Pract- **Add a jump mechanic on tap**

- File → **New Scene**.
- Click **"Other Node"** (or the + icon in the Scene panel). In the search box type CharacterBody2D and double-click it to create it as the **root node**.
- Rename the root node to **Player** (select it, press F2, type Player).
- With Player selected → Add Child Node (+) → choose **Sprite2D**. Select the Sprite2D, in Inspector → **Texture** → load your player image (or leave blank to test).
- With Player selected → Add Child Node → **CollisionShape2D**. In Inspector → **Shape** → choose **RectangleShape2D** (or Capsule) and set the size so it covers the sprite.
- Save Scene → name it Player.tscn.
- With Player selected → click **Attach Script** (paper+pen icon). Keep defaults, press **Create**.
- Delete everything in the new script and paste this exact code:

```
extends CharacterBody2D


var speed = 200

var gravity = 1200

var jump_velocity = -400


func _physics_process(delta):
    # gravity
    if not is_on_floor():
        velocity.y += gravity * delta


    # movement
    var dir = Input.get_action_strength("ui_right") - Input.get_action_strength("ui_left")
    velocity.x = dir * speed
```

```
# jump
if Input.is_action_just_pressed("ui_accept") and is_on_floor():
        velocity.y = jump_velocity


move_and_slide()
```

Make a floor

- Right-click root node → **Add Child Node** → StaticBody2D. Rename it Ground.
- Add child to Ground: **CollisionShape2D**.
- In Inspector → Shape → choose RectangleShape2D.
- Resize the rectangle wide and flat (like a platform).
- (Optional) Add a Sprite2D to see it, fill with a solid color.

Check Player's collision

- Click Player → CollisionShape2D.
- Make sure the shape (Rectangle/Capsule) **covers the Sprite** and doesn't disappear.
- Your Player must overlap the Ground slightly when you run → so Godot detects collision.

Add the input action

- Go to **Project → Project Settings → Input Map**.
- Add new action: ui_accept.
- Bind it to **Space** (or any key).
- Your screen should look like this: -
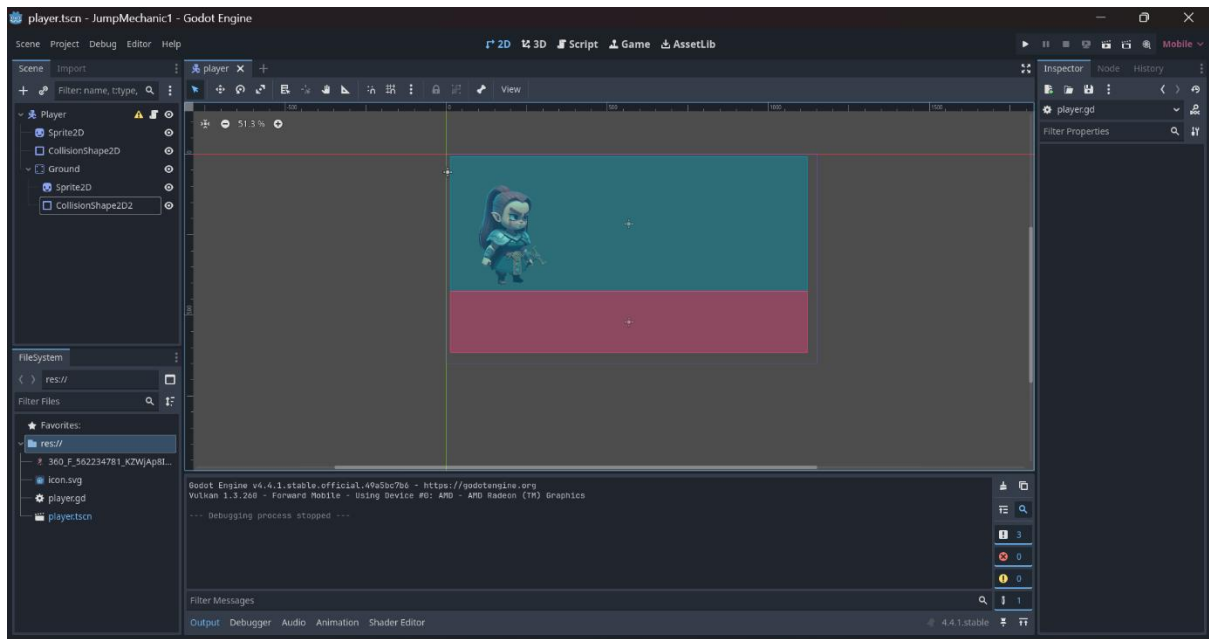
Green is Player Body (**CollisionShape2D)**

Red is Ground **(CollisionShape2D)**

Test

- Run the scene.
- Player should stand on the Ground.
- Press **Space** → Player jumps.