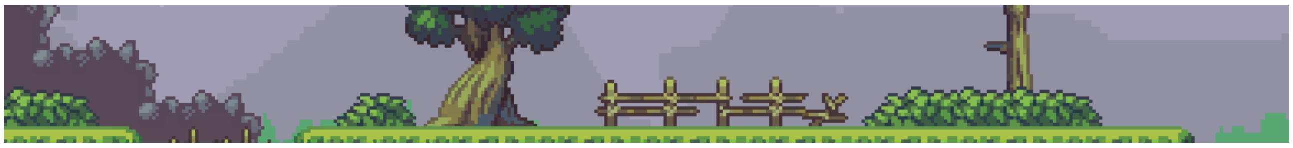
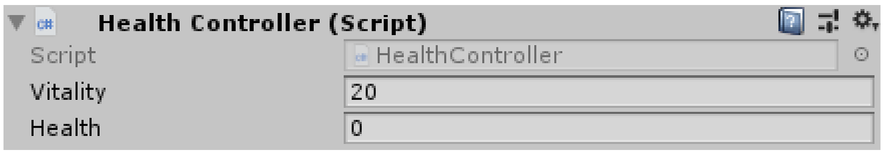
BASIC PLATFORMER TEMPLATE

This is a 2D platformer game template. In this document I will explain how to correctly configure the components. I'll leave the scripts less important for the end.



HEALTH CONTROLLER



Health Controller (Script)

Script	HealthController
Vitality	20
Health	0

This script is responsible for managing everything related to health, as its name suggests. Assigning this script to an object would imply that the object has life, so it can be damaged, cured or killed.

It does not necessarily have to be used in characters, for example, we can also make a door that after receiving a certain amount of damage, breaks.

In any case, both this script and the following one that I will explain will not do anything until we indicate it. They need another component that tells them when to act. In this case, for the adventurer is the Adventurer script. Slime, in the case of the slime.

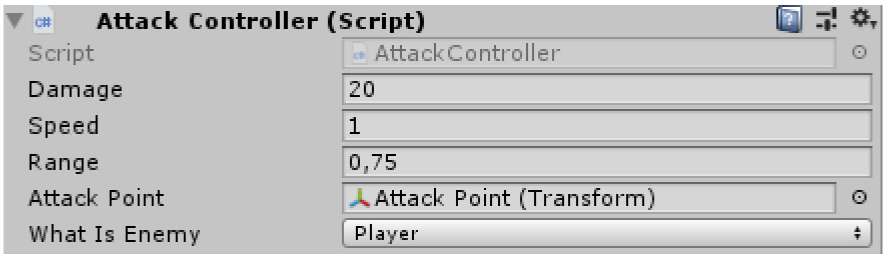
Parameters

- **Vitality:** Indicates the maximum life that can be reached.
- **Health:** Indicates the current life.

Methods:

- **Take Damage:** Subtract the health according to the damage received. If health reaches zero, the method of death will be launched.
- **Heal:** Increase health based on the cure received without exceeding vitality.
- **Hurt:** Determine that the object is being hurt and throw some animation.
- **Death:** Determine that the object has died and throw some animation.

ATTACK CONTROLLER



Attack Controller (Script)

Script	AttackController
Damage	20
Speed	1
Range	0,75
Attack Point	Attack Point (Transform)
What Is Enemy	Player

This script defines everything related to attacks. Assign this script to an object if you want it to attack.

In this case, if you attack and there is an object with the player layer within range, that object will suffer damage, as long as it has the assigned health script.

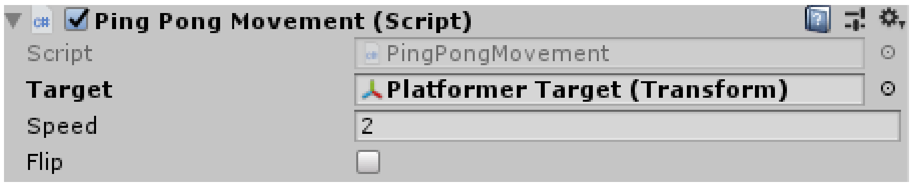
Parameters

- **Damage:** Amount of damage that is applied when attacking.
- **Speed:** Attack speed, time that passes between one attack and another.
- **Range:** Delimits the scope of attacks.
- **Attack Point:** Point from which the attack originates.
- **What Is Enemy:** Determine what the enemy is.

Methods:

- **Attack:** It is determined that he is attacking and communicates it to the animator.
- **Hit:** Check for enemies within range and hurt them. That method is called from an animation.

PING PONG MOVEMENT



Ping Pong Movement (Script)

Script	PingPongMovement
Target	Platformer Target (Transform)
Speed	2
Flip	☐

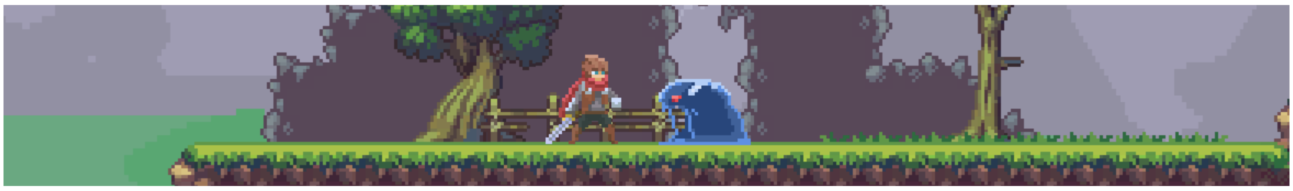
While this script is active, the object will move to a certain position and then return. Repeat this movement infinitely.

It is an essential component to describe the movement of some platforms. With this script you can move both horizontally, vertically and even diagonally.

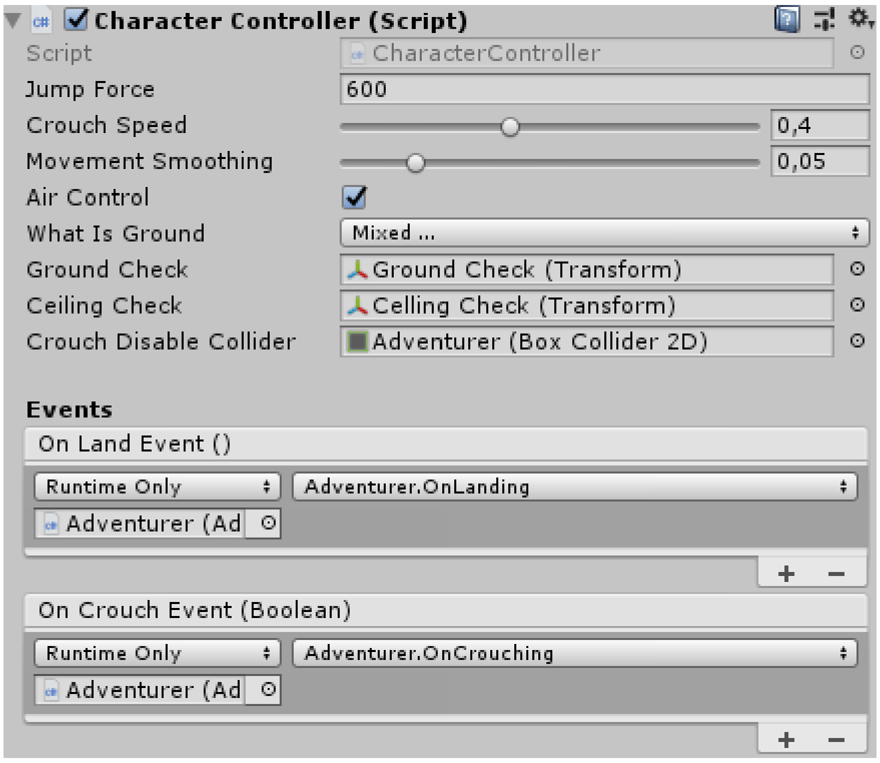
It can also serve to make the movement of simple enemies.

Parameters

- **Target:** Target point to reach.
- **Speed:** Speed at which it will move.
- **Flip:** Activate it so that when it reaches the point, turn.



CHARACTER CONTROLLER



Character Controller (Script)

Script	CharacterController
Jump Force	600
Crouch Speed	0,4
Movement Smoothing	0,05
Air Control	✓
What Is Ground	Mixed ...
Ground Check	Ground Check (Transform)
Ceiling Check	Ceiling Check (Transform)
Crouch Disable Collider	Adventurer (Box Collider 2D)

Events

On Land Event ()

Runtime Only | Adventurer.OnLanding

Adventurer (Ad

On Crouch Event (Boolean)

Runtime Only | Adventurer.OnCrouching

Adventurer (Ad

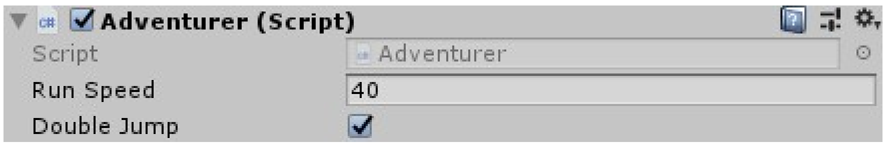
This script is somewhat complex to explain, but basically is responsible for performing the movements of the adventurer (move, jump, crouch).

<u>Parameters</u>

- **Jump Force:** Amount of force added when the player jumps.
- **Crouch Speed:** Amount of maxSpeed applied to crouching movement. 1 = 100%
- **Movement Smoothing:** How much to smooth out the movement.
- **Air Control:** Whether or not a player can steer while jumping.
  What Is Ground: A mask determining what is ground to the character.
- **Ground Check:** A position marking where to check if the player is grounded.

- **Ceiling Check:** A position marking where to check for ceilings.
- **Crouch Disable Collider:** A collider that will be disabled when crouching.

ADVENTURER



```
Adventurer (Script)
Script          Adventurer
Run Speed       40
Double Jump     ✓
```

Basically, this script listens to the player's inputs and communicates it to the character controller. Internally you are ready to work on PC and mobile.

It also contains everything related to the adventurer's animations.

Parameters

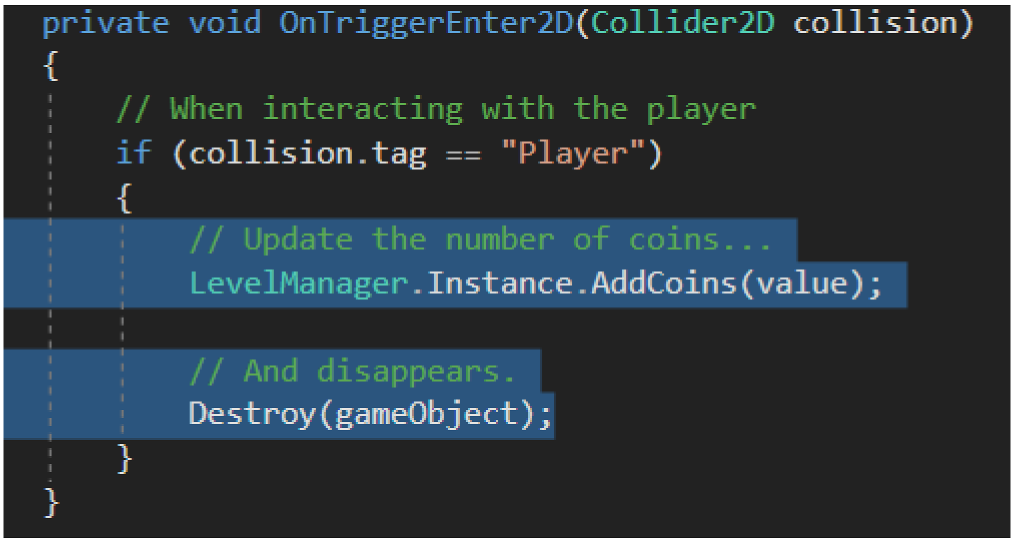
- **Run Speed:** Movement speed of the adventurer.
- **Double Jump:** Enable for double jump.

SLIME

It is a small artificial intelligence that is responsible for detecting when to attack and manage animations.

INTERACTABLE ITEMS

This asset contains coins, which can be collected by the adventurer. Doing this is very simple, look at the image on the right.



```
private void OnTriggerEnter2D(Collider2D collision)
{
    // When interacting with the player
    if (collision.tag == "Player")
    {
        // Update the number of coins...
        LevelManager.Instance.AddCoins(value);

        // And disappears.
        Destroy(gameObject);
    }
}
```

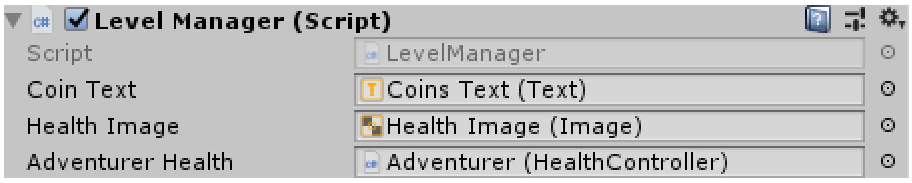
Upon entering into contact with the player, a certain logic will come into play. In this case, the amount of money available will increase and then be destroyed.

In a similar way we could make a life potion. Just replace the highlighted code with a line that accesses the player's health controller and execute the healing method.

SPIKES

The skewers use the same logic as before, except that instead of curing or adding coins, they apply damage.

LEVEL MANAGER


Level Manager (Script)

Script	LevelManager
Coin Text	Coins Text (Text)
Health Image	Health Image (Image)
Adventurer Health	Adventurer (HealthController)

In this script I manage the interface and health events.

Parameters

- **Coin Text:** Reference to the text that shows the number of coins.
- **Health Image:** Reference to the health bar.
- **Adventurer Health:** Reference to the health of the player.

Remember that if you do not understand something, you can see how it is done in the sample scene or, if you prefer, you can contact me.

By Antipixel.