CODE NINJAS®

Activity 04 Prove Yourself: Jungle Breakout

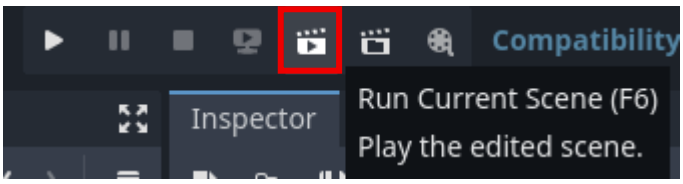
Prove Yourself: Jungle Breakout

For this Prove Yourself, Jungle Escape becomes Jungle Breakout as walls have been placed in Codey's way, preventing escape! Use your understanding of **Raycasting, Collision Layers,** and **Input** events to program Codey to destroy walls by pressing a button!

Open the **Jungle Escape** project. Explore how to do the following:

1. Navigate to **res://** > **Prove Yourself** > **Scenes**, and open **prove_yourself.tscn.**

2. Playtest the game using **Run Current Scene** instead of **Run Project** (as **main.tscn** is considered the default scene in **Run Project**).



Oh no! Codey can't get past the walls!

3. In **Project Settings > Input Map**, create a new "destroy" action and map it to Backspace. This will be used in the code later!

4. Give Codey a new **RayCast3D** to detect walls directly in front of Codey and give it a fitting name. Set up the RayCast3D's properties in the **Inspector**.

   *The source of the previously made Raycasts was slightly forward from Codey so it started at the eyes. This time, only set the **Y** coordinate of the Raycast's transform position, as changing **X** or **Z** will cause the wall detection to be inconsistent at close ranges.*
   Should this new Raycast's destination point diagonally down or directly forward from Codey's face?
   - *Remember, the **Y** axis controls up/down.*

   What is the next available/unused Collision Layer to mask?

5. In **FileSystem**, navigate to **res:// > Prove Yourself > Scenes > Objects**, and open **wall.tscn.** In its **StaticBody3D's Inspector**, set the **Collision Layer** to *just* the one that is masked in the new RayCast3D.

   *Remember to save the scene by pressing **CTRL + S.***

6. Return to the **prove_yourself.tscn** scene and ensure that **Codey's Collision Mask** includes the new layer that the walls use.

7. Navigate to **res:// > Prove Yourself > Scripts**, and open **player_PY.gd.** Under **TODO 2**, declare an `onready` `ray_walls` variable for the **RayCast3D**.

8. Under the `if/elif/else` code in **TODO 3**, write the following:

   Write a new `if` *-statement to check if* `ray_walls` *is colliding.*
   Inside the if, get the `other_object` *and* `wall_node`**.** *Then, print* `"WALL AHEAD: "` *with the name of the* `wall_node`*.*
   Write an `if` *-statement nested inside of the current one and use* `Input.is_action_just_pressed()` *to detect the* `"destroy"` *action.*
   In the nested if, set `other_object's` *collision layer to 0 by calling* `other_object.set_collision_layer(0)`**.**
   - *This is to avoid an error that occurs when RayCast3Ds detect collisions on an already-destroyed object.*

   Delete the wall by calling `queue_free()` *on* `wall_node`**.**

9. Playtest the game! Ensure that the **Output** panel prints warnings for both dangerous platforms and any nearby walls, and that backspace destroys the walls!

Extra Challenge!

Try adding more walls to destroy!

- *In **Scene**, open the dropdown for **Platforms** then for **Walls.** Select any wall and press CTRL+D to duplicate it. Make any number of duplicates!*
- *Use the toolbar to move, rotate, and scale the duplicated walls.*

Congratulations on completing **SB Activity 04: Jungle Escape** and **Prove Yourself: Jungle Breakout** in Godot – **You Rock**! You are now ready to save this project and submit it.

Continue your exploration with Godot by opening the **SB Activity 05: Cloud Hop** Ninja Guide.