using System;

using UnityEngine;

namespace UnityStandardAssets.Utility

{

public class DynamicShadowSettings : MonoBehaviour

{

public Light sunLight;

public float minHeight = 10;

public float minShadowDistance = 80;

public float minShadowBias = 1;

public float maxHeight = 1000;

public float maxShadowDistance = 10000;

public float maxShadowBias = 0.1f;

public float adaptTime = 1;

private float m\_SmoothHeight;

private float m\_ChangeSpeed;

private float m\_OriginalStrength = 1;

private void Start()

{

m\_OriginalStrength = sunLight.shadowStrength;

}

// Update is called once per frame

private void Update()

{

Ray ray = new Ray(Camera.main.transform.position, -Vector3.up);

RaycastHit hit;

float height = transform.position.y;

if (Physics.Raycast(ray, out hit))

{

height = hit.distance;

}

if (Mathf.Abs(height - m\_SmoothHeight) > 1)

{

m\_SmoothHeight = Mathf.SmoothDamp(m\_SmoothHeight, height, ref m\_ChangeSpeed, adaptTime);

}

float i = Mathf.InverseLerp(minHeight, maxHeight, m\_SmoothHeight);

QualitySettings.shadowDistance = Mathf.Lerp(minShadowDistance, maxShadowDistance, i);

sunLight.shadowBias = Mathf.Lerp(minShadowBias, maxShadowBias, 1 - ((1 - i)\*(1 - i)));

sunLight.shadowStrength = Mathf.Lerp(m\_OriginalStrength, 0, i);

}

}

}