Python with Lego Mindstorms EV3



Exercise (Ultrasonic Sensor)

An example of the code for the ultrasonic sensor

```
ultrasonic.py •

1 #!/usr/bin/env python3
2 from ev3dev2.sensor.lego import UltrasonicSensor
3 from ev3dev2.led import Leds
4 from time import sleep
5
6 # Connect ultrasonic sensor to any sensor port
7 us = UltrasonicSensor()
8 distance = us.distance_centimeters
```

The ultrasonic sensor has to:

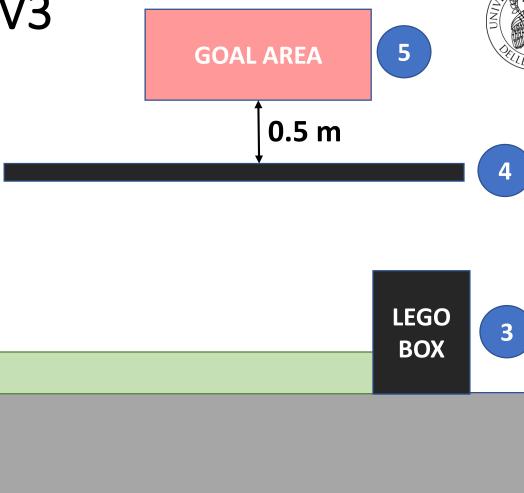
- Measure the distance to an object every 0.5 s
- Display these values on the EV3 screen
- If the distance is < 0 20 cm, Leds become red and the EV3 emits an alarm sound

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Final Challenge – The wall follower

The robot must:

- 1. Begin at the Starting Area
- Follow the wall, trying to maintain a stable distance of 20 cm (from the ultrasonic sensor to the wall)
- **3. Touch** the box
- **4. Find** the black line
- **5. Reach** the goal area



WALL

1

STARTING AREA