

# Desenvolviment o de jogos com a Godot

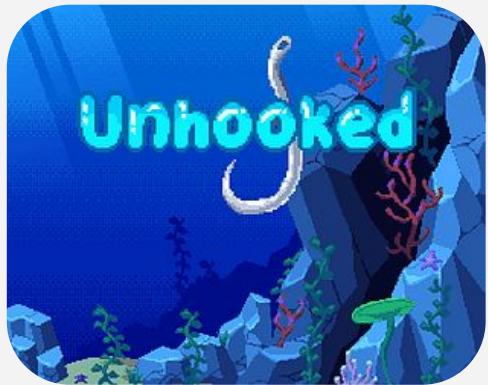




# Quem sou eu

- Renato
- Formado em Sistemas
- Hobbista em **gamedev**  
há mais de 12 anos

# Meus jogos



# Objetivo

- Introduzir a **Godot**
- Criarmos um jogo juntos





# Metodologia

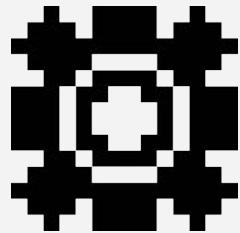
- Teoria
- Prática **conjunta**

# Sobre a Godot

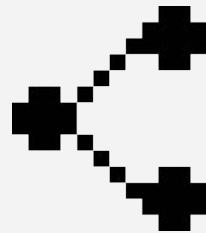
- Lançada em 2014
- **Open source**
- Exporta para várias plataformas
- 2D e 3D



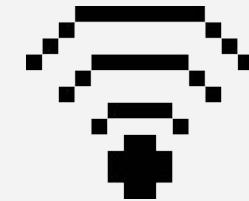
# Conceitos básicos



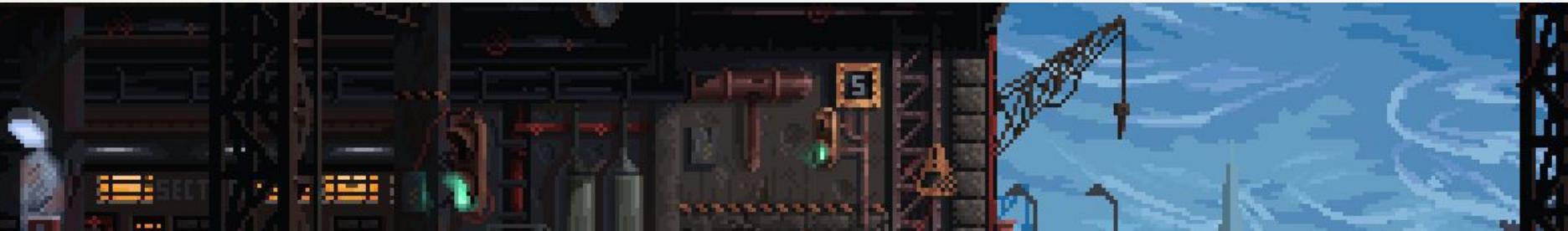
Nodos

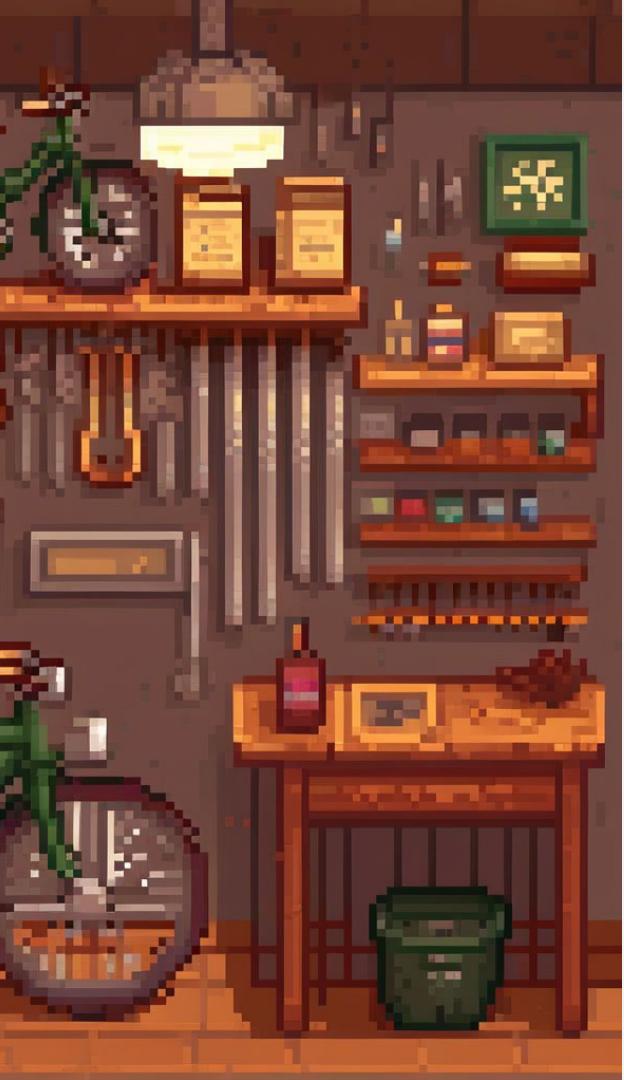


Cenas



Sinais





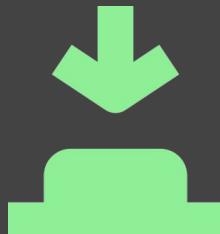
# Nodos

- Blocos atômicos de **comportamento**
- Quase TUDO na Godot é feito através de **nodos**

# Alguns nodos



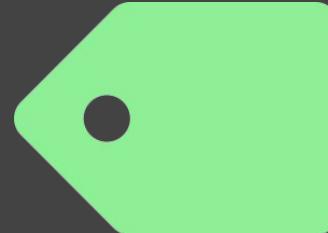
Sprite2D



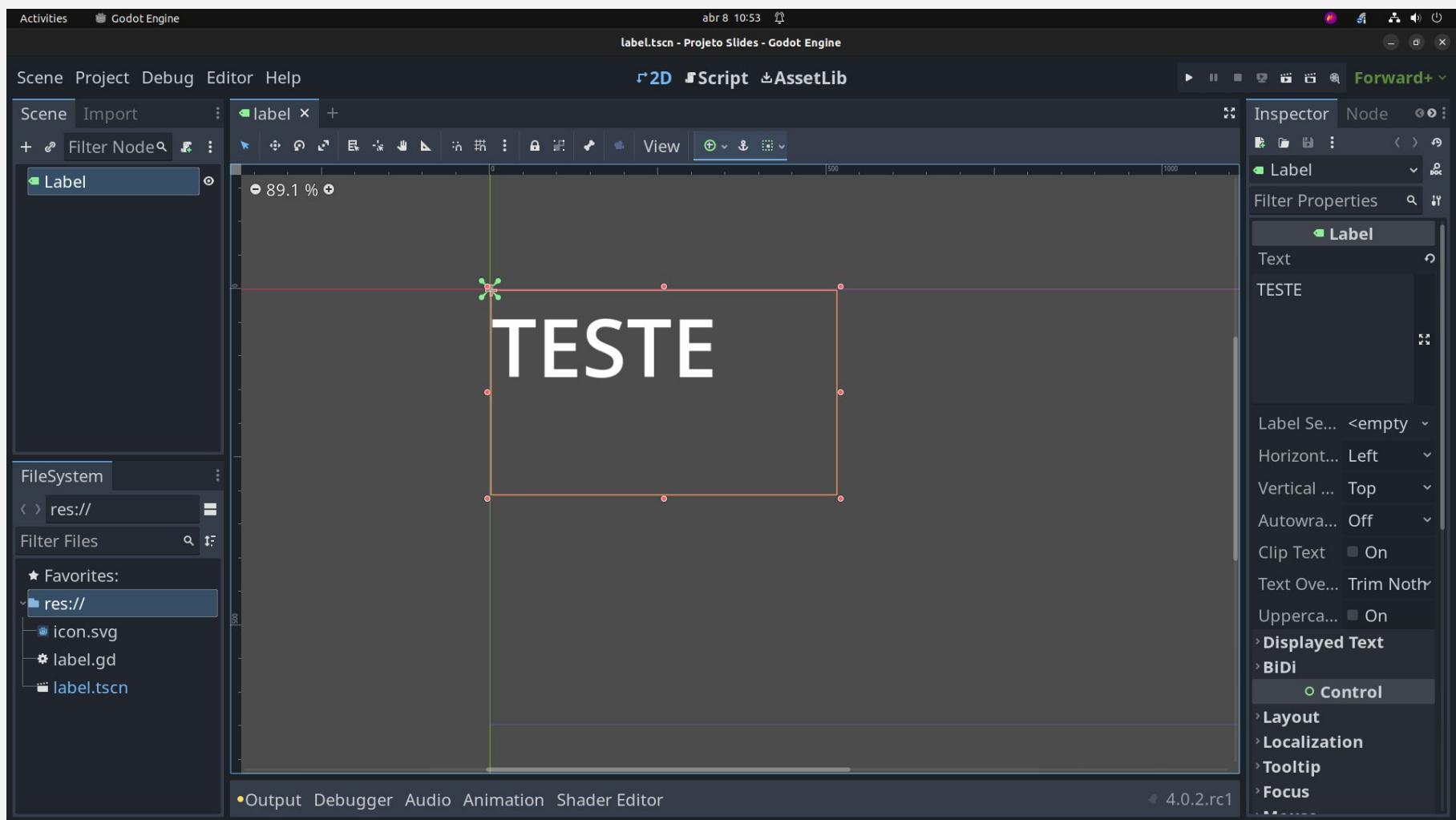
Button



CharacterBody2D



Label



Scene Project Debug Editor Help

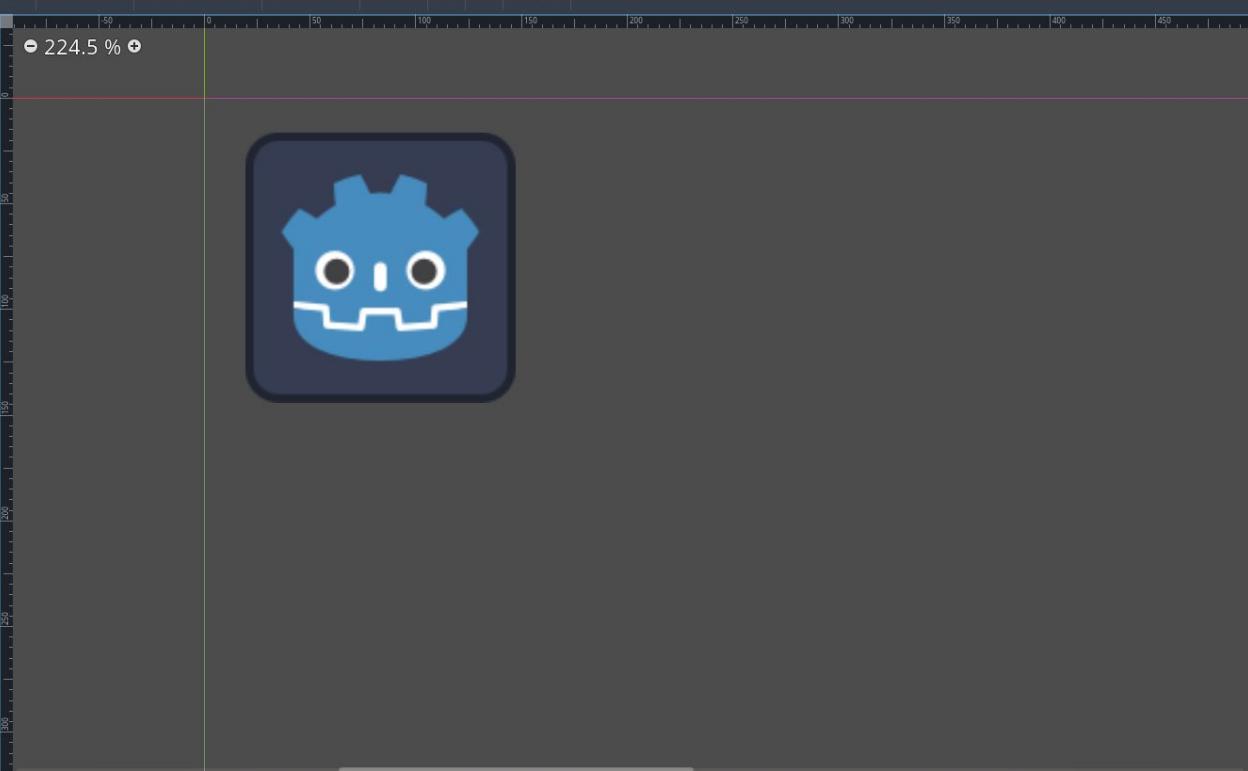
2D Script AssetLib

Forward+ ▾

Scene Import

+ Filter Nodes

Sprite2D



Scene Project Debug Editor Help

2D Script AssetLib

Forward+ ▾

Scene Import

+ Filter Nodes

label(\*)

+

Node2D

Sprite2D

Label

224.5 %



TESTE

FileSystem

res://icon.svg

Filter Files

★ Favorites:

res://

icon.svg

label.gd

label.tscn

Output Debugger Audio Animation Shader Editor

4.0.2.rc1

Inspector Node

File Properties

Filter Properties

Scene Project Debug Editor Help

2D Script AssetLib

Forward+ ▾

Scene Import

+ Filter Nodes

level\_1 player +

View

Player

- AnimatedSprite2D
- CollisionShape2D

FileSystem

&lt; &gt; res://

Filter Files

★ Favorites:

res://

addons

assets

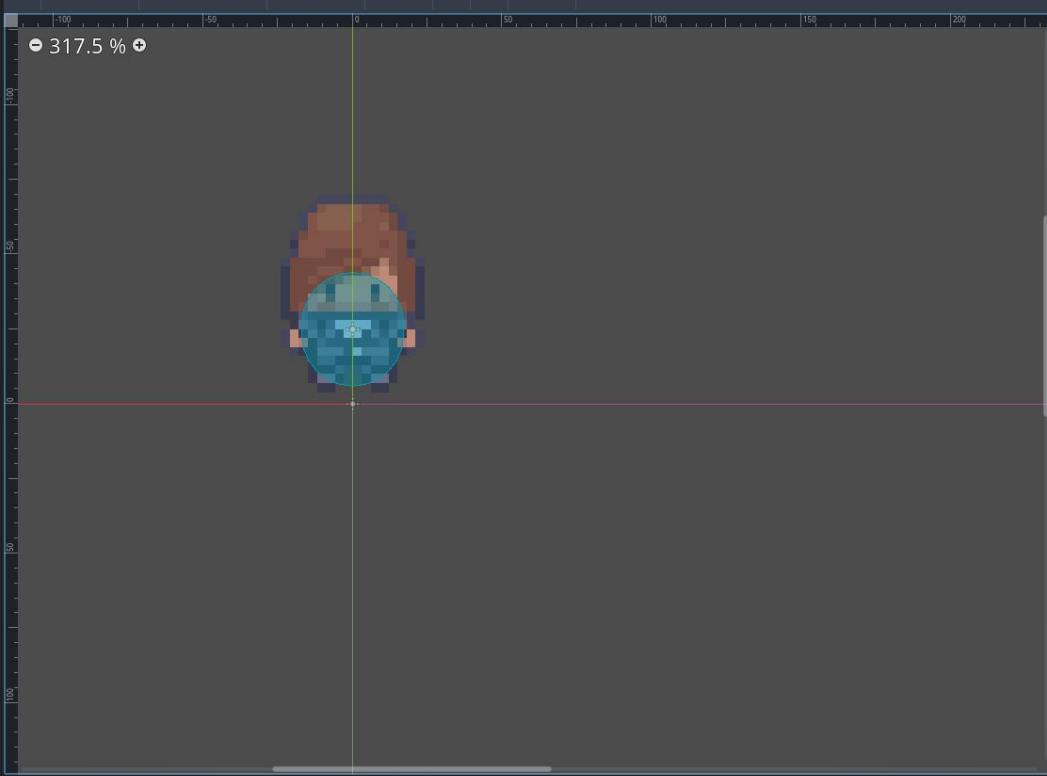
dist

resources

scenes

export\_presets.cfg

icon.svg



Inspector

Node History

...

Filter Properties

...

# Cenas

- Conjuntos de nodos **reutilizáveis**
- Toda tela/fase é uma cena
- Blocos usados **em mais de um lugar** também são cenas
- Cada cena está num **arquivo separado**



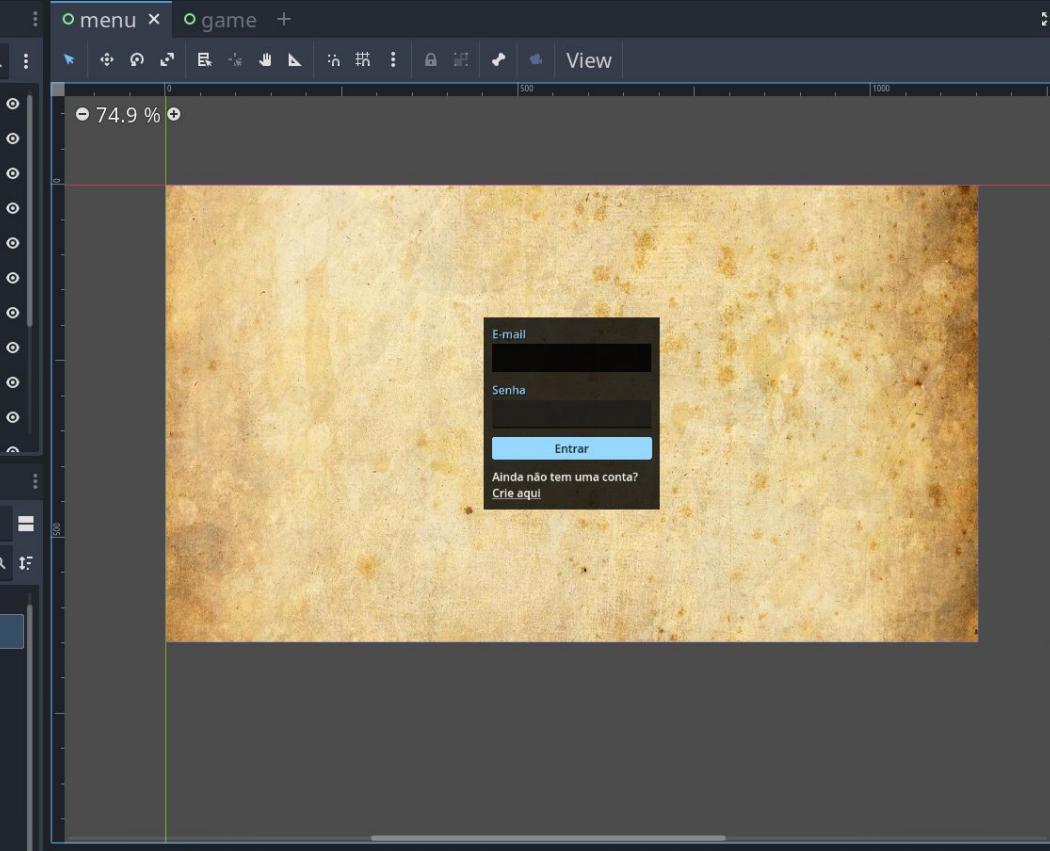
Scene Project Debug Editor Help

2D Script AssetLib

Forward +

Scene Import

+ Filter Nodes



Inspector Node History

File Properties

FileSystem

res://

Filter Files

★ Favorites:

- res://
  - addons
  - assets
  - dist
  - resources
  - scenes
  - export\_presets.cfg
  - icon.svg

Output Debugger Audio Animation Shader Editor

4.0.2.rc1

Scene Project Debug Editor Help

2D Script AssetLib

Forward+ ▾

Scene Import

+ Filter Nodes

level\_1 player +

Player

- AnimatedSprite2D
- CollisionShape2D

View

Inspector Node History

...

Filter Properties

FileSystem

&lt; &gt; res://

Filter Files

★ Favorites:

res://

addons

assets

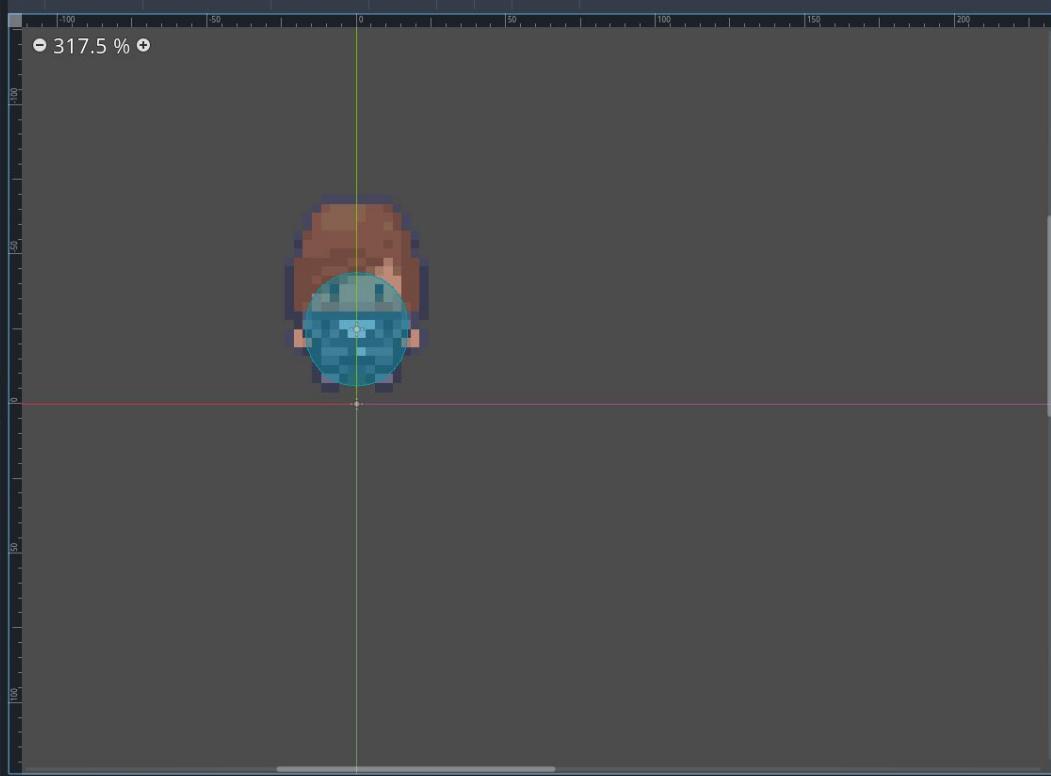
dist

resources

scenes

export\_presets.cfg

icon.svg





# Sinais

- Formas de **notificar ações** dentro do jogo
- Cada sinal se **conecta** a várias funções
  - Cada nodo **emite** vários sinais

# Exemplos de sinais

- Um objeto **colide** com outro
- Um botão é **apertado**
- Um timer **termina**
- Mouse entra no espaço de um objeto



Scene Project Debug Editor Help

2D Script AssetLib

Scene Import

label(\*)

+ Filter Node

Node2D

Sprite2D

Label

Button

FileSystem

res://

Filter Files

Favorites:

res://

icon.svg

label.gd

label.tscn

2D Script AssetLib

label.tscn - Projeto Slides - Godot Engine

Scene Project Debug Editor Help

2D Script AssetLib

label(\*)

168.2 %

View

Inspector Node History

Signals Groups

Filter Signals

BaseButton

- button\_down()
- button\_up()
- pressed()
- toggled(button\_pressed:bool)

Control

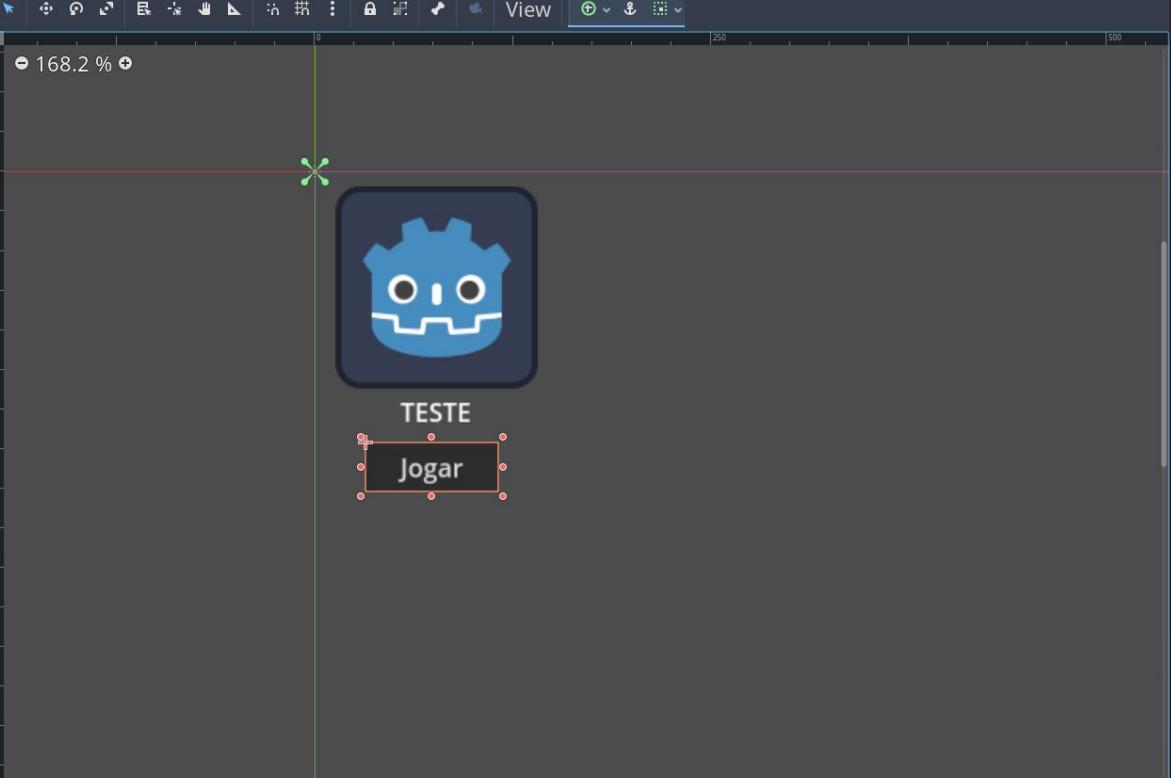
- focus\_entered()
- focus\_exited()
- gui\_input(event: InputEvent)
- minimum\_size\_changed()
- mouse\_entered()
- mouse\_exited()
- resized()
- size\_flags\_changed()
- theme\_changed()

CanvasItem

- draw()
- hidden()
- item\_rect\_changed()
- visibility\_changed()

Node

Output Debugger Audio Animation Shader Editor 4.0.2.rc1 Connect...



Scene Project Debug Editor Help

2D Script AssetLib

Scene Import

label

+

+ Filter Node

File Edit Search Go To Debug

Online Docs Search Help

Node2D

Filter Script

1 extends Node2D

Sprite2D

label.gd

2

Label

Filter Meth

3

Button

label.gd

4 func \_on\_button\_pressed():

Filter Files

5 print("BOTÃO PRESSIONADO")

\_on\_button...

6

Output Debugger Search Results Audio Animation Shader Editor

4.0.2.rc1

Connect...

Inspector

Node

History

Signals

Groups

Filter Signals

BaseButton

button\_down()

button\_up()

pressed()

.. :: \_on\_button\_pressed()

toggled(button\_pressed:...)

Control

focus\_entered()

focus\_exited()

gui\_input(event: InputEvent)

minimum\_size\_changed()

mouse\_entered()

mouse\_exited()

resized()

size\_flags\_changed()

theme\_changed()

CanvasItem

draw()

hidden()

item\_rect\_changed()

visibility\_changed()

label.tscn - Projeto Slides - Godot Engine

Projeto Slides (DEBUG)

Scenes

Scenes

+ ⚡

Resources

TESTE

Jogar

FileSystems

Filter

★ Favorites:

- res://
- icon.svg
- label.gd
- label.tscn

--- Debugging process started ---  
Godot Engine v4.0.2.rc1.official.50f26811b - https://godotengine.org  
Vulkan API 1.3.205 - Forward+ - Using Vulkan Device #0: NVIDIA - NVIDIA GeForce RTX 3060

BOTÃO PRESSIONADO

Filter Messages

Output Debugger Search Results Audio Animation Shader Editor

6 : 1

4 0 0 1

Inspector Node History

Forward+ ↗

Online Docs ⌂ Search Help

Signals Groups

Filter Signals

BaseButton

- button\_down()
- button\_up()
- pressed()
- .. :: \_on\_button\_pressed()
- toggled(button\_pressed:...)

Control

- focus\_entered()
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- item\_rect\_changed()
- visibility\_changed()

4.0.2.rc1

Connect...



# Uma introdução a GDScript

- GDScript é a linguagem padrão da Godot
- Inspirada em Python



```
class_name Personagem
extends CharacterBody2D

func _ready() -> void:
    print("Chamado quando o objeto é adicionado na cena")

func _process(delta: float) -> void:
    print("Chamado o tempo todo em loop")

func atirar():
    # Código que atira uma bala
    pass
```



```
class_name Personagem
extends CharacterBody2D

var numero_balas: int = 10

func atirar():
    if numero_balas <= 0:
        return
    numero_balas -= 1
    # Código que atira uma bala
    pass

func recarregar():
    numero_balas = 10
```



# Hora de pôr a mão na massa





# Astrum

Jogar

