#### **Practical No.6**

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#### **Step 1: Set Up Your Unity Project**

1. **Open Unity**: Start a new or existing Unity project.
2. **Create a Scene**: If you're in a new project, create a new scene.

#### **Step 2: Create the Shake Script**

1. **Create the Shake Script**:
   * In the Assets folder, right-click and select **Create > C# Script**.
   * Name the script Shake.
2. **Open the Shake Script**: Double-click the Shake script to open it in your code editor (e.g., Visual Studio).
3. **Write the Shake Script**: Replace the contents of the Shake script with the following code:

using System.Collections;

using System.Collections.Generic;

using UnityEngine;

public class Shake : MonoBehaviour

{

public float shakeDuration = 0.2f;

public float shakeIntensity = 0.1f;

private Vector3 initialPosition;

private float currentShakeDuration = 0f;

void Start()

{

initialPosition = transform.localPosition; // Store initial position

}

void Update()

{

if (currentShakeDuration > 0)

{

Vector3 randomOffset = Random.insideUnitSphere \* shakeIntensity; // Generate random offset

transform.localPosition = initialPosition + randomOffset; // Apply shake

currentShakeDuration -= Time.deltaTime; // Reduce shake duration

}

else

{

transform.localPosition = initialPosition; // Reset position

}

}

public void StartShake()

{

Debug.Log("Shake Started!"); // Log for debugging

currentShakeDuration = shakeDuration; // Set shake duration

}

}

#### **Step 3: Create the Shoot Script**

1. **Create the Shoot Script**:
   * In the Assets folder, right-click and select **Create > C# Script**.
   * Name the script Shoot.
2. **Open the Shoot Script**: Double-click the Shoot script to open it in your code editor.
3. **Write the Shoot Script**: Replace the contents of the Shoot script with the following code:

using System.Collections;

using System.Collections.Generic;

using UnityEngine;

public class Shoot : MonoBehaviour

{

public Shake s; // Reference to the Shake script

void Update()

{

if (Input.GetKeyDown(KeyCode.Mouse0)) // Check for left mouse click

{

Debug.Log("Mouse Click Detected!"); // Log for debugging

s.StartShake(); // Call shake method

}

}

}

#### **Step 4: Set Up the Unity Scene**

1. **Create an Empty GameObject**:
   * In the Unity Editor, right-click in the Hierarchy panel and select **Create Empty**.
   * Name the GameObject ShakeController.
2. **Attach the Shake Script**:
   * Select the ShakeController GameObject in the Hierarchy.
   * In the Inspector panel, click **Add Component**.
   * Search for Shake and select it to attach the script.
3. **Attach the Shoot Script**:
   * With the ShakeController still selected, click **Add Component** again.
   * Search for Shoot and select it to attach the script.
4. **Link the Shake Script**:
   * In the Inspector, find the Shoot component.
   * Drag the Shake component from the ShakeController GameObject into the s field of the Shoot component.

#### **Step 5: Test the Shake Effect**

1. **Play the Scene**:
   * Click the **Play** button at the top of the Unity Editor.
2. **Trigger the Shake**:
   * While the game is running, click the left mouse button (Mouse0). You should see the GameObject with the Shake script shaking.