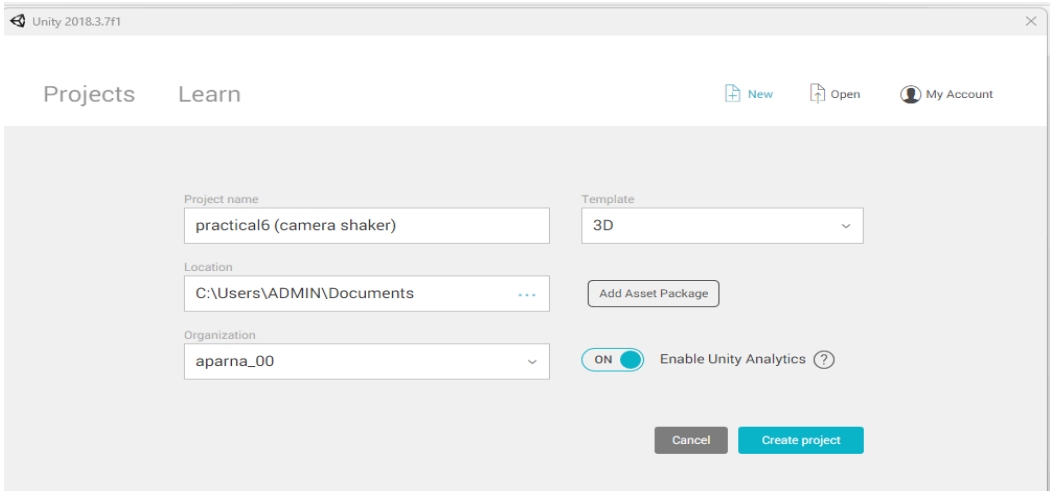
TYCS SEM V

Game Programming

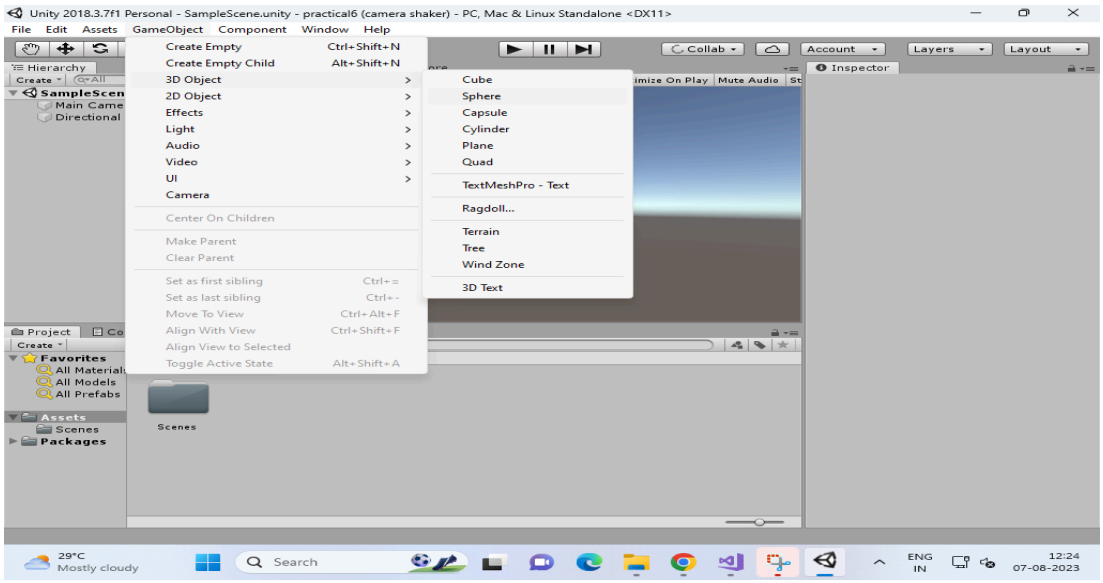
Practical no .6

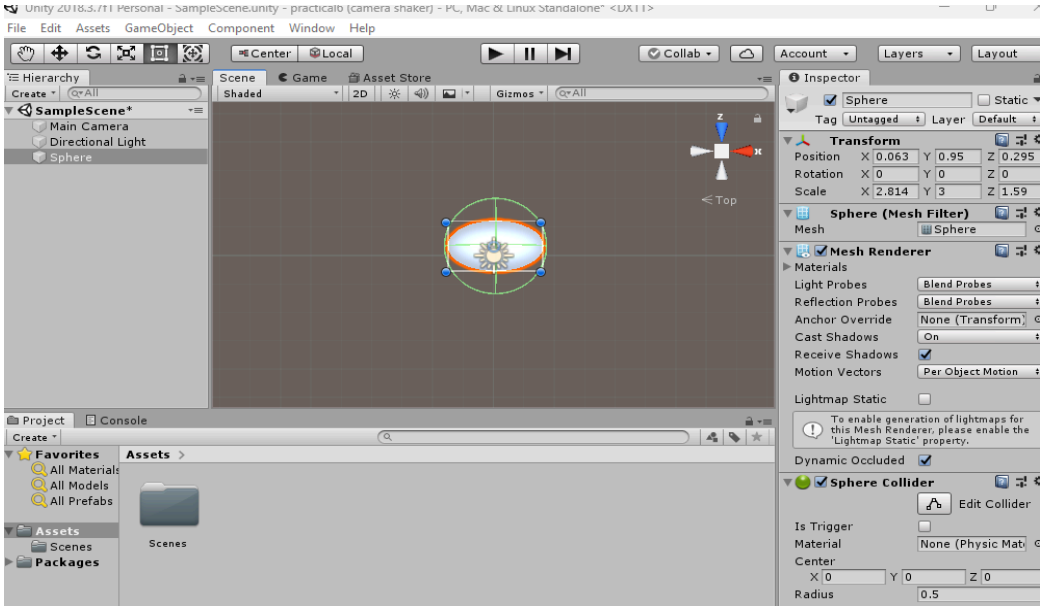
Aim : Create Camera Shake Effect in Unity.

Step 1 : Open the Unity app → select new project → write the project name → select the template (3D)→ click on create project

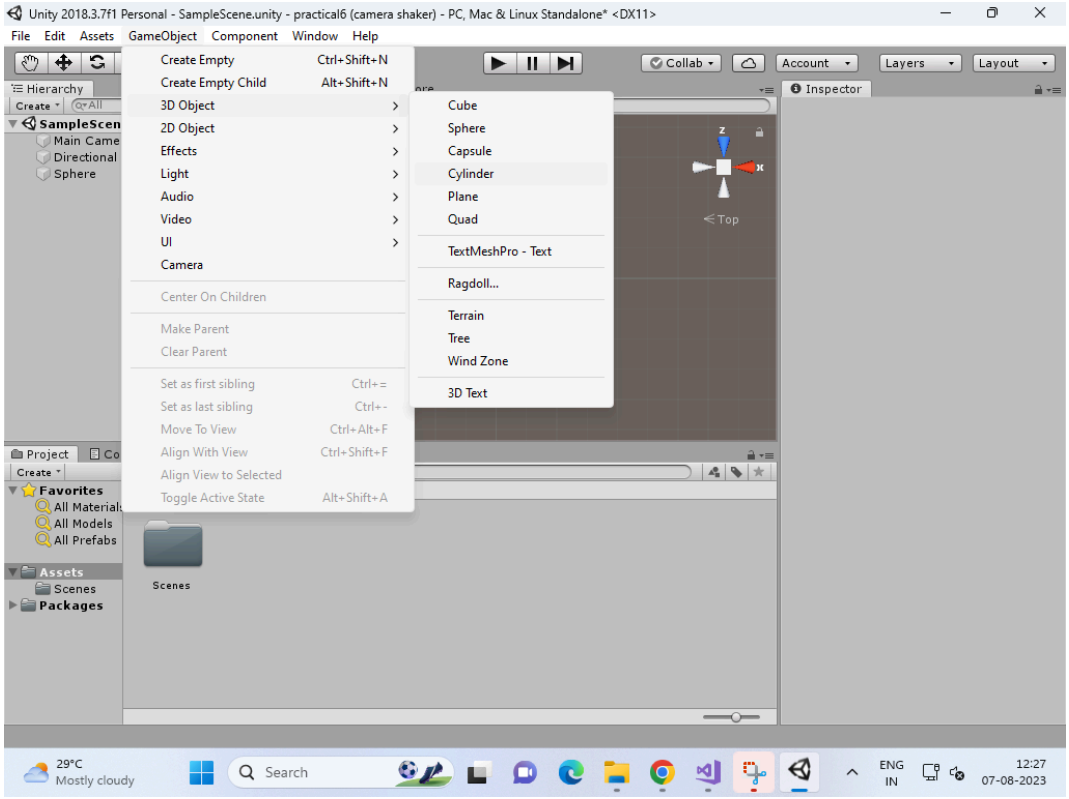


Step 2 : We are going to create a miniatureto observe the shaking of a camera.
(Miniatures will consist of a sphere , cube , etc).
Add the Gameobject by clicking on the GameObject → 3D Object → sphere.

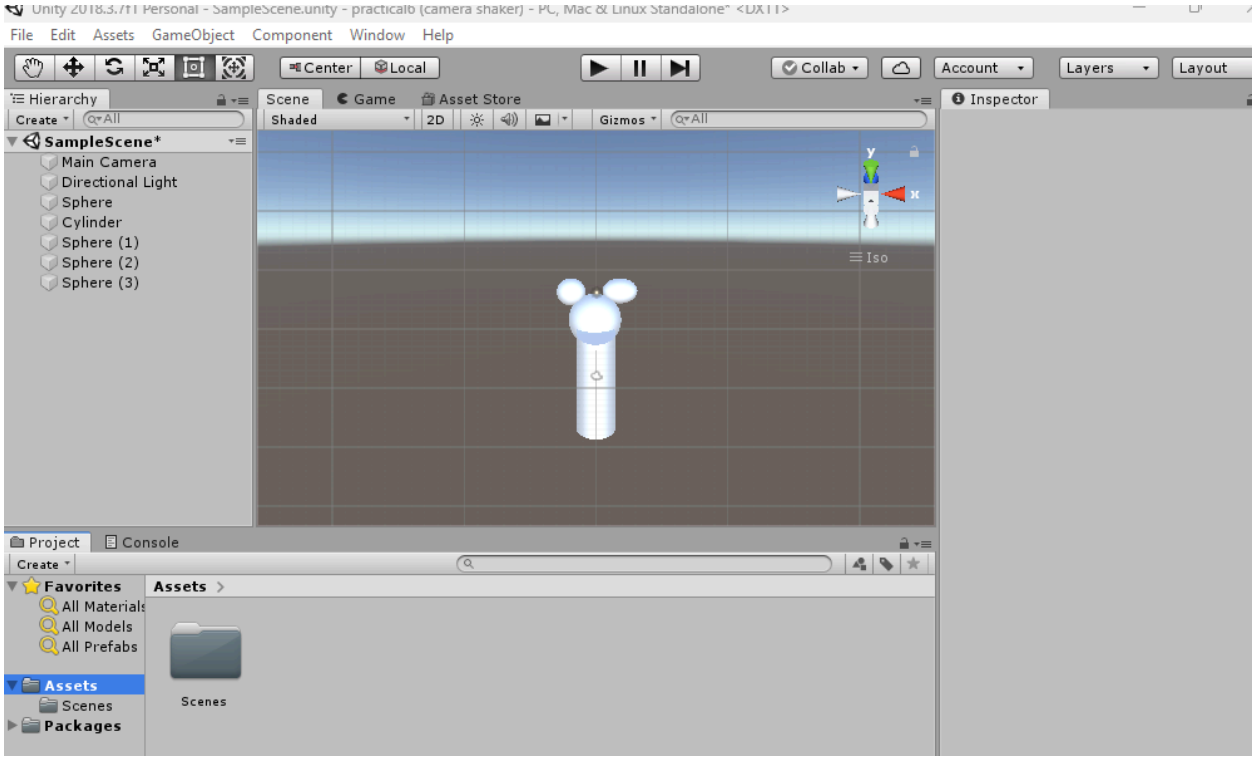




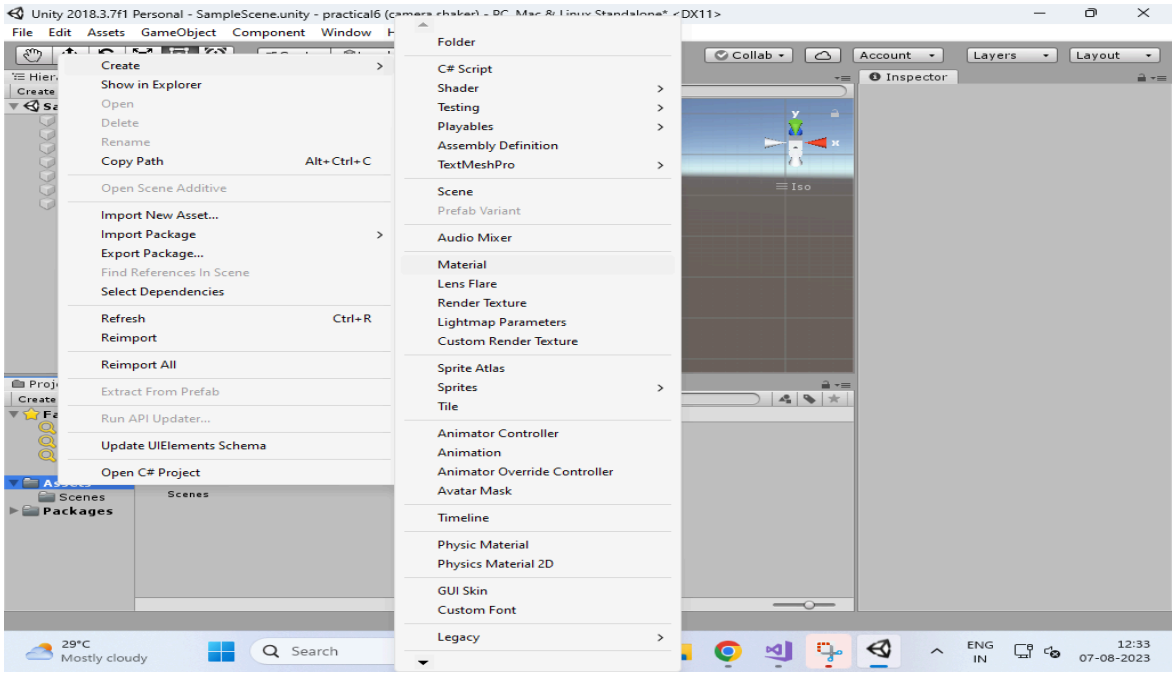
Step 3: Add the Gameobject by clicking on the GameObject → 3D Object → cube



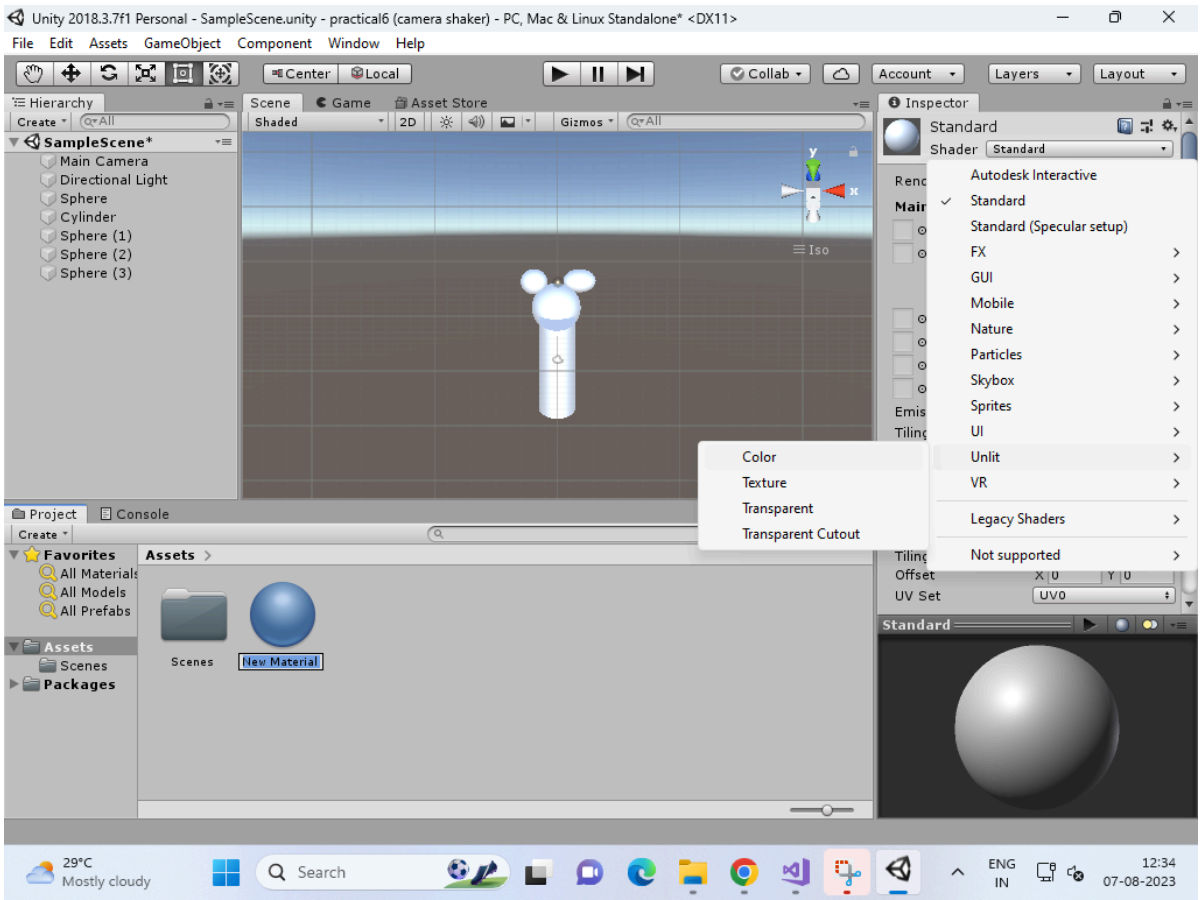
Step 3: All the GameObject will be seen in the Hierarchy window.
Make the changes in the properties according to your need.
Properties of the GameObject will be visible in the Inspector window.



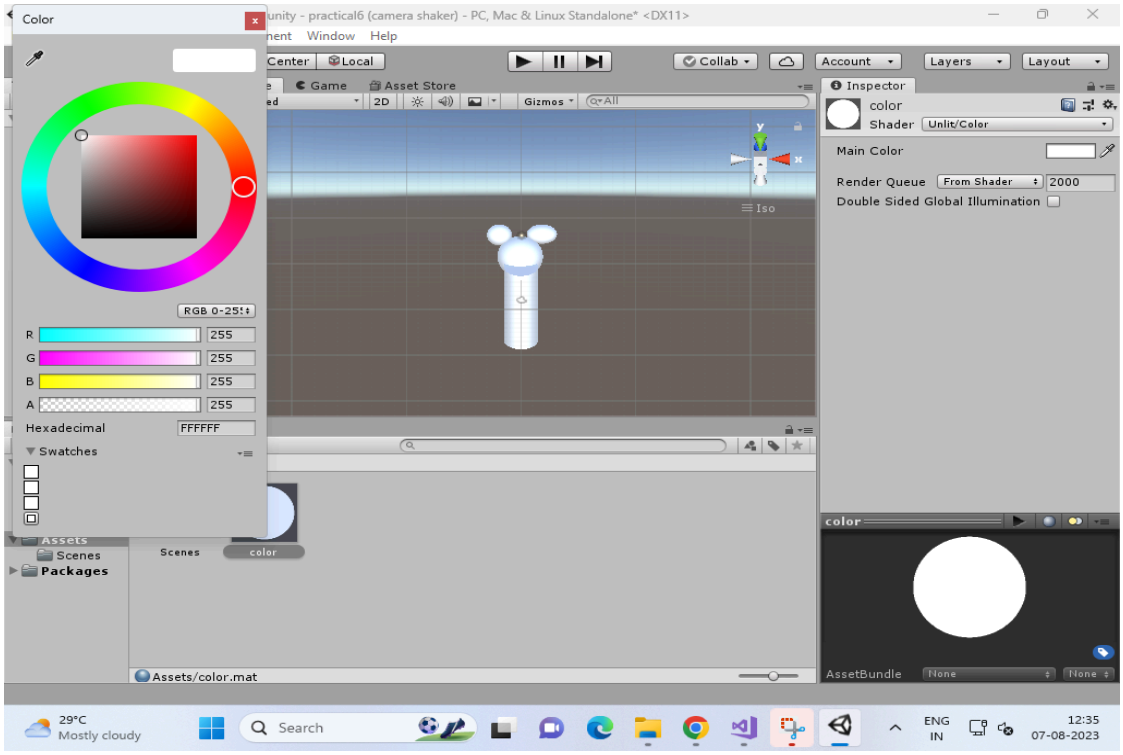
Step 4: If you want to change the color of the GameObject,
Create the material from the Asset window.
Name it as color and change the properties or select the color according to your choice.

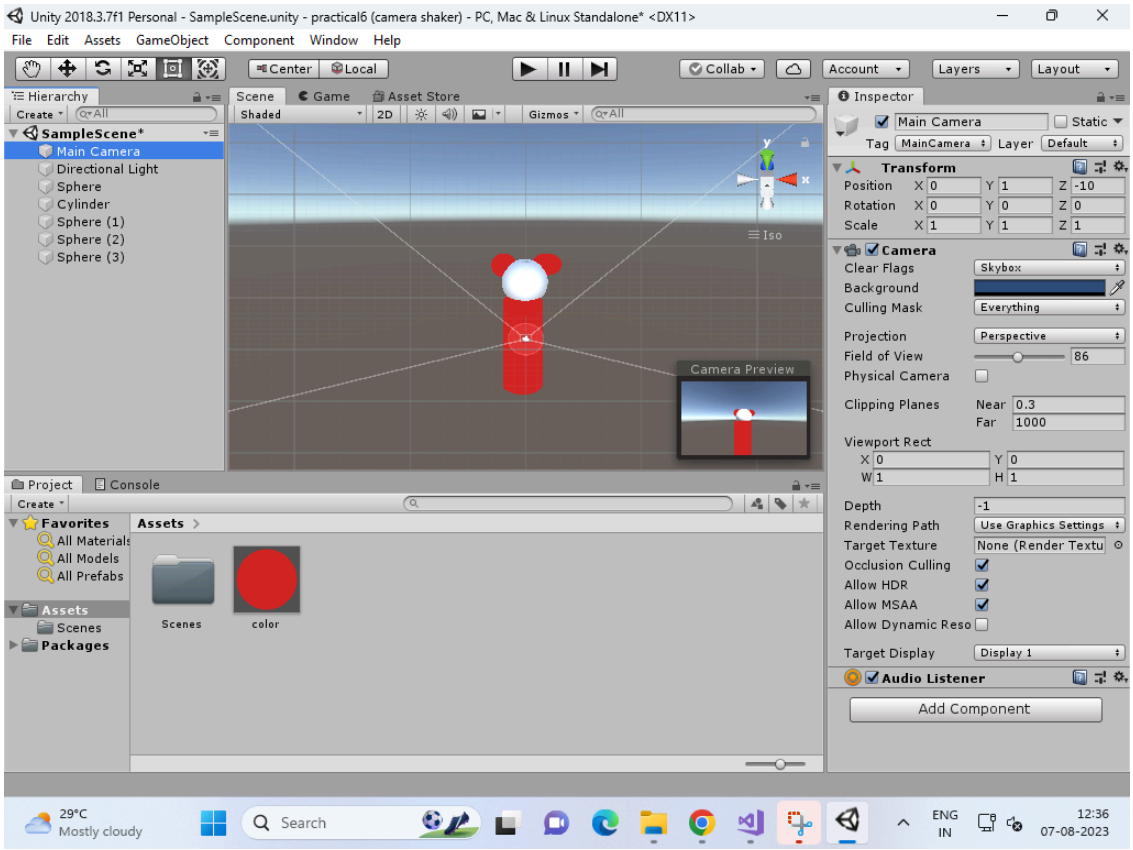


Step 5 : Properties → changes in the inspector window → click in unit —> select color —>abele

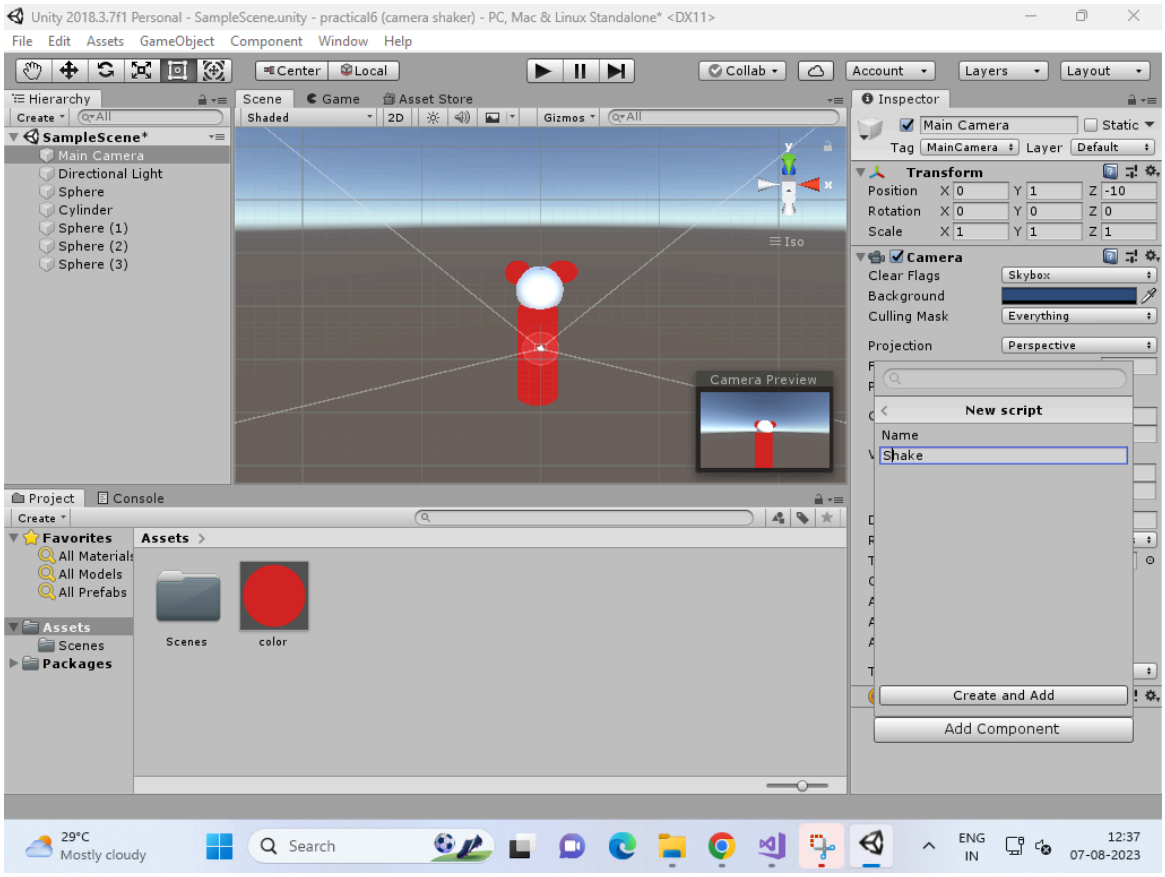


Select the color from the hex.



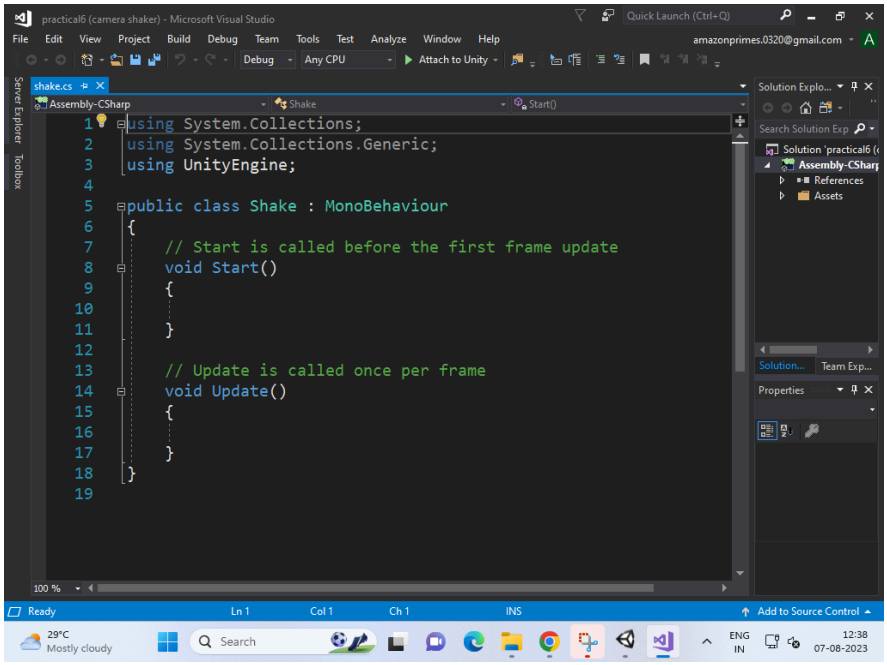


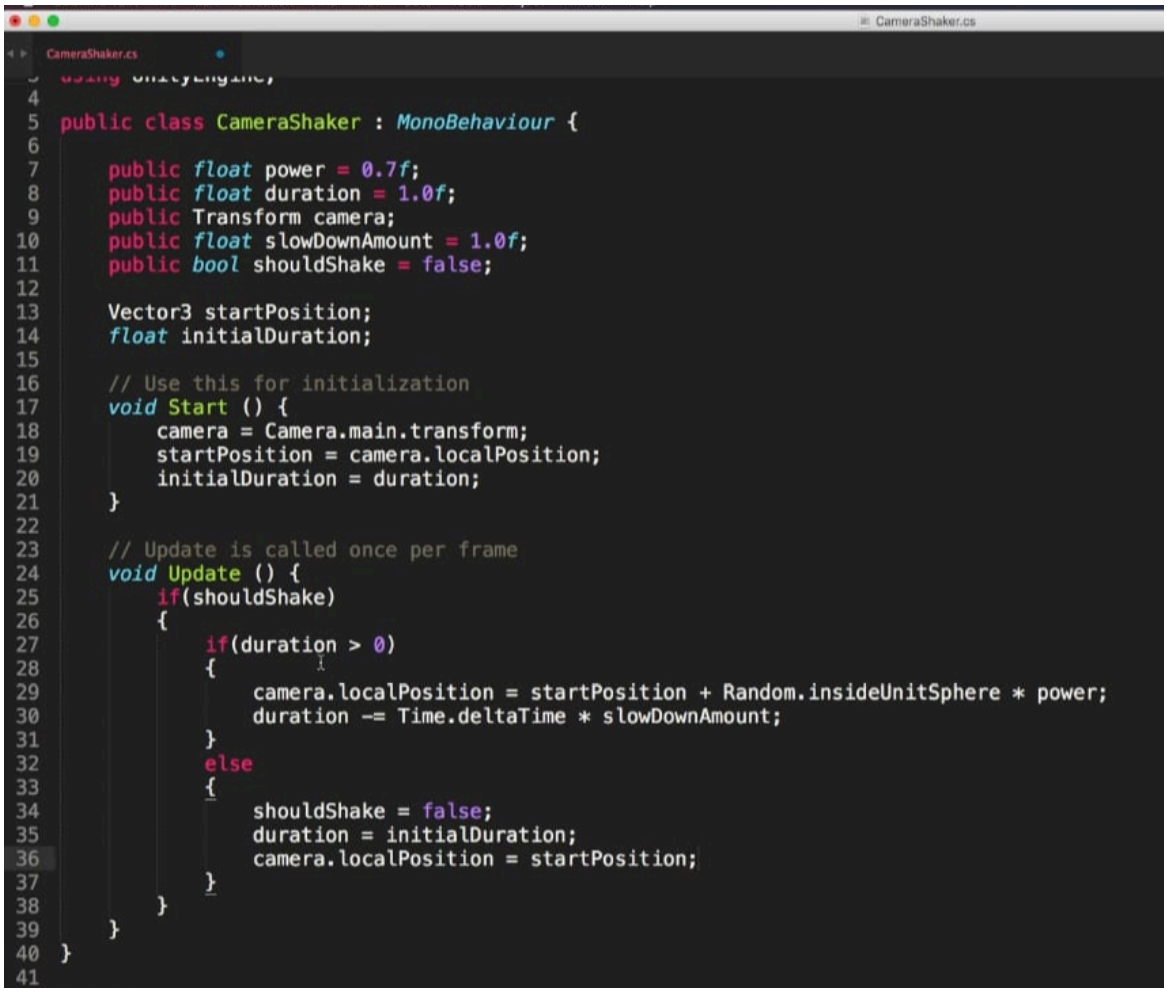
Step 6: check whether the camera is adjust properly and light is there or not on the object that you have created.



Step 7 : Once everything is done we have to make the camera shake for that write the C# script.

For C# script → click on main camera (in hierarchy window) —> Go to inspector window (make the changes in the properties) i.e Add Component → click on script → add new script → name it —> script file will be visible in the asset window → double click on it.
Visual studio will open → write the code.

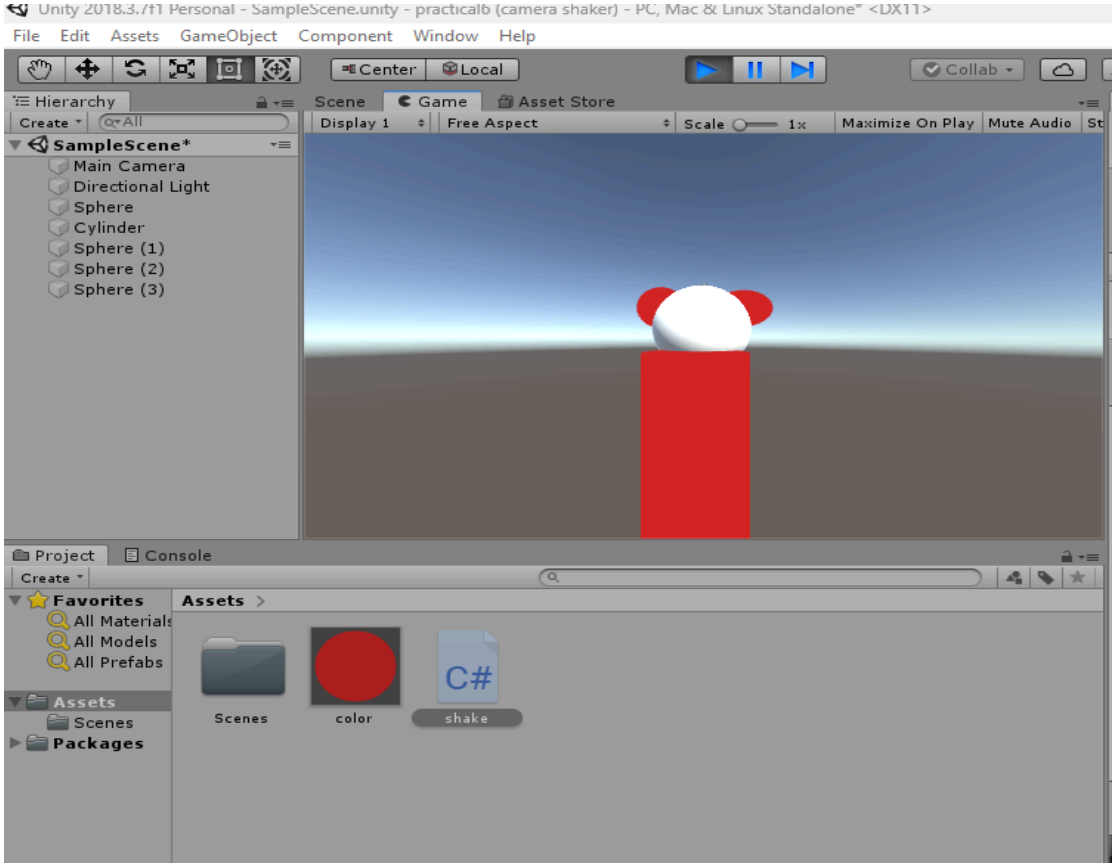

practical6 (camera shaker) - Microsoft Visual Studio
shake.cs
Assembly-CSharp
Shake
Start()
using System.Collections;
using System.Collections.Generic;
using UnityEngine;
public class Shake : MonoBehaviour
{
// Start is called before the first frame update
void Start()
{
}
// Update is called once per frame
void Update()
{
}
}
Ready
Ln 1
Col 1
Ch 1
INS
Add to Source Control

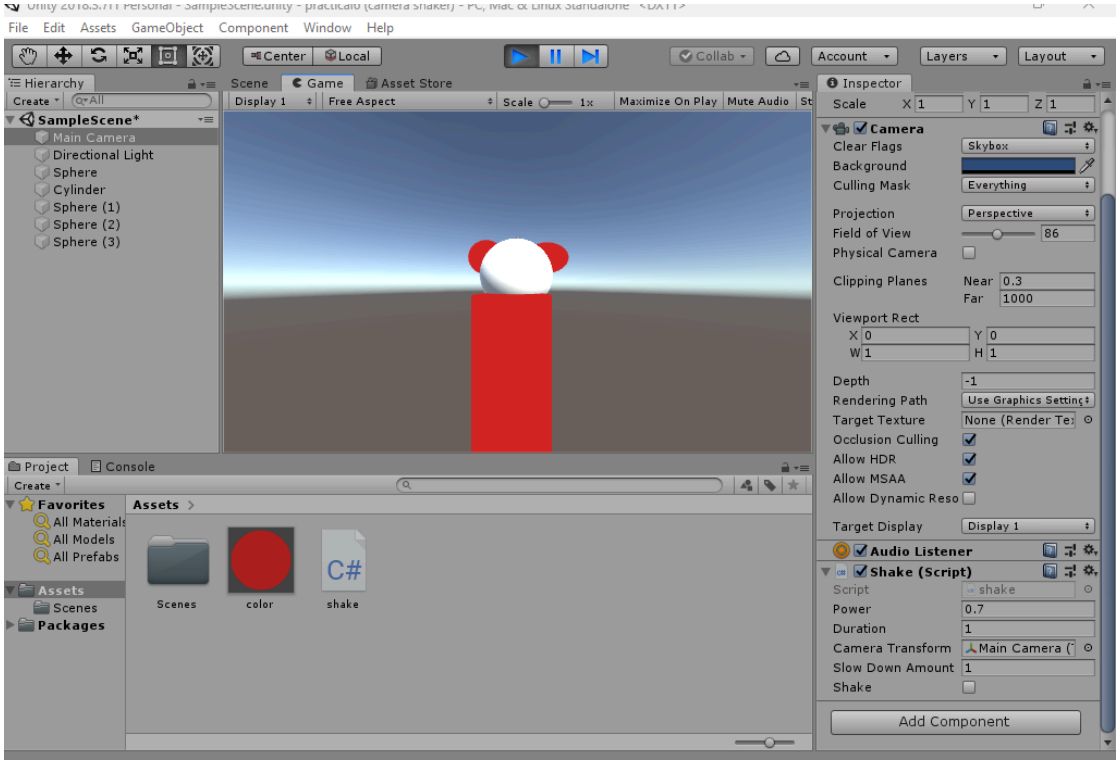

CameraShaker.cs
public class CameraShaker : MonoBehaviour {
public float power = 0.7f;
public float duration = 1.0f;
public Transform camera;
public float slowDownAmount = 1.0f;
public bool shouldShake = false;
Vector3 startPosition;
float initialDuration;
// Use this for initialization
void Start () {
camera = Camera.main.transform;
startPosition = camera.localPosition;
initialDuration = duration;
}
// Update is called once per frame
void Update () {
if(shouldShake)
{
if(duration > 0)
{
camera.localPosition = startPosition + Random.insideUnitSphere * power;
duration -= Time.deltaTime * slowDownAmount;
}
else
{
shouldShake = false;
duration = initialDuration;
camera.localPosition = startPosition;
}
}
}
}

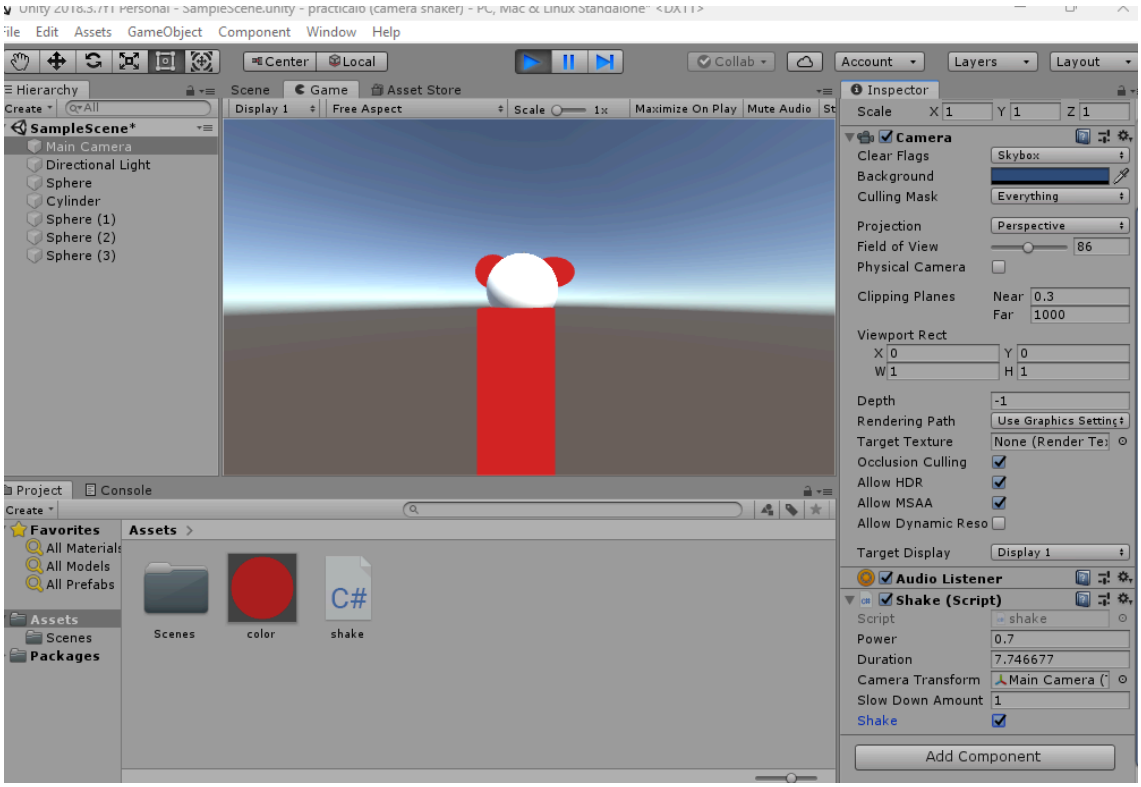
```
using System.Collections;
using System.Collections.Generic;
using UnityEngine;

public class shake : MonoBehaviour
{
    public float power = 0.7f;
    public float duration = 1.0f;
    public Transform cameraTransform;
    public float slowDownAmount = 1.0f;
    Vector3 startPosition;
    public bool Shake = false;
    float initialDuration;

    // Start is called before the first frame update
    void Start()
    {
        cameraTransform = Camera.main.transform;
        startPosition = cameraTransform.localPosition;
        initialDuration = duration;
    }

    // Update is called once per frame
    void Update()
    {
        if (Shake)
        {
            if (duration > 0)
            {
                cameraTransform.localPosition = startPosition + Random.insideUnitSphere * power;
                duration -= Time.deltaTime * slowDownAmount;
            }
            else
            {
                Shake = false;
                duration = initialDuration;
                cameraTransform.localPosition = startPosition;
            }
        }
    }

    public void StartShake()
```

```
    {
        Shake = true;
    }
}
```

Step 8: Once it is done , go to unity —> play the game —> you will find the variable of the script. Click on the shake variable to shake the camera.




File Edit Assets GameObject Component Window Help
Center Local
Collab Account Layers Layout
Hierarchy
Create All
SampleScene*
Main Camera
Directional Light
Sphere
Cylinder
Sphere (1)
Sphere (2)
Sphere (3)
Scene Game Asset Store
Display 1 Free Aspect Scale 1x Maximize On Play Mute Audio
Inspector
Scale X 1 Y 1 Z 1
Camera
Clear Flags Skybox
Background
Culling Mask Everything
Projection Perspective
Field of View 86
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 Setting
Target Texture None (Render Te
Occlusion Culling
Allow HDR
Allow MSAA
Allow Dynamic Reso
Target Display Display 1
Audio Listener
Shake (Script)
Script shake
Power 0.7
Duration 1
Camera Transform Main Camera
Slow Down Amount 1
Shake
Add Component
Project Console
Create
Favorites
All Materials
All Models
All Prefabs
Assets
Scenes
Packages
Assets
Scenes
color
shake


File Edit Assets GameObject Component Window Help
Center Local
Collab Account Layers Layout
Hierarchy
Create All
SampleScene*
Main Camera
Directional Light
Sphere
Cylinder
Sphere (1)
Sphere (2)
Sphere (3)
Scene Game Asset Store
Display 1 Free Aspect Scale 1x Maximize On Play Mute Audio
Inspector
Scale X 1 Y 1 Z 1
Camera
Clear Flags Skybox
Background
Culling Mask Everything
Projection Perspective
Field of View 86
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 Setting
Target Texture None (Render Te
Occlusion Culling
Allow HDR
Allow MSAA
Allow Dynamic Reso
Target Display Display 1
Audio Listener
Shake (Script)
Script shake
Power 0.7
Duration 7.746677
Camera Transform Main Camera
Slow Down Amount 1
Shake
Add Component
Project Console
Create
Favorites
All Materials
All Models
All Prefabs
Assets
Scenes
Packages
Assets
Scenes
color
shake