```
1  using System;
2  using UnityEngine;
3
4  /// <summary>
5  /// BackgroundParallax captures any mouse movement and proportionally moves
       an assigned background to emulate a parallax effect.
6  /// </summary>
7  public class BackgroundParallax : MonoBehaviour
8  {
9      // Singleton state reference
10     private static BackgroundParallax instance;
11
12     /// <summary>
13     /// Controls how much the captured mouse movement alters the
         background.
14     /// </summary>
15     [SerializeField]
16     float parallaxStrength;
17
18     /// <summary>
19     /// The background that the parallax is applied on.
20     /// </summary>
21     [SerializeField]
22     RectTransform backgroundTransform;
23
24     /// <summary>
25     /// Stores prior mouse positions to calculate the delta movement
         between frames.
26     /// </summary>
27     private Vector2 mousePos;
28
29     // Enforces a singleton state pattern
30     private void Awake()
31     {
32         if (instance != null)
33         {
34             Destroy(this);
35             throw new Exception("BackgroundParallax instance already
                 established; terminating.");
36         }
37
38         instance = this;
39     }
40
41     private void Start() { mousePos = Input.mousePosition; }
42
43     private void Update()
44     {
45         // Captures the difference in mouse position between frames,
```

```
            proportionally moving the background.
        Vector2 prevMousePos = mousePos, mouseDelta;

        mousePos = Input.mousePosition;
        mouseDelta = (prevMousePos - mousePos) * parallaxStrength;
        backgroundTransform.offsetMin += mouseDelta;
    }

    // Getter method
    public static BackgroundParallax Instance { get { return instance; } }
}
```