Trumpet Ball Bounce

Godot 4 Tutorial

# Create the scene

1. Create a new project (or even just a new scene in your current Godot project)
2. Choose 2D Scene

A screenshot of a phone

Description automatically generated with medium confidence

1. Put the ball, gem and trumpet files into the project.

A screenshot of a computer

Description automatically generated with medium confidence

1. Attach a new script to the Node2D node

Graphical user interface, application

Description automatically generated

1. Click on 2D at the top of the window to return to the viewport.



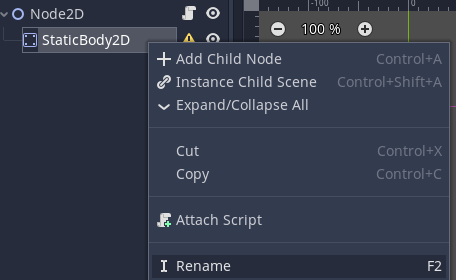
# Create the gems

1. Add a StaticBody2D child to the Node2D node.

Graphical user interface, application

Description automatically generated

1. Rename StaticBody2D to Gem.



1. Move the + symbol into the centre of the viewport.

A screenshot of a computer

Description automatically generated with medium confidence

1. From the Node tab, click Groups, then add the gems group.

A screenshot of a computer

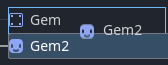
Description automatically generated with low confidence

1. Drag the gem file into the viewport. Make sure it is centred on the + symbol.

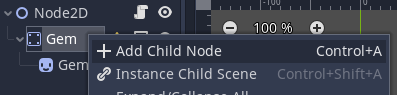
Graphical user interface

Description automatically generated

1. Drag the  node onto the  node to make it a child. Rename it to Gem.



1. Add a CollisionShape2D child to the  node.



1. From the Inspector tab, set the shape to a New CircleShape2D.

A screenshot of a computer

Description automatically generated with low confidence

1. Resize the collision shape to match the gem by dragging the red circle.

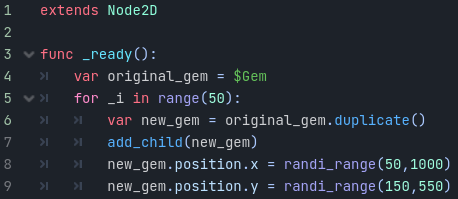
A picture containing icon

Description automatically generated

1. Go to script view by clicking Script at the top of the screen



1. Delete all the code in the Node2D script and set the code to this:

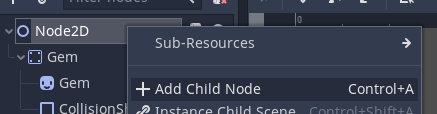


1. Play the scene to make sure it works (there should be lots of gems)



# Create the ball

1. Add a RigidBody2D child to the Node2D node.



1. Click on 2D at the top of the window to return to the viewport.

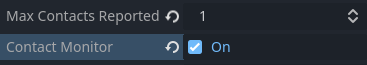


1. Move the + so it is above the gem in the viewport.

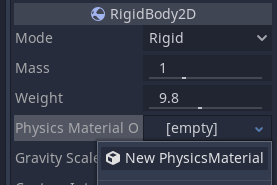
Application

Description automatically generated

1. In the Inspector, set Max Contacts Reported to 1, and Contact Monitor to On.



1. Create a new PhysicsMaterial and click on it to open it.

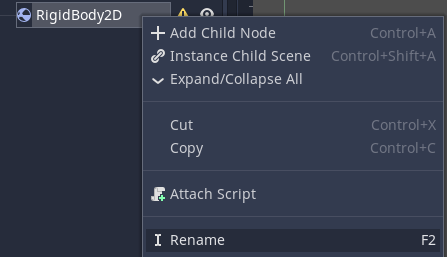


1. Set Bounce to 0.7

Graphical user interface, application

Description automatically generated

1. Rename the Rigidbody2D node to Ball.



1. Drag the ball image into the viewport. Make sure it is centred on the + symbol.

Graphical user interface, application

Description automatically generated

1. Drag the  node onto the  node to make it a child. Rename it to Ball.



1. Add a CollisionShape2D child to the  node.

Graphical user interface, text, application

Description automatically generated

1. Choose the circle shape

Graphical user interface, text, application

Description automatically generated

1. Resize the collision shape to match the ball.

Diagram, schematic

Description automatically generated

1. Select the  node:
2. From the Node tab, click Signals.

Graphical user interface, application, Teams

Description automatically generated

1. Connect the body\_entered signal to the Node2D script.

Graphical user interface, text, application

Description automatically generated

1. Change the \_on\_ball\_body\_entered code to this:

A blue text on a black background

Description automatically generated

1. Play the scene to make sure it works (the ball should bounce off gems and destroy them)



# Create the trumpet

1. Click on 2D at the top of the window to return to the viewport.



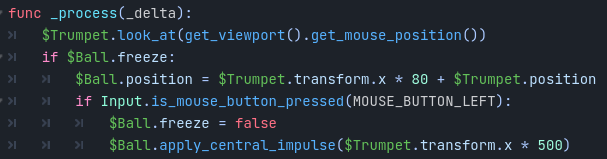
1. Drag the trumpet image into the viewport. Place it at the top of the viewport.

A screenshot of a computer

Description automatically generated

# Make the trumpet launch the ball

1. Change to script view and add this code:



1. Select the  node.
2. Switch to the Inspector tab.



1. Change Freeze to On

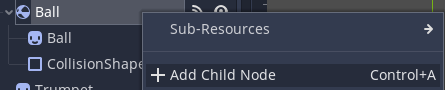


1. Play the scene to make sure it works (click the left mouse button to launch)



# Reset the ball when it goes out of view

1. Add a VisibleOnScreenNotifier2D child to the  node.



1. From the Node tab, click Signals.

Graphical user interface, application, Teams

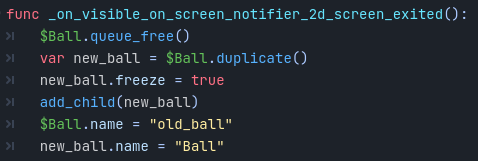
Description automatically generated

1. Connect the screen\_exited signal to the Node2D script.

Graphical user interface, text, application, chat or text message

Description automatically generated

1. Change the \_on\_visible\_on\_screen\_notifier\_2d\_screen\_exited code to this:



1. The game is finished!

# Bonus step

If you add the wall file to your project, you can put two walls in the game – one on the left and one on the right. Give each one a StaticBody2D to keep your ball from flying off the sides of the screen!