



- Place the platform sprites and player sprite.
- Give them all a box collider 2D and scale it to fit.
- Give the player the name tag Player and a rigidbody2D with the z constraint selected and gravity set to 1.
- Place a new empty game object and call it ladder.
- Drag the ladder sprite to it and make it a child of the empty game object In the list drag it onto the name ladder. Set this sprit to the central position of the ladder (0,0,0).
- Use as many ladder sprites as you need.
- Give the ladder a box collider 2D with is trigger selected. Scale it so it fits in the middle of the ladder object and set the top and bottom of it.
- Give the player this script:

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

public class Playermovement : MonoBehaviour
{
    public float speed;
    Vector3 characterScale;
    float characterScaleX;
    public bool ladderarea = false;
    public float climbSpeed;
    public float climbVelocity;
    public float gravityStore;
    private Rigidbody2D myrigidbody2D;

    void Start()
    {
        myrigidbody2D = GetComponent<Rigidbody2D>();
        gravityStore = myrigidbody2D.gravityScale;
        characterScale = transform.localScale;
        characterScaleX = characterScale.x;
    }
    private void Update()
    {
        if (ladderarea)
        {
            myrigidbody2D.gravityScale = 0f;
            climbVelocity = climbSpeed * Input.GetAxisRaw("Vertical");
            myrigidbody2D.velocity = new Vector2(myrigidbody2D.velocity.x, climbVelocity);
        }
        if (!ladderarea)
        {
            myrigidbody2D.gravityScale = gravityStore;
        }
        if (Input.GetKey(KeyCode.LeftArrow))
        {
            characterScale.x = -characterScaleX;
            transform.Translate(Vector2.left * speed * Time.deltaTime);
        }
    }
}
```



```
if (Input.GetKey(KeyCode.RightArrow))
{
characterScale.x = characterScaleX;
transform.Translate(Vector2.right * speed * Time.deltaTime);
}
transform.localScale = characterScale;
}
}
```

If the ladderarea bool is set to true the player is able to go up and down as the gravity and velocity changes into the settings you use. When the bool is set to false all is reset to the default setting. So if player walks off the ladder it will fall down. In order to make it work the ladder needs a simple script to.

- Give the ladder this script :

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

public class Ladderarea : MonoBehaviour
{
private Playermovement PM;
void Start()
{
PM = FindObjectOfType<Playermovement>();
}

void OnTriggerEnter2D(Collider2D other)
{
if (other.gameObject.tag == ("Player"))
{
PM.ladderarea = true;
}
}

void OnTriggerExit2D(Collider2D other)
{
if (other.gameObject.tag == ("Player"))
{
PM.ladderarea = false;
}
}
}
```

Now whenever the player comes close to the ladder trigger it will change the player's bool variable by looking for its script and changing the variable. On enter it gets set to true and on Exit it goes back to false. Run the project and you will see all works like it should. Moving up on the game ladder is now easy.