

Robot Practical Course Master Competition #1

Task 1.1 The competition: This is the final task for this semester. Therefore you will have three days to finish the assignment. You will write a hunter or a prey turtle. Talk to your fellow students and the supervisor and decide which role your group takes. The turtle has to move autonomously. After starting your node, you may not interact with the computer. You will have to wait for the boolean `true` to be published on the `/game.state` topic, before you are allowed to move.

Prey The prey turtle is supposed to run away from the hunter in order to not get caught. The name of the turtle has to be `prey`. The prey wins if it is not caught within the game duration.

Hunter The hunter turtle is supposed to catch the prey turtle. The name of the turtle has to be `hunter`. The hunter wins if it catches the prey within the game duration.

Game rules:

- TurtleSim settings:
 - Canvas color: White
 - Hunter pen color: Red
 - Prey pen color: Blue
- Game limitations:
 - Game duration: 90 seconds
 - Maximum turning speed: 2
 - Maximum driving speed: 2
 - No teleporting is allowed during the game. You may only use the `/[prey,hunter]/cmd_vel` for moving.
- Starting positions:
 - Hunter turtle starts in bottom right corner: (11,0)
 - Prey turtle starts in top left corner: (0,11)
- Catching rules:
 - If the hunter catches the prey, it must teleport to the bottom right corner to indicate the catch.
 - If the prey is caught, it must remove itself from the canvas to indicate the hit.
 - The hit radius for the turtles is 0.2.
- On the last day, you will play vs. the other groups. You can earn bonus points for winning games.

CHEATING IS PROHIBITED AND WILL LEAD TO BAD KARMA¹!

¹and disqualification