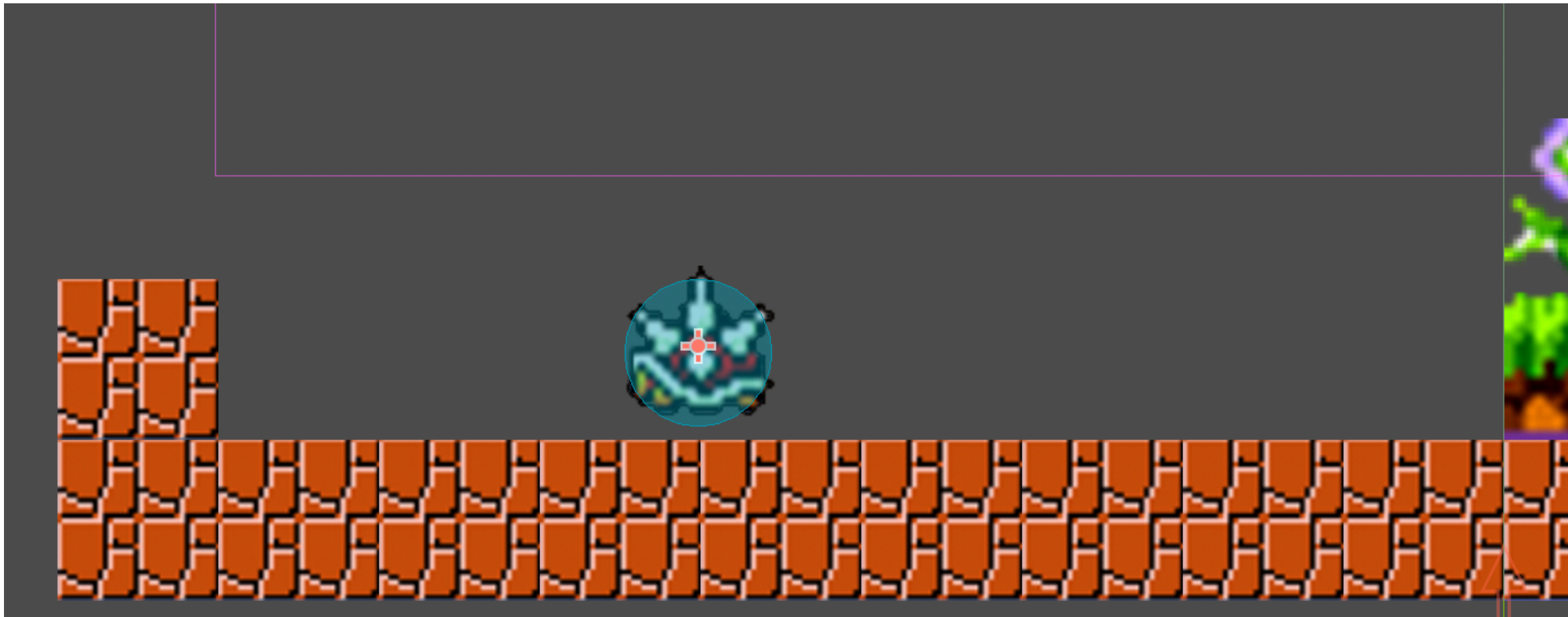


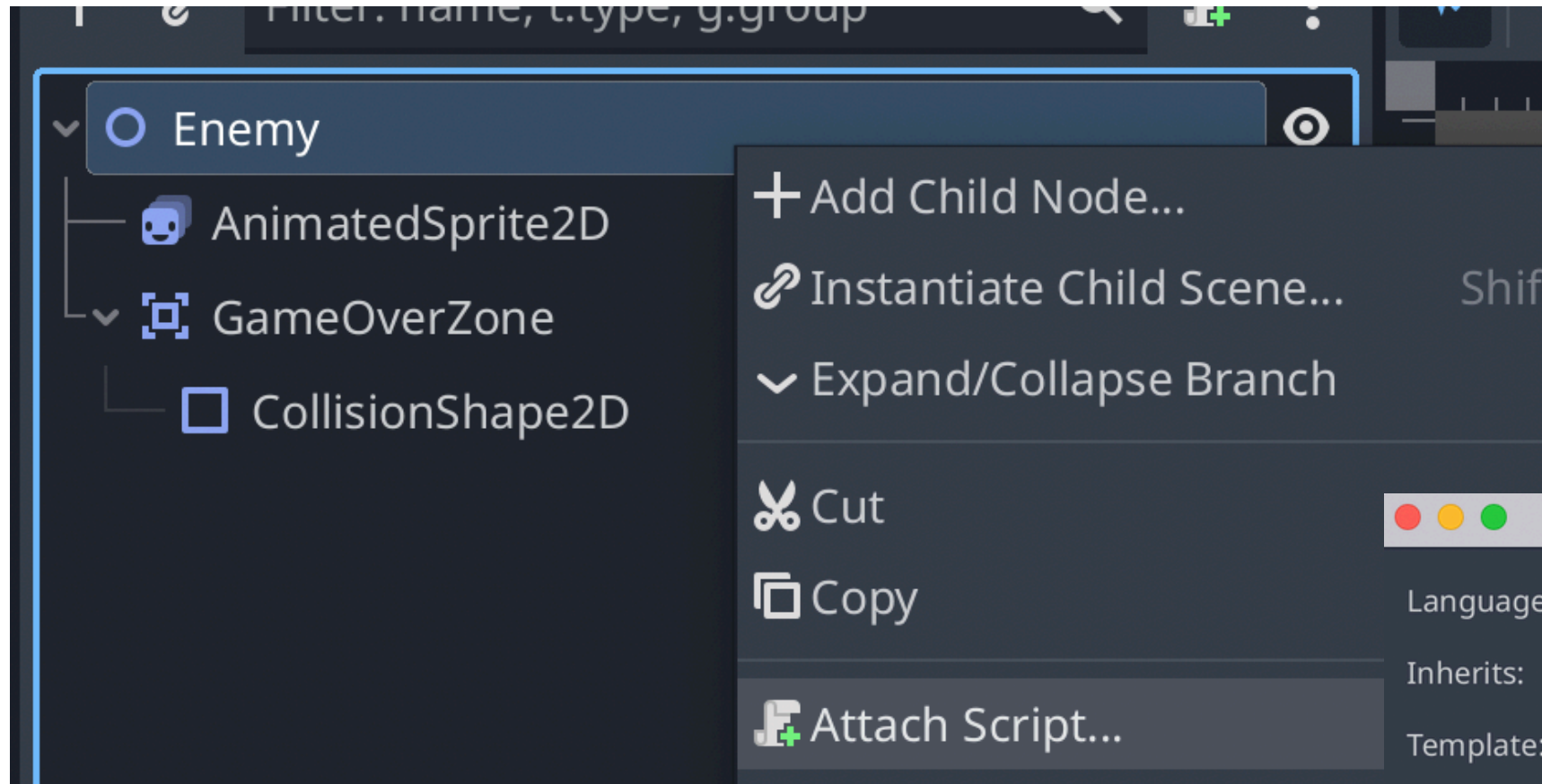
Auto move Enemy!

We will make our enemy detect walls and move on its own! No animation needed.

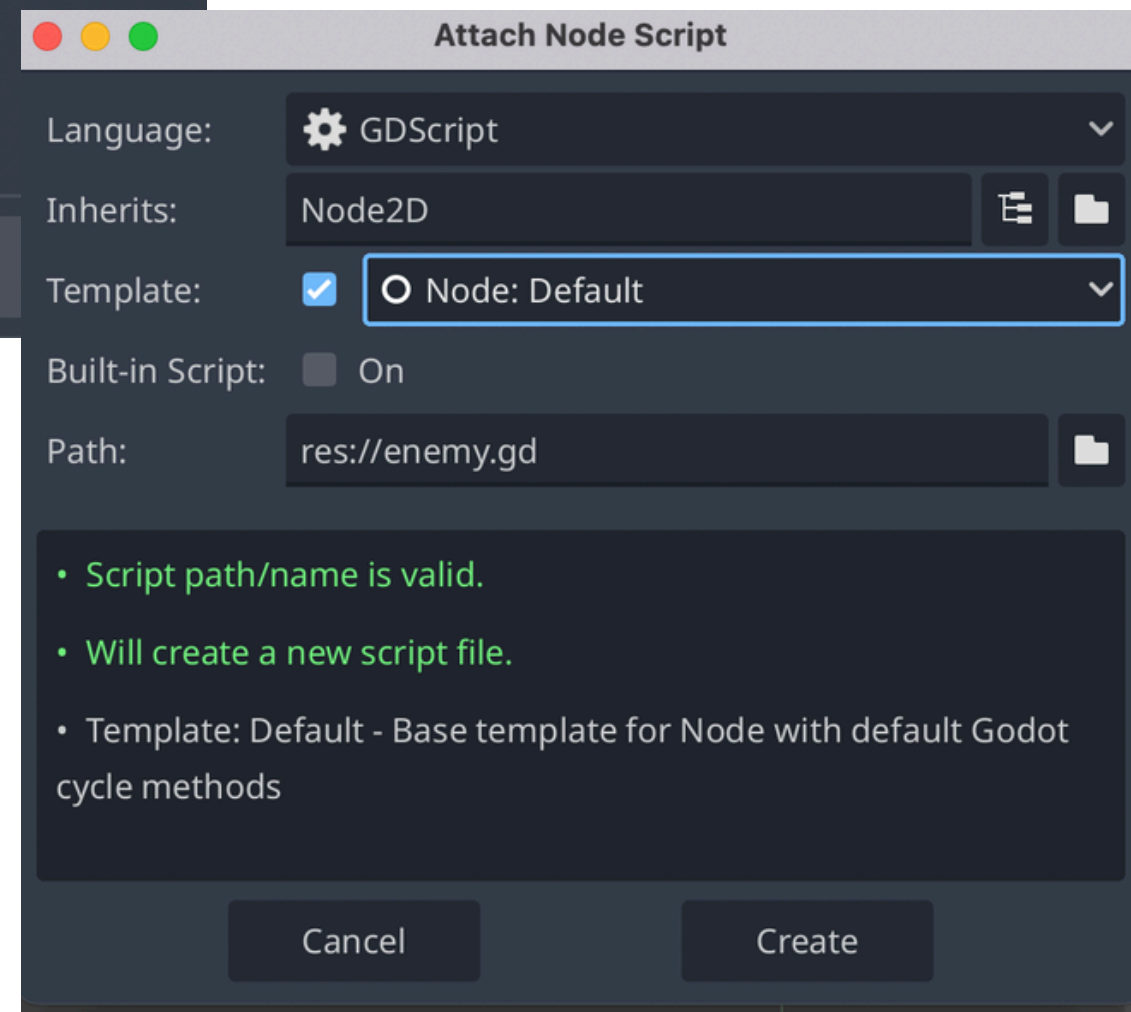


Put your enemy between two walls.

Auto move Enemy!



Attach Script to the
Enemy Node.
Use Node: Default



Auto move Enemy!

```
1  extends Node2D
2
3
4  # Called when the node enters the scene tree for
5  ▾ func _ready() -> void:
6    >| pass # Replace with function body.
7
8
9  # Called every frame. 'delta' is the elapsed tim
10 ▾ func _process(delta: float) -> void:
11   >| pass
12
```

Delete the `func _ready()`
lines

keep the `_process` lines

```
1  extends Node2D
2
3
4  # Called every frame. 'delta' is the elapsed time
5  ▾ func _process(delta: float) -> void:
6    >| pass
7
```

Auto move Enemy!

```
1  extends Node2D
2
3  #this is the amount of pixels moved per second
4  const SPEED = 60
5
6  # Called every frame. 'delta' is the elapsed time
7  func _process(delta):
8      position.x += SPEED * delta
9
```

We want the enemy to move a certain amount of PIXELS on the X axis every second.

We will define the amount of pixels as the SPEED. we will do this above the function using a CONSTANT.

we will then add code to move the POSITION according to time (delta).

Test it!

Auto move Enemy!

```
extends Node2D

#this is the amount of pixels moved per second
const SPEED = 60

#we want to control the direction of the enemy
var direction = 1

# Called every frame. 'delta' is the elapsed time
▼ func _process(delta):
    >| position.x += direction * SPEED * delta
```

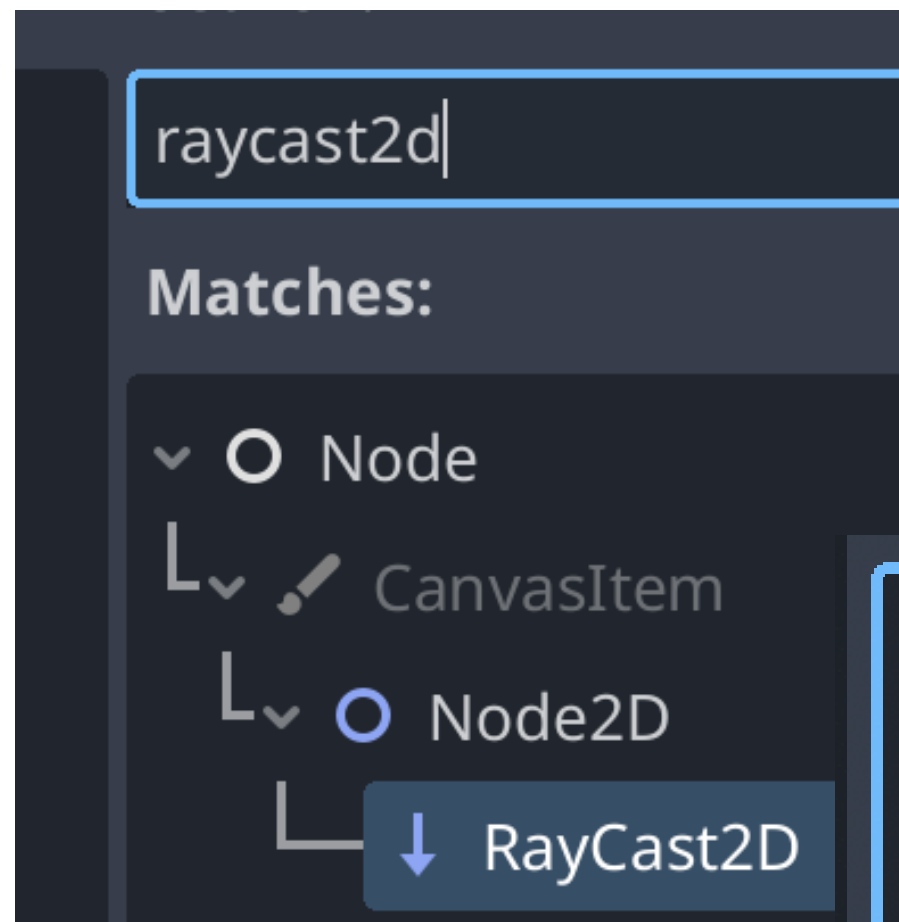
We want the enemy to move on its own AND to change direction when it hits a wall.

We will add a VARIABLE to control the direction and add it to our function.

1 will move to the right
-1 will move to the left

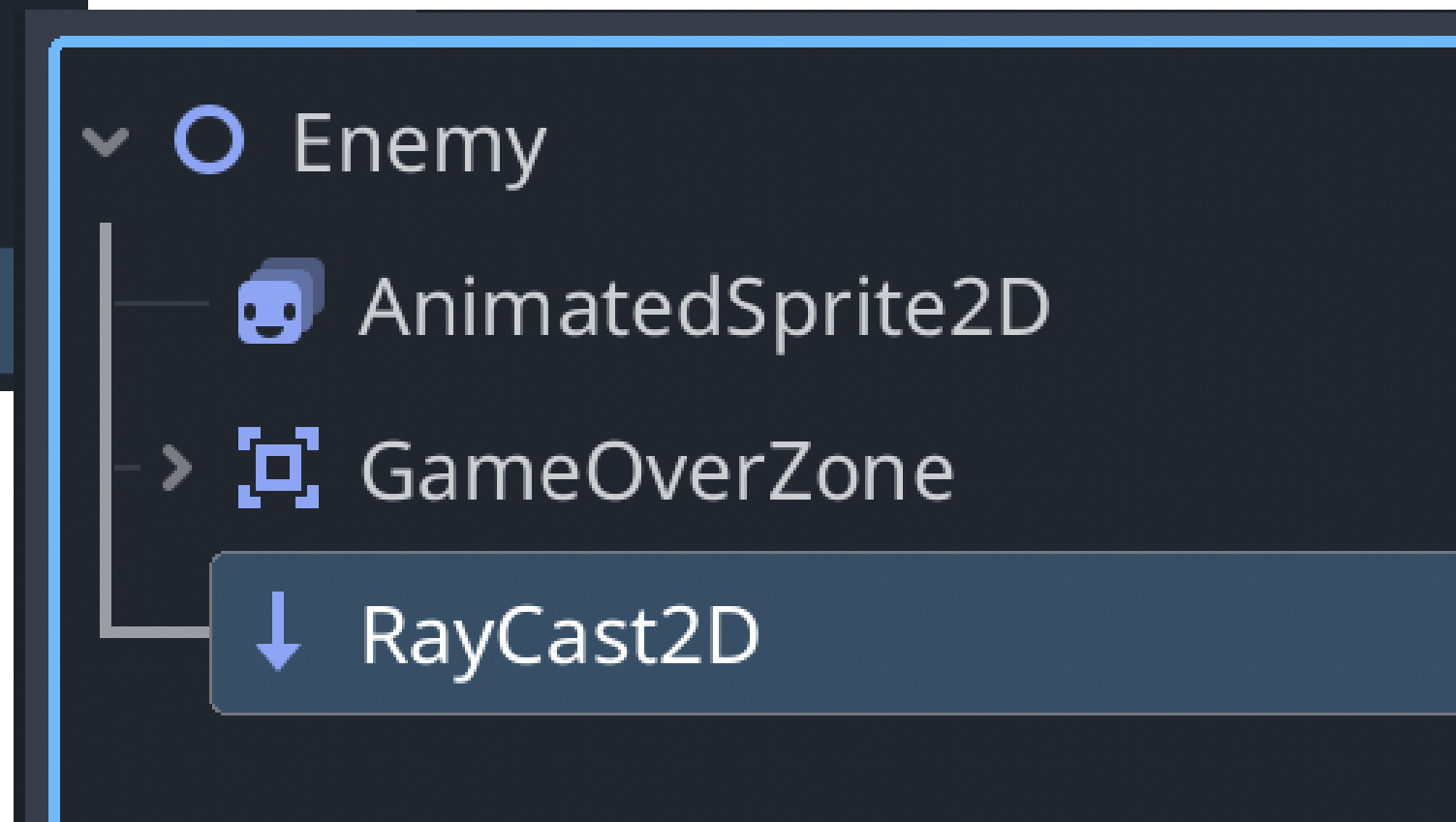
TEST IT!

Auto move Enemy!

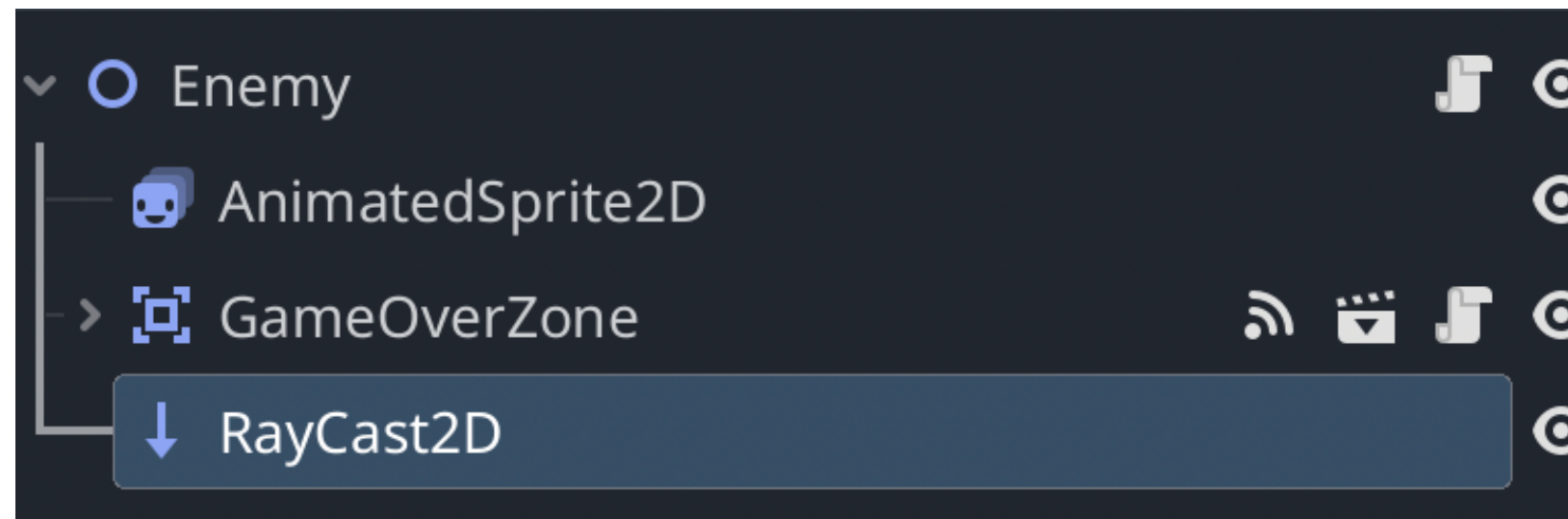


We will use a RAYCAST2D NODE to help the Enemy detect a wall.

Add a RayCast2D node as child to the Enemy.

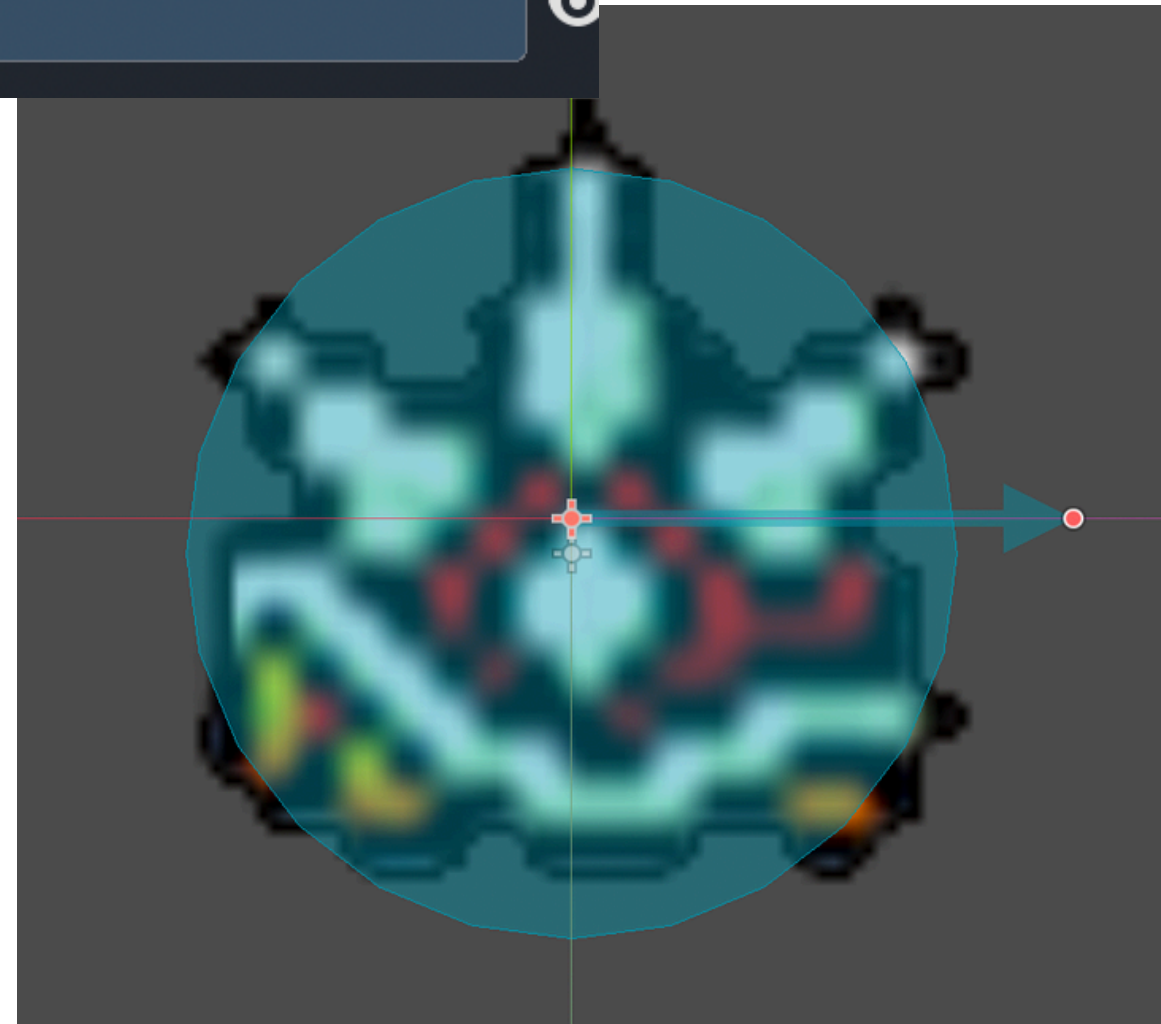


Auto move Enemy!



Click on the RayCast2D node

You will see an arrow, move it to the right. This arrow will be used to detect the walls.

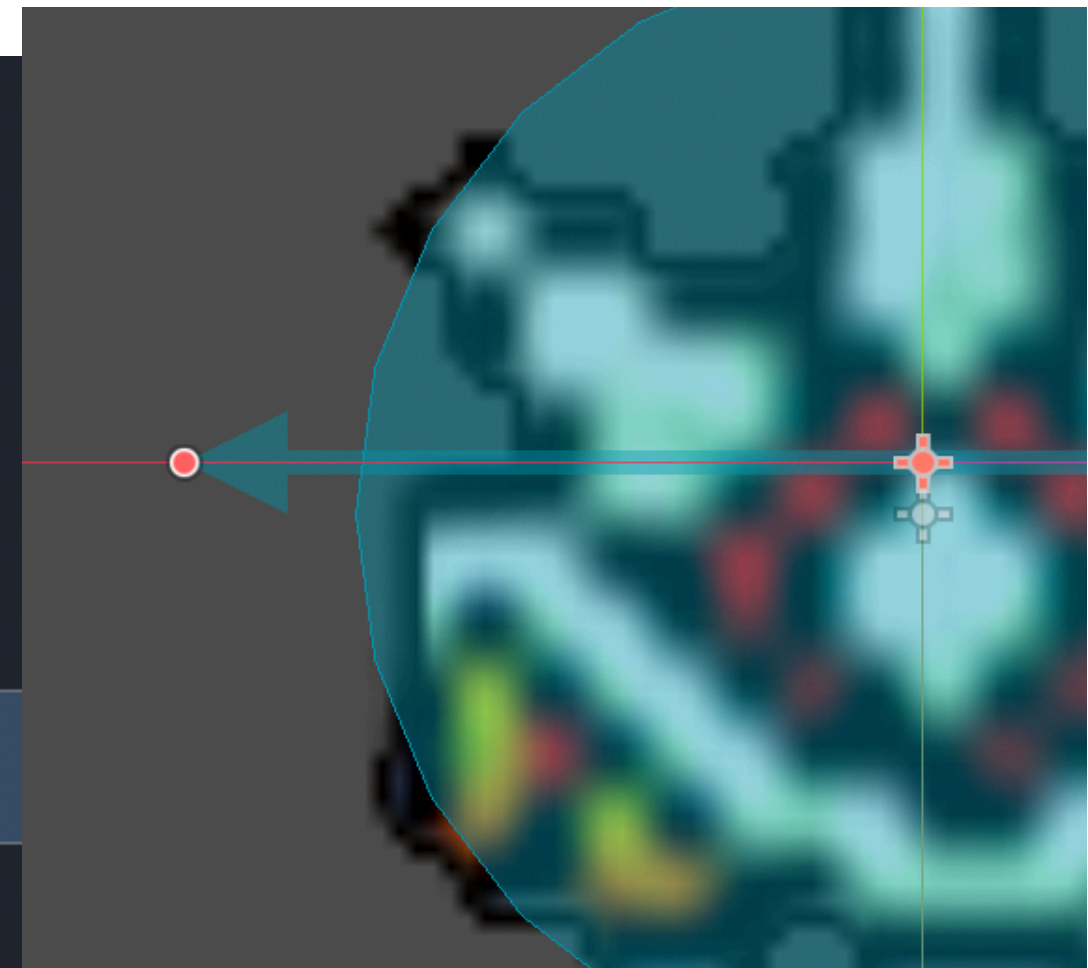


Auto move Enemy!

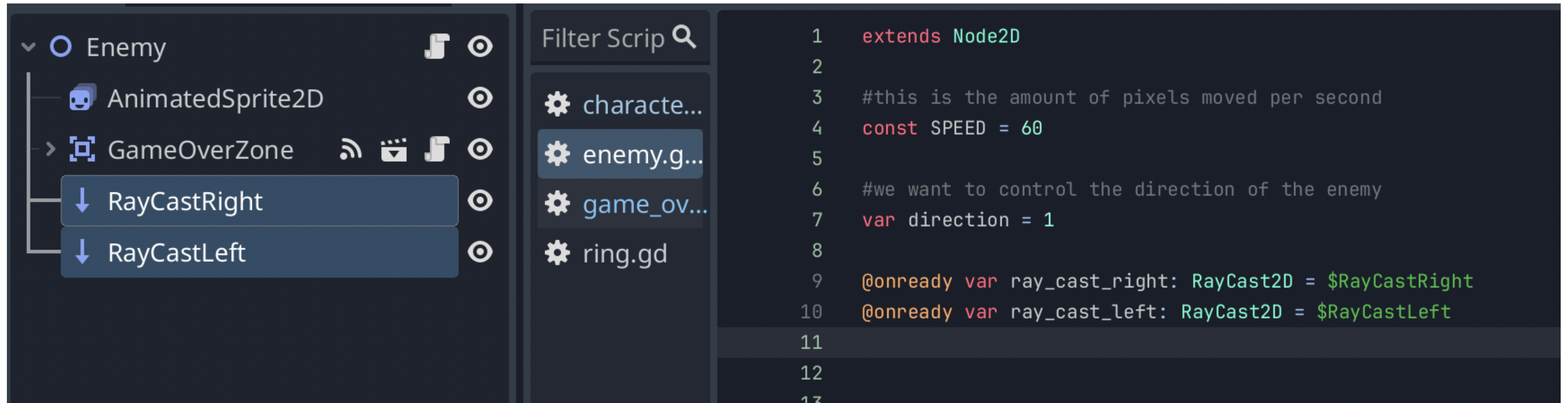


Rename this to RayCastRight

Duplicate this node, and now move the arrow to the left for the duplicated node and name it Ray Cast left.



Auto move Enemy!



Hold Shift to click on the names of the RayCastNodes we just created.
Now drag into your script while holding CONTROL to add them as variables.

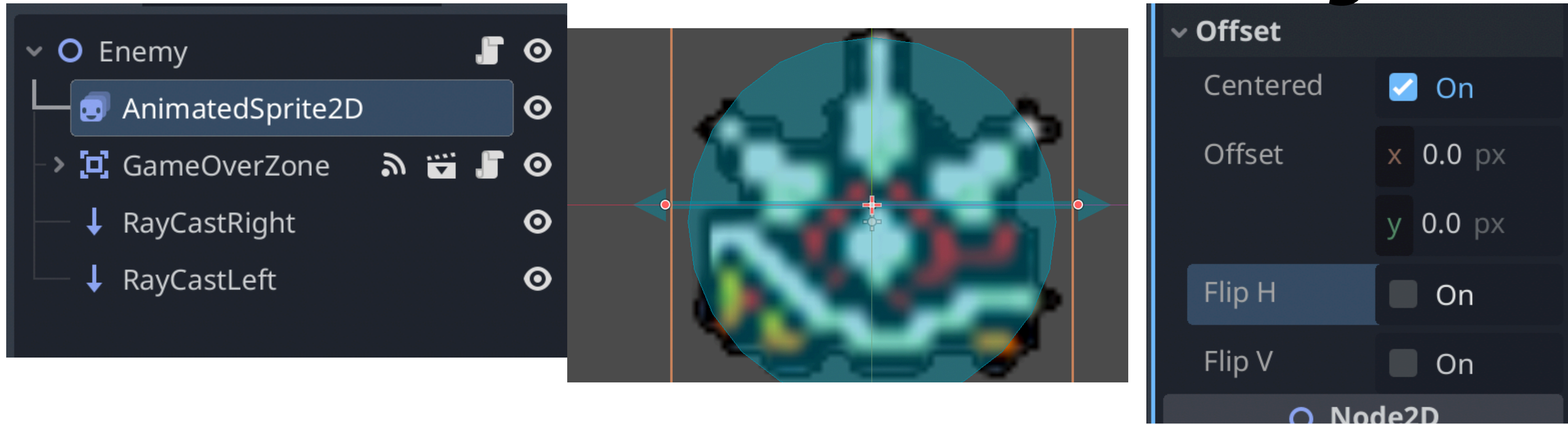
Auto move Enemy!

```
12
13
14 # Called every frame. 'delta' is the elapsed time since the previous frame.
15 ▸ func _process(delta):
16     ▸ #the code below makes the enemy change direction when hitting walls
17     ▸ if ray_cast_right.is_colliding():
18         ▸ direction = -1
19     ▸ if ray_cast_left.is_colliding():
20         ▸ direction = 1
21     ▸
```

We will now add code to make the RayCast Nodes detect the wall and then change the direction.

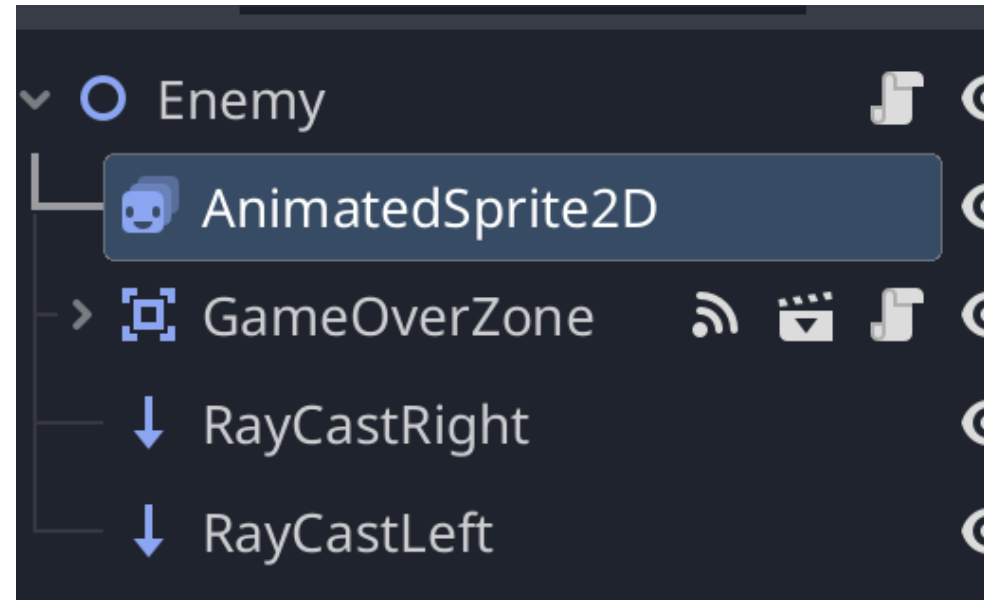
Our enemy will now turn on its own when colliding with a wall!

Auto move Enemy!



We now want the enemy to flip its direction when it hits the wall.
We will control this in the AnimatedSprite2D node by changing the FlipH property.
We will use code to make it happen!

Auto move Enemy!



```
@onready var ray_cast_right: RayCast2D = $RayCastRight
@onready var ray_cast_left: RayCast2D = $RayCastLeft
@onready var animated_sprite_2d: AnimatedSprite2D = $AnimatedSprite2D
```

Go back to the Enemy code.

Add the AnimatedSprite2D node to the code by dragging and holding Control.

Auto move Enemy!

```
# Called every frame. 'delta' is the elapsed time since the previous frame.
▼ func _process(delta):
    >| #the code below makes the enemy change direction when hitting walls
    ▼ >| if ray_cast_right.is_colliding():
        >| >| direction = -1
        >| >| animated_sprite_2d.flip_h = true
    ▼ >| if ray_cast_left.is_colliding():
        >| >| direction = 1
        >| >| animated_sprite_2d.flip_h = false
    >|
```

If our enemy hits the wall on the RIGHT, he will need to FLIP which is why we need to set the flip_h to TRUE.

If our enemy hits a the wall on the LEFT, he will need to FLIP in the other direction.

TEST IT!

Auto move Enemy!

Important!

You may need to change the FALSE and TRUE values depending on where your enemy is faced.

In our example it may be better to put FALSE for Right and TRUE for left.

TEST IT OUT!

