

MISSION #1

The Robot at First Sight

Due: Week 4 (September 9, 2020)

This week we will play with robot in order to be familiar with the robot. It will force you to write a simple program to communicate with the robot via serial communication port and wireless communication (Bluetooth). In addition, perhaps, you and your teammate will work together for the first time. ☺ However, don't worry. This task is very easy.

For each assignment, please create a button on you program so that the one who evaluates your work will click in order to start the running. In addition, you should provide the way to exit the execution as well.

Assignment 0.0 : The Dumb Wander

Task: Write a robot program called **DumbWander**

Description: When executed, it will make the robot to move forward at least 10 centimeters per second as long as its infrared sensors so not detect an obstacle in its path. Before the robot hits anything that it can see on its path, the robot should stop. If someone removes the obstacle out of the way, the robot should start to move again.

Note: this assignment involves no robot rotation and obstacles are usually going to be human leg, although they will at times be the walls and chairs.

Assignment 0.1 : The Head-Turner

Task: Write a robot program called **TurnClosest**

Description: When executed, the robot should exhibit the behavior of rotating toward the closest object that its infrared sensors detect.

Note: with some care, your solution can look smooth and intelligent. For example, it is a good idea for the robot to turn faster if someone is on ninety degrees from its front compared to twenty degrees. We will be testing this by walking around your robot as it sits in an empty, open space. Again, this assignment involves no robot move forward/backward.

Good luck...☺

Remark: Right now, we have only five robots available, so please be patience sharing them between groups. We will make more robots when it's needed.