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using UnityEngine;

public class MouseLook : MonoBehaviour
{
    public float sensitivity = 100f; // Mouse sensitivity multiplier
    public Transform playerBody; // The player body for horizontal rotation

    private float xRotation = 0f; // Tracks vertical rotation (up/down)

    void Start()
    {
        // Lock the cursor to the center of the screen and make it invisible
        Cursor.lockState = CursorLockMode.Locked;
        Cursor.visible = false;
    }

    void Update()
    {
        // Get mouse input
        float mouseX = Input.GetAxis("Mouse X") * sensitivity * Time.deltaTime;
        float mouseY = Input.GetAxis("Mouse Y") * sensitivity * Time.deltaTime;

        // Adjust vertical rotation (up/down)
        xRotation -= mouseY;
        xRotation = Mathf.Clamp(xRotation, -90f, 90f); // Limit vertical rotation
        to avoid flipping

        // Apply vertical rotation to the camera
        transform.localRotation = Quaternion.Euler(xRotation, 0f, 0f);

        // Rotate the player body horizontally (left/right)
        playerBody.Rotate(Vector3.up * mouseX);

        // Debug logs for monitoring rotation
        Debug.Log($"Mouse Input: X={mouseX}, Y={mouseY}");
        Debug.Log($"Camera Rotation: X={xRotation},
Y={transform.localRotation.eulerAngles.y}");
        Debug.Log($"Player Body Rotation:
Y={playerBody.localRotation.eulerAngles.y}");
    }
}

```