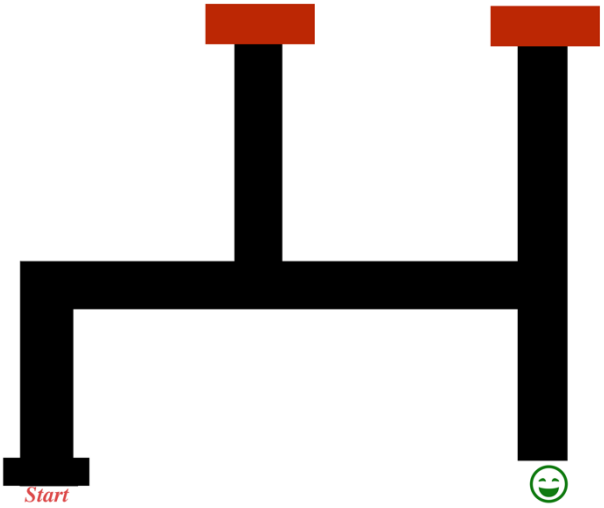
Workshop #2 Support Sheet

In this workshop, your job is to program the robot and though your implementation get the robot out of the maze (a screenshot of the maze can be seen below).

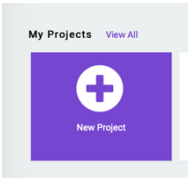


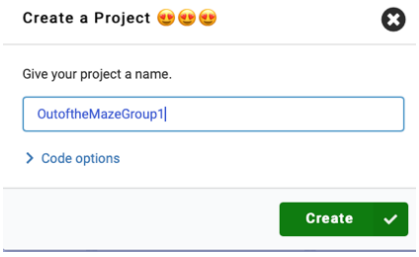
MISSION OBJECTIVE

- Get the robot out of the maze.

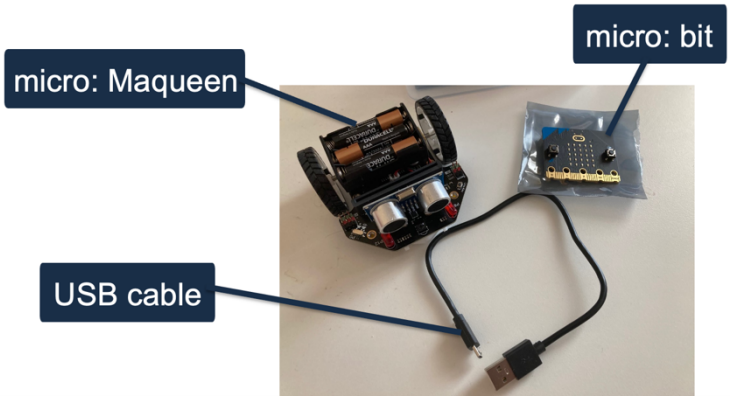
MISSION BRIEF

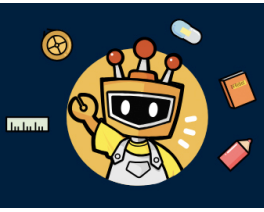
- To start, you need to go to https://makecode.microbit.org/.
- Create new project (see the screenshot).
- Name your project "OutoftheMazeGroup" and append your group number (see screenshot below).





- You have a box containing a micro:bit, a cable, and a micro:maqueen robot (see the screenshot below). The micro:bit is the pocket-size computer that you need to program, and plug in to the micro:maqueen robot. You will need to program your micro:bit to help you robot escape the maze. You can use the light/ultrasonic/line tracing sensors, it is entirely up to you. You can be creative!

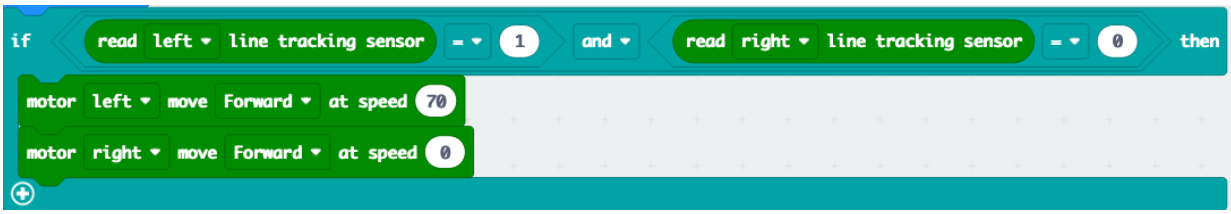




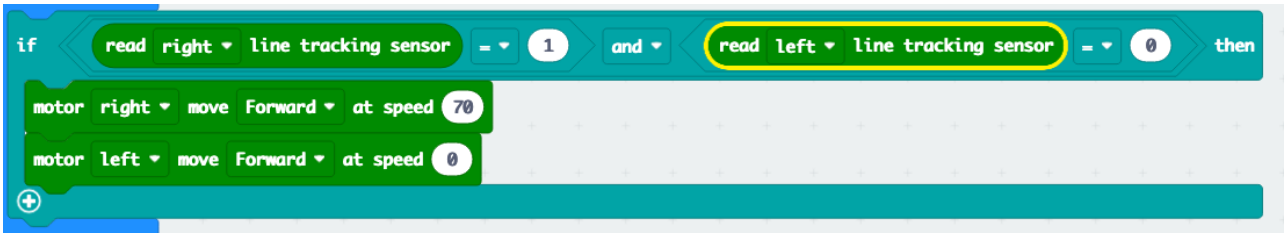
micro:bit

If you have any questions, please call the mentor who is responsible for your group to help you.

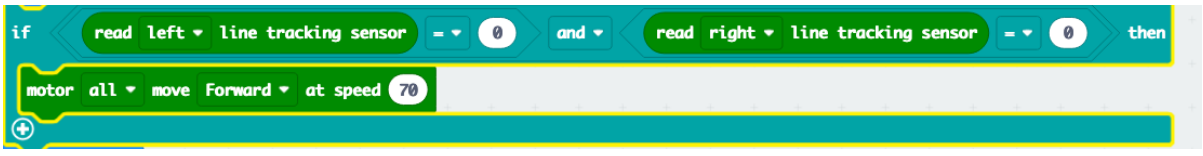
Hint 1: In the code block below, when the Maqueen's line-tracking sensors (left and right) detect the black line, then Maqueen's motor is put to move forward at speed 70. Therefore, when both sensors detect a black line, the robot moves forward at a speed of 70



Hint 2: In the code block below, when the Maqueen's line-tracking left sensor detects white and the right sensor detects the black line, then Maqueen's left motor put to move forward at a speed of 70 and the right motor is put to move forward at speed 0. This means that if the robot detects white on the left sensor and black on the right sensor, then the robot rotates to the left.



Hint 3: In the code block below, when Maqueen's line-tracking right sensor detects white and the left sensor detects the black line, then Maqueen's right motor put to move forward at a speed 70 and the left motor is put to move forward at speed 0. This means that if the robot detects white on the right sensor and black on the left sensor, then the robot rotates to the right.



Hint 4: In the code block below, when the Maqueen's line-tracking right sensor detects white and the left sensor detects white, then maqueen's left motor put to move forward at a speed of 30 and the left motor is put to move backward at speed -30. This means that if the robot detects white on both sensors, then the robot stays in the same place.