

Spawn Turtle Catch Game with ROS 2

Project Description

The "Spawn Turtle Catch" game involves multiple turtles, where one turtle play as the base one, and others are spawned as targets. The base turtle's objective is to chase and catch the spawned turtles. When the base turtle catches a spawned turtle, it is destroyed, and a new one appears at a random location.

Objectives

1. Spawn Turtle Generation: Create a system for spawning new turtles at random positions within a specified workspace.

2. Collision Detection: Implement a collision detection mechanism to determine when the base turtle catches a spawned turtle.

3. Turtle Destruction: Design a service to destroy the caught spawned turtle and remove it from the game.

4.Launch file: write a launch file that will contains all the nodes used in your program

Hints

1- you could use (Kill – spawn) built-in services in turtlesim.

2- use Pose topic to get the position of the turtles.

Bonus:

Develop control mechanisms for the base turtle using ROS 2, enabling it to move and chase the spawned turtles autonomously .

Deliverables

- The project will deliver a complete "Spawn Turtle Catch" game implemented in ROS 2, including source code, launch file, custom interfaces and instructions for build and use.

Deadline : **Friday 12 am**

Form : <https://forms.gle/7M2nWQwJKVHtzoWx7>