

Assets\Scripts\PlayerRigidbody.cs

```
1 using UnityEngine;
2
3 [RequireComponent(typeof(Rigidbody))]
4 public class PlayerRigidbody : MonoBehaviour
5 {
6     [SerializeField] private float _moveSpeed = 5f;
7     [SerializeField] private float _jumpForce = 5f;
8     [SerializeField] private float _doubleJumpForce = 5f;
9     [SerializeField] private float _speedRotation = 10f;
10
11     private Rigidbody _rb;
12     private Vector2 _input;
13     private Camera _followCam;
14     private bool _isGrounded = true;
15     private bool _canDoubleJump = false;
16
17     void Start()
18     {
19         _rb = GetComponent<Rigidbody>();
20         _followCam = Camera.main;
21     }
22
23     void Update()
24     {
25         Jump();
26     }
27
28     private void FixedUpdate()
29     {
30         _input = new Vector2(Input.GetAxis("Horizontal"), Input.GetAxis("Vertical"));
31
32         Vector3 _moveDirection = new Vector3(-_input.x, 0f, -_input.y);
33         _rb.MovePosition(_rb.position + (_moveDirection * _moveSpeed * Time.fixedDeltaTime));
34
35         Vector3 movementInput = Quaternion.Euler(0, _followCam.transform.eulerAngles.y, 0) * new Vector3(_input.x, 0, _input.y);
36         Vector3 movementDirection = movementInput.normalized;
37
38         if (movementDirection != Vector3.zero)
39         {
40             Quaternion desiredRotation = Quaternion.LookRotation(movementDirection, Vector3.up);
41             transform.rotation = Quaternion.Slerp(transform.rotation, desiredRotation, _speedRotation * Time.deltaTime);
42         }
43
44         _rb.AddForce(movementDirection * _moveSpeed * Time.deltaTime);
45     }
46
47     void Jump()
48     {
49         if (Input.GetButtonDown("Jump"))
50         {
51             if (_isGrounded)
52             {
53                 _rb.AddForce(transform.up * _jumpForce, ForceMode.Impulse);
54                 _isGrounded = false;
55                 _canDoubleJump = true;
56             }
57             else if (_canDoubleJump)
58             {
59                 _rb.velocity = new Vector3(_rb.velocity.x, 0f, _rb.velocity.z);
60                 _rb.AddForce(transform.up * _doubleJumpForce, ForceMode.Impulse);
61                 _canDoubleJump = false;
62             }
63         }
64     }
65
66     private void OnCollisionEnter(Collision collision)
67     {
68         if (collision.gameObject.CompareTag("Ground"))
69         {
70             _isGrounded = true;
71         }
72     }
73 }
74
```