

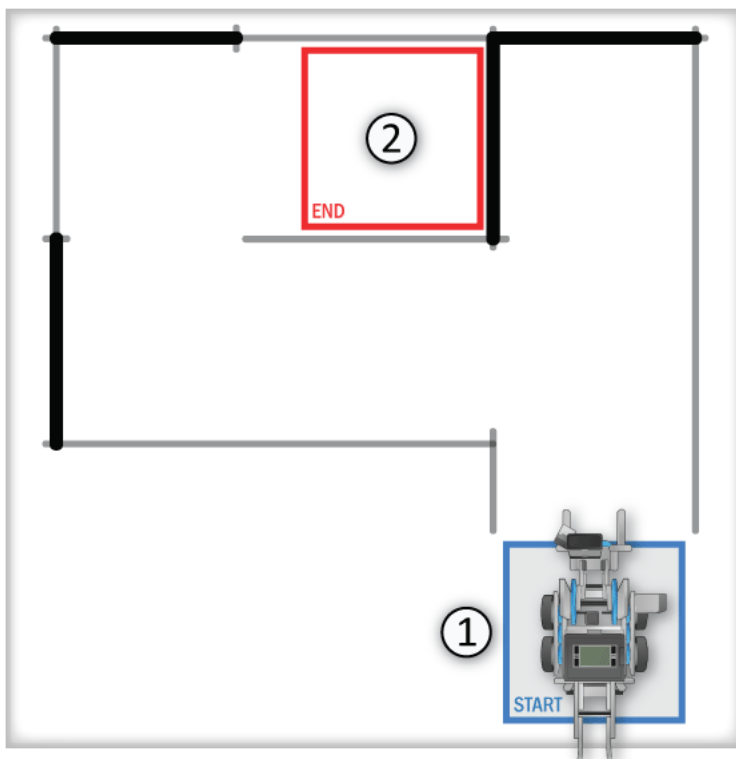
# Introduction to Programming



## CHAPTER 4: Maze Challenge

In this challenge, you will program the VEX IQ robot to move from its starting area through a maze with tall, vertical walls. Walls in the maze can be adjusted to be nearer or farther between each run, but the general path must remain unchanged. Make use of the Ultrasonic Sensor and be sure to not touch any walls along the way.

### Rules and Procedures:



- Recreate the maze with tall objects, such as books or binders.
- The robot must start entirely within the start box (1), as well as stopping entirely inside the end box (2).
- Walls marked by gray lines can move slightly.
- Walls marked by dark black lines cannot be moved.
- The robot must not touch any walls as it navigates throughout the maze.

### Hints:

- The patterns of turns cannot change, so you don't need to worry about using a sensor (other than Rotation) during turns.
- Look carefully at what distances in the maze are guaranteed not to change. Try to use those distances in combination with the Ultrasonic Sensor to orient yourself.
- Because of the length of the robot, try raising the arm up to shorten itself.