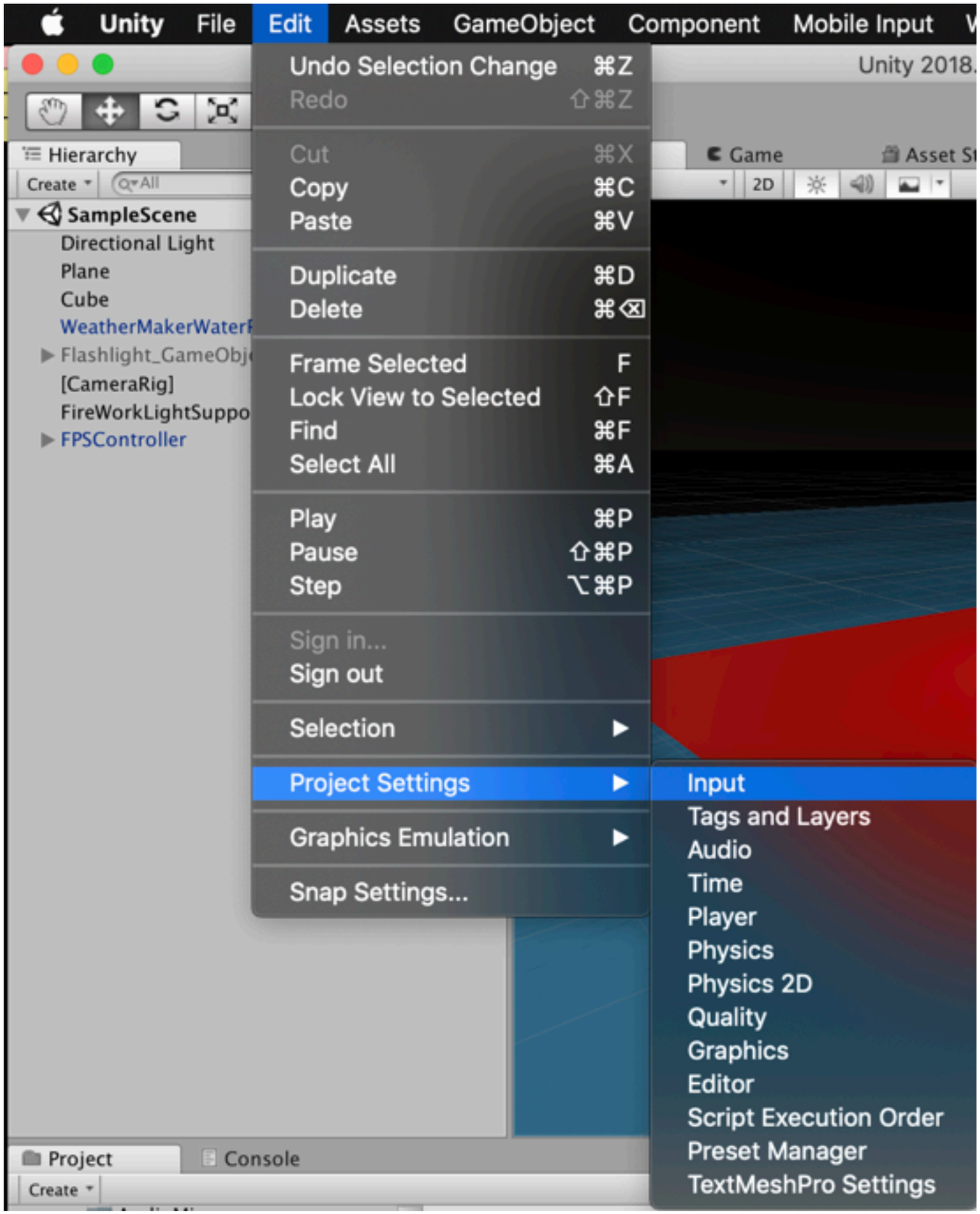
```
using System.Collections;
using System.Collections.Generic;
using UnityEngine;

public class PlanController : MonoBehaviour
{

    public bool makeActive;
    public GameObject[] objects;
    // Use this for initialization

    bool trigger;

    public void OnTriggerEnter(Collider other)
    {
        if (other.gameObject.CompareTag("Player"))
        {
            trigger = true;
        }
    }

    private void LateUpdate()
    {
        if (trigger)
        {
            foreach (var o in objects)
            {
                o.SetActive(makeActive);
            }

            trigger = false;
        }
    }
}
```

트리거로 해서 물체 눈꺼주는 코드 -> 이 전에 setActive(); 로 하니까 에러떠서 이걸로 교체

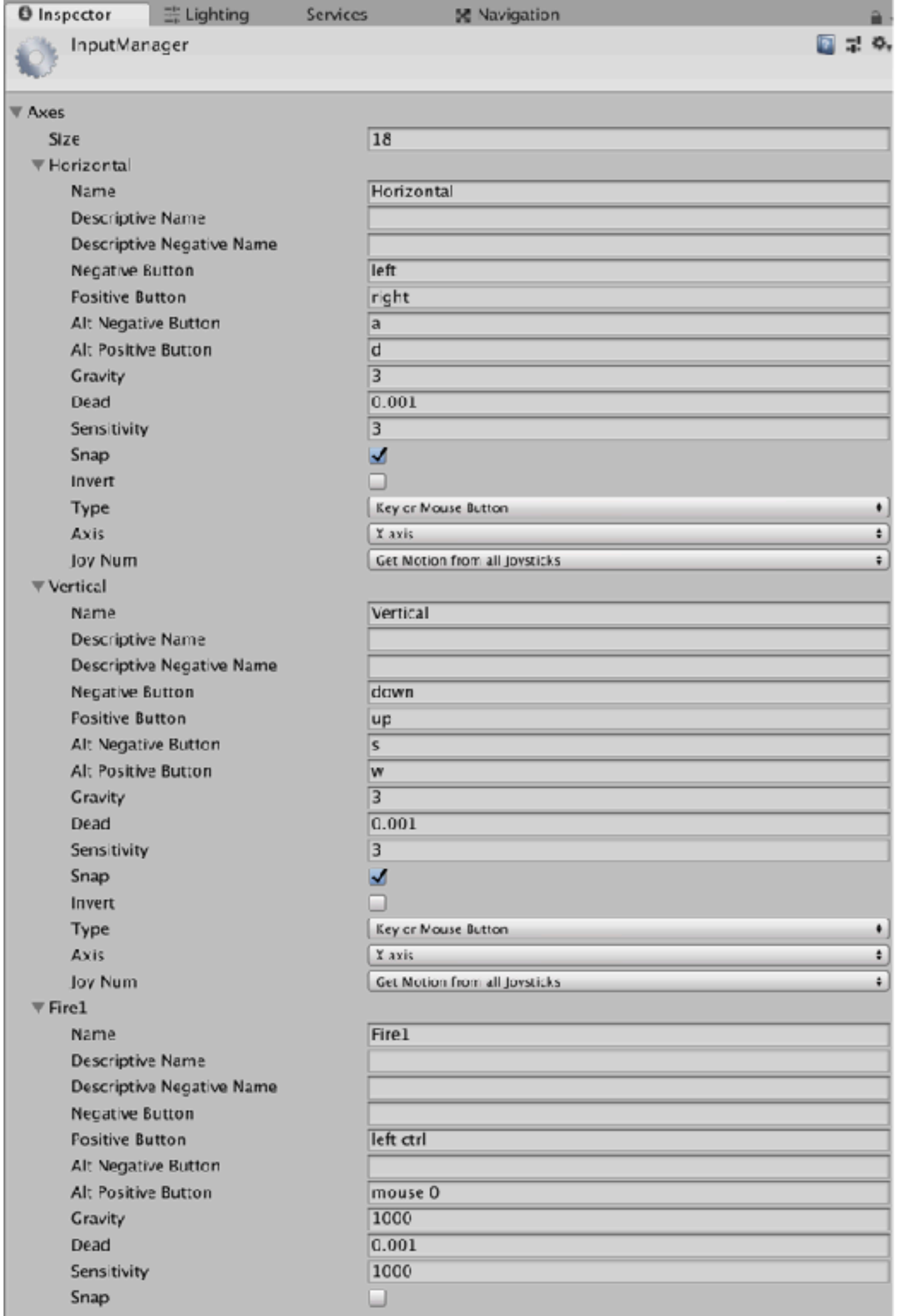
33. 일정시간 동안 멈췄다가 작동가능하게!

```
using System.Collections;
using System.Collections.Generic;
using UnityEngine;
using UnityStandardAssets.Characters.FirstPerson;

public class PlayerTimer_reverse : MonoBehaviour
{

    public float restTime;


    void Start()
    {
        restTime *= 60;
    }

    void Update()
    {
        restTime -= Time.deltaTime;
        if (restTime > 0)
        {
            transform.position = new Vector3(0, transform.position.y, 0);
        }
        if (restTime < 0)
        {
            transform.position = new Vector3(transform.position.x, transform.position.y, transform.position.z);
        }

    }
}
```

34. 키보드/컨트롤러 키 설정



34. 키보드/컨트롤러 키 설정



```
        }


        private void GetInput(out float speed)
        {
            // Read input
            float horizontal = CrossPlatformInputManager.GetAxis("Horizontal");
            float vertical = CrossPlatformInputManager.GetAxis("Vertical");

            bool waswalking = m_IsWalking;

#if !MOBILE_INPUT
            // On standalone builds, walk/run speed is modified by a key press.
            // keep track of whether or not the character is walking or running
            m_IsWalking = !Input.GetKey(KeyCode.LeftShift);
#endif
            // set the desired speed to be walking or running
            speed = m_IsWalking ? m_WalkSpeed : m_RunSpeed;
            m_Input = new Vector2(horizontal, vertical);

            // normalize input if it exceeds 1 in combined length:
            if (m_Input.sqrMagnitude > 1)
            {
                m_Input.Normalize();
            }

            // handle speed change to give an fov kick
            // only if the player is going to a run, is running and the fovkick is to be used
            if (m_IsWalking != waswalking && m_UseFovKick && m_CharacterController.velocity.sqrM
            {
                StopAllCoroutines();
                StartCoroutine(!m_IsWalking ? m_FovKick.FOVKickUp() : m_FovKick.FOVKickDown());
            }
        }


        private void RotateView()
        {
            m_MouseLook.LookRotation (transform, m_Camera.transform);
        }


        private void OnControllerColliderHit(ControllerColliderHit hit)
        {
            Rigidbody body = hit.collider.attachedRigidbody;
            //dont move the rigidbody if the character is on top of it
            if (m_CollisionFlags == CollisionFlags.Below)
            {
```

Leftshift만 누른다고 되는게 아니고
w+leftshift 해줘야지 움직임

```
212 #if !MOBILE_INPUT
213             // On standalone builds, walk/run speed is modified by a key press.
214             // keep track of whether or not the character is walking or running
215             m_IsWalking = !Input.GetKey(KeyCode.JoystickButton1) || !Input.GetKey(KeyCode.RightShift);
```

Inspector | Lighting | Services | Navigation

InputManager

- Axes
  - Size: 18
  - Horizontal
    - Name: Horizontal
    - Descriptive Name:
    - Descriptive Negative Name:
    - Negative Button: left
    - Positive Button: right
    - Alt Negative Button: a
    - Alt Positive Button: d
    - Gravity: 3
    - Dead: 0.001
    - Sensitivity: 3
    - Snap: ☑
    - Invert: ☐
    - Type: Key or Mouse Button
    - Axis: X axis
    - Joy Num: Get Motion from all Joysticks
  - Vertical
    - Name: Vertical
    - Descriptive Name:
    - Descriptive Negative Name:
    - Negative Button: down
    - Positive Button: up
    - Alt Negative Button: s
    - Alt Positive Button: w
    - Gravity: 3
    - Dead: 0.001
    - Sensitivity: 3
    - Snap: ☑
    - Invert: ☐
    - Type: Key or Mouse Button
    - Axis: X axis
    - Joy Num: Get Motion from all Joysticks
  - Fire1
    - Name: Fire1
    - Descriptive Name:
    - Descriptive Negative Name:
    - Negative Button:
    - Positive Button: left ctrl
    - Alt Negative Button:
    - Alt Positive Button: mouse 0
    - Gravity: 1000
    - Dead: 0.001
    - Sensitivity: 1000
    - Snap: ☐

run작동하는 input

- Fire2
  - Name: Fire2
  - Descriptive Name:
  - Descriptive Negative Name:
  - Negative Button:
  - Positive Button: left alt
  - Alt Negative Button:
  - Alt Positive Button: mouse 1
  - Gravity: 1000
  - Dead: 0.001
  - Sensitivity: 1000
  - Snap: ☐
  - Invert: ☐
  - Type: Key or Mouse Button
  - Axis: X axis
  - Joy Num: Get Motion from all Joysticks
- Fire3
  - Name: Fire3
  - Descriptive Name:
  - Descriptive Negative Name:
  - Negative Button:
  - Positive Button: left shift
  - Alt Negative Button:
  - Alt Positive Button: mouse 2
  - Gravity: 1000
  - Dead: 0.001
  - Sensitivity: 1000
  - Snap: ☐
  - Invert: ☐
  - Type: Key or Mouse Button
  - Axis: X axis
  - Joy Num: Get Motion from all Joysticks

FirstPersonController.cs

No selection

```
using System;
using UnityEngine;
using UnityStandardAssets.CrossPlatformInput;
using UnityStandardAssets.Utility;
using Random = UnityEngine.Random;

namespace UnityStandardAssets.Characters.FirstPerson
{
    [RequireComponent(typeof (CharacterController))]
    [RequireComponent(typeof (AudioSource))]
    public class FirstPersonController : MonoBehaviour
    {
        [SerializeField] private bool m_IsWalking;
        [SerializeField] private float m_WalkSpeed;
        [SerializeField] private float m_RunSpeed;
        [SerializeField] [Range(0f, 1f)] private float m_RunstepLenghten;
        [SerializeField] private float m_JumpSpeed;
        [SerializeField] private float m_StickToGroundForce;
        [SerializeField] private float m_GravityMultiplier;
        [SerializeField] private MouseLook m_MouseLook;
        [SerializeField] private bool m_UseFovKick;
        [SerializeField] private FOVKick m_FovKick = new FOVKick();
        [SerializeField] private bool m_UseHeadBob;
        [SerializeField] private CurveControlledBob m_HeadBob = new CurveControlledBob();
        [SerializeField] private LerpControlledBob m_JumpBob = new LerpControlledBob();
        [SerializeField] private float m_StepInterval;
        [SerializeField] private AudioClip[] m_FootstepSounds;    // an array of footstep sounds that will be randomly
        [SerializeField] private AudioClip m_JumpSound;           // the sound played when character leaves the ground.
        [SerializeField] private AudioClip m_LandSound;           // the sound played when character touches back on gr

        private Camera m_Camera;
        private bool m_Jump;
        private float m_YRotation;
        private Vector2 m_Input;
        private Vector3 m_MoveDir = Vector3.zero;
        private CharacterController m_CharacterController;
        private CollisionFlags m_CollisionFlags;
        private bool m_PreviouslyGrounded;
        private Vector3 m_OriginalCameraPosition;
        private float m_StepCycle;
        private float m_NextStep;
        private bool m_Jumping;
        private AudioSource m_AudioSource;

        // Use this for initialization
        private void Start()
        {
            m_CharacterController = GetComponent<CharacterController>();
            m_Camera = Camera.main;
            m_OriginalCameraPosition = m_Camera.transform.localPosition;
            m_FovKick.Setup(m_Camera);
            m_HeadBob.Setup(m_Camera, m_StepInterval);
            m_StepCycle = 0f;
            m_NextStep = m_StepCycle/2f;
            m_Jumping = false;
            m_AudioSource = GetComponent<AudioSource>();
            m_MouseLook.Init(transform , m_Camera.transform);
        }
```

```
        m_AudioSource = GetComponent<AudioSource>();
        m_MouseLook.Init(transform , m_Camera.transform);
    }


    // Update is called once per frame
    private void Update()
    {
        RotateView();
        // the jump state needs to read here to make sure it is not missed
        if (!m_Jump)
        {
            m_Jump = CrossPlatformInputManager.GetButtonDown("Jump");
        }

        if (!m_PreviouslyGrounded && m_CharacterController.isGrounded)
        {
            StartCoroutine(m_JumpBob.DoBobCycle());
            PlayLandingSound();
            m_MoveDir.y = 0f;
            m_Jumping = false;
        }
        if (!m_CharacterController.isGrounded && !m_Jumping && m_PreviouslyGrounded)
        {
            m_MoveDir.y = 0f;
        }

        m_PreviouslyGrounded = m_CharacterController.isGrounded;
    }


    private void PlayLandingSound()
    {
        m_AudioSource.clip = m_LandSound;
        m_AudioSource.Play();
        m_NextStep = m_StepCycle + .5f;
    }


    private void FixedUpdate()
    {
        float speed;
        GetInput(out speed);
        // always move along the camera forward as it is the direction that it being aimed at
        Vector3 desiredMove = transform.forward*m_Input.y + transform.right*m_Input.x;

        // get a normal for the surface that is being touched to move along it
        RaycastHit hitInfo;
        Physics.SphereCast(transform.position, m_CharacterController.radius, Vector3.down, out hitInfo,
                           m_CharacterController.height/2f, Physics.AllLayers, QueryTriggerInteraction.Ignore);
        desiredMove = Vector3.ProjectOnPlane(desiredMove, hitInfo.normal).normalized;

        m_MoveDir.x = desiredMove.x*speed;
        m_MoveDir.z = desiredMove.z*speed;


        if (m_CharacterController.isGrounded)
```

```
            m_MoveDir.y = -m_StickToGroundForce;

            if (m_Jump)
            {
                m_MoveDir.y = m_JumpSpeed;
                PlayJumpSound();
                m_Jump = false;
                m_Jumping = true;
            }
        }
        else
        {
            m_MoveDir += Physics.gravity*m_GravityMultiplier*Time.fixedDeltaTime;
        }
        m_CollisionFlags = m_CharacterController.Move(m_MoveDir*Time.fixedDeltaTime);

        ProgressStepCycle(speed);
        UpdateCameraPosition(speed);

        m_MouseLook.UpdateCursorLock();
    }


    private void PlayJumpSound()
    {
        m_AudioSource.clip = m_JumpSound;
        m_AudioSource.Play();
    }


    private void ProgressStepCycle(float speed)
    {
        if (m_CharacterController.velocity.sqrMagnitude > 0 && (m_Input.x != 0 || m_Input.y != 0))
        {
            m_StepCycle += (m_CharacterController.velocity.magnitude + (speed*(m_IsWalking ? 1f : m_RunstepLenghten
                        Time.fixedDeltaTime;
        }

        if (!(m_StepCycle > m_NextStep))
        {
            return;
        }

        m_NextStep = m_StepCycle + m_StepInterval;

        PlayFootStepAudio();
    }


    private void PlayFootStepAudio()
    {
        if (!m_CharacterController.isGrounded)
        {
            return;
        }
        // pick & play a random footstep sound from the array,
        // excluding sound at index 0
```

```
            int n = Random.Range(1, m_FootstepSounds.Length);
            m_AudioSource.clip = m_FootstepSounds[n];
            m_AudioSource.PlayOneShot(m_AudioSource.clip);
            // move picked sound to index 0 so it's not picked next time
            m_FootstepSounds[n] = m_FootstepSounds[0];
            m_FootstepSounds[0] = m_AudioSource.clip;
        }


        private void UpdateCameraPosition(float speed)
        {
            Vector3 newCameraPosition;
            if (!m_UseHeadBob)
            {
                return;
            }
            if (m_CharacterController.velocity.magnitude > 0 && m_CharacterController.isGrounded)
            {
                m_Camera.transform.localPosition =
                    m_HeadBob.DoHeadBob(m_CharacterController.velocity.magnitude +
                                        (speed*(m_IsWalking ? 1f : m_RunstepLenghten)));
                newCameraPosition = m_Camera.transform.localPosition;
                newCameraPosition.y = m_Camera.transform.localPosition.y - m_JumpBob.Offset();
            }
            else
            {
                newCameraPosition = m_Camera.transform.localPosition;
                newCameraPosition.y = m_OriginalCameraPosition.y - m_JumpBob.Offset();
            }
            m_Camera.transform.localPosition = newCameraPosition;
        }


        private void GetInput(out float speed)
        {
            // Read input
            float horizontal = CrossPlatformInputManager.GetAxis("Horizontal");
            float vertical = CrossPlatformInputManager.GetAxis("Vertical");

            bool waswalking = m_IsWalking;

#if !MOBILE_INPUT
            // On standalone builds, walk/run speed is modified by a key press.
            // keep track of whether or not the character is walking or running
            m_IsWalking = !Input.GetKey(KeyCode.LeftShift);
#endif
            // set the desired speed to be walking or running
            speed = m_IsWalking ? m_WalkSpeed : m_RunSpeed;
            m_Input = new Vector2(horizontal, vertical);

            // normalize input if it exceeds 1 in combined length:
            if (m_Input.sqrMagnitude > 1)
            {
                m_Input.Normalize();
            }

```

```
#if !MOBILE_INPUT
            // On standalone builds, walk/run speed is modified by a key press.
            // keep track of whether or not the character is walking or running
            m_IsWalking = !Input.GetKey(KeyCode.LeftShift);
#endif
            // set the desired speed to be walking or running
            speed = m_IsWalking ? m_WalkSpeed : m_RunSpeed;
            m_Input = new Vector2(horizontal, vertical);

            // normalize input if it exceeds 1 in combined length:
            if (m_Input.sqrMagnitude > 1)
            {
                m_Input.Normalize();
            }

            // handle speed change to give an fov kick
            // only if the player is going to a run, is running and the fovkick is to be used
            if (m_IsWalking != waswalking && m_UseFovKick && m_CharacterController.velocity.sqrMagnitude > 0)
            {
                StopAllCoroutines();
                StartCoroutine(!m_IsWalking ? m_FovKick.FOVKickUp() : m_FovKick.FOVKickDown());
            }
        }


        private void RotateView()
        {
            m_MouseLook.LookRotation (transform, m_Camera.transform);
        }


        private void OnControllerColliderHit(ControllerColliderHit hit)
        {
            Rigidbody body = hit.collider.attachedRigidbody;
            //dont move the rigidbody if the character is on top of it
            if (m_CollisionFlags == CollisionFlags.Below)
            {
                return;
            }

            if (body == null || body.isKinematic)
            {
                return;
            }
            body.AddForceAtPosition(m_CharacterController.velocity*0.1f, hit.point, ForceMode.Impulse);
        }
    }
}
```

달리기