

BUILD YOUR ROBOT WORLD IN JAVA

<https://www.educative.io/courses/hour-of-code-build-your-robot-world-in-java/m2Y3Bko1vor>

MOVING THE ROBOT

STEP 1:

- Press Run
- Robot moves one box to right: "east"

STEP 2:

- Click mouse at end of Line 18
- Press Enter
- Drag mouse to select `maze.turn();`
- Press CTRL C to copy
- Click on Line 19
- Press CTRL V to paste
- Click at end of Line 19
- Press Enter
- Drag mouse to select `robbie.setDirection("east")`
- Press CTRL C to copy
- Click on Line 20
- Press CTRL V to paste
- Change "east" to "south"
- Robot moves one box down: "south"

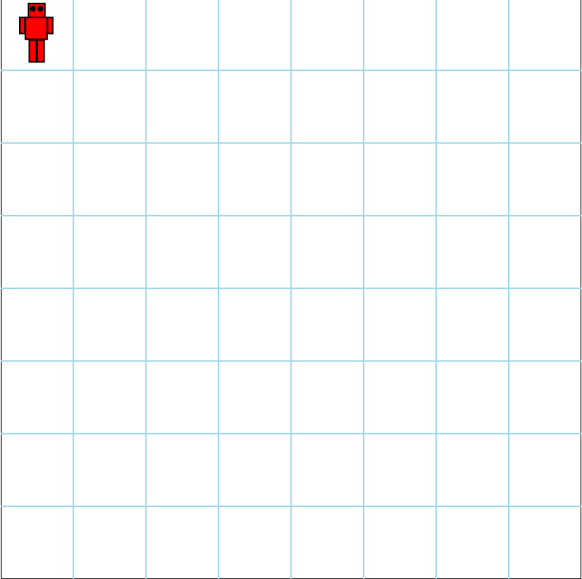
STEP 3:

- Click mouse at end of Line 20
- Press Enter
- Drag mouse to select `maze.turn();`
- Press CTRL C to copy
- Click on Line 21
- Press CTRL V to paste
- Click at end of Line 21
- Press Enter
- Drag mouse to select `robbie.setDirection("east")`
- Press CTRL C to copy
- Click on Line 22
- Press CTRL V to paste
- Change "east" to "west"
- Robot moves one box left: "west"

STEP 4:

- Click mouse at end of Line 22
- Press Enter
- Drag mouse to select maze.turn();
- Press CTRL C to copy
- Click on Line 23
- Press CTRL V to paste
- Click at end of Line 23
- Press Enter
- Drag mouse to select robbie.setDirection("east")
- Press CTRL C to copy
- Click on Line 24
- Press CTRL V to paste
- Change "east" to "north"
- Robot moves up ("north") one box to start position

```
1 import com.educative.robot.*;
2
3 // A program that creates a robot in a maze
4 class RobotDemo {
5
6     public static void main(String[] args) {
7         // set up variables to store the robot and the maze
8         Robot robbie;
9         Maze maze;
10
11         // create the robot and maze, and add
12         // the robot to the maze
13         robbie = new Robot(0.0, 0.0, "red");
14         maze = new Maze(8, 8, 50);
15         maze.add(robbie);
16
17         // set the robot movement direction:
18         robbie.setDirection("east");
19         maze.turn();
20         robbie.setDirection("south");
21         maze.turn();
22         robbie.setDirection("west");
23         maze.turn();
24         robbie.setDirection("north");
25
26     }
```



✓ Succeeded

BUILDING THE LABYRINTH

STEP 1:

- Click mouse at beginning of Line 17
- Press Enter
- Click mouse at Beginning of Line 17
- On Line 17 type: // add several walls
- Click Enter
- On Line 18 type: maze.add(new Wall(2.0, 2.0));
- Click mouse at end of Line 19
- Click Enter
- On Line 20 type: maze.add(new Wall(2.0, 3.0));
- Click mouse at end of Line 20
- Click Enter
- On Line 21 type: maze.add(new Wall(3.0, 3.0));
- Click Run
- You have now created a 4 box wall:

<pre>// add several walls maze.add(new Wall(2.0, 2.0)); maze.add(new Wall(3.0, 2.0)); maze.add(new Wall(2.0, 3.0)); maze.add(new Wall(3.0, 3.0));</pre>	
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STEP 2: ADDING MORE BOXES

- Click mouse at end of Line 22
- Click Enter
- Click Enter again
- On Line 23, type: Type: maze.add(new Wall(5.0, 2.0));
- Click mouse at end of Line 23
- Click Enter
- On Line 24 type: maze.add(new Wall(5.0, 3.0));
- Click mouse at end of Line 24
- On Line 25 type: maze.add(new Wall(5.0, 4.0));
- Click Run
- You have now created a 3 box wall:

<pre>// add several walls maze.add(new Wall(2.0, 2.0)); maze.add(new Wall(3.0, 2.0)); maze.add(new Wall(2.0, 3.0)); maze.add(new Wall(3.0, 3.0)); maze.add(new Wall(5.0, 2.0)); maze.add(new Wall(5.0, 3.0)); maze.add(new Wall(5.0, 4.0));</pre>	
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ADDING CREATURES TO YOUR MAZE

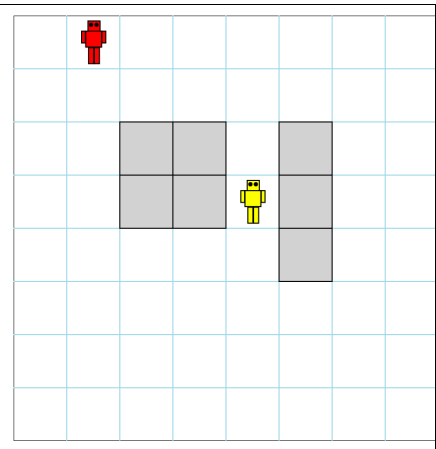
STEP 1:

- Click mouse at the end of Line 8
- Press Enter
- On Line 9 type: Robot tiktok;

STEP 2:

- Click Mouse at the end of Line 14
- Click Enter
- On Line 14 type: tiktok = new Robot(4.0, 3.0, "yellow");
- Click Enter at end of Line 15
- Click Enter at end of Line 18
- On Line 19 type: maze.add(tiktok);
- Click Run
- You have now added a second, yellow robot

```
6 public static void main(String[] args) {
7     // set up variables to store the robot and the maze
8     Robot robbie;
9     Robot tiktok;
10    Maze maze;
11
12    // create the robot and maze, and add
13    // the robot to the maze
14    robbie = new Robot(0.0, 0.0, "red");
15    tiktok = new Robot(4.0, 3.0, "yellow");
16
17    maze = new Maze(8, 8, 50);
18    maze.add(robbie);
19    maze.add(tiktok);
20 }
```



DRIVE THE ROBOTS AROUND THE LABYRINTH

STEP 1:

- Drag the mouse over the text in Line 31 to select
- On Line 31 type: `// drive the robots around`
- Click mouse at the end of Line 32
- Click Enter
- On Line 33 type: `maze.turn();`
- Click at the end of Line 33
- Click mouse at the end of Line 33
- Click Enter
- On Line 34 type: `maze.turn();`
- Click mouse at the end of Line 34
- Click Enter
- On Line 35 type: `maze.turn();`
- Click mouse at the end of Line 35
- Click Enter
- On line 36: type `maze.turn();`

STEP 2:

- Click mouse at the end of Line 36
- Click Enter
- On Line 37 Click Enter
- On Line 38: type `robbie.setVelocity(0.0, 1.0);`
- Click mouse at the end of Line 38
- Click Enter
- On Line 39: type `tiktok.setVelocity(0.0, 1,0);`
- Click mouse at the end of Line 39
- Click Enter
- On Line 40: type `maze.turn();`

STEP 3:

- Click mouse at the end of Line 40
- Click Enter
- On Line 41 click Enter
- On Line 42 type: `tiktok.setVelocity(-1.0, 0,0);`
- Click at the end of Line 42
- Click Enter
- On Line 43 type: `maze.turn();`
- Click mouse at the end of Line 43
- Click Enter
- On Line 44 type: `maze.turn();`

- Click mouse at the end of Line 44
- Click Enter
- On Line 45 type: maze.turn();

STEP 4:

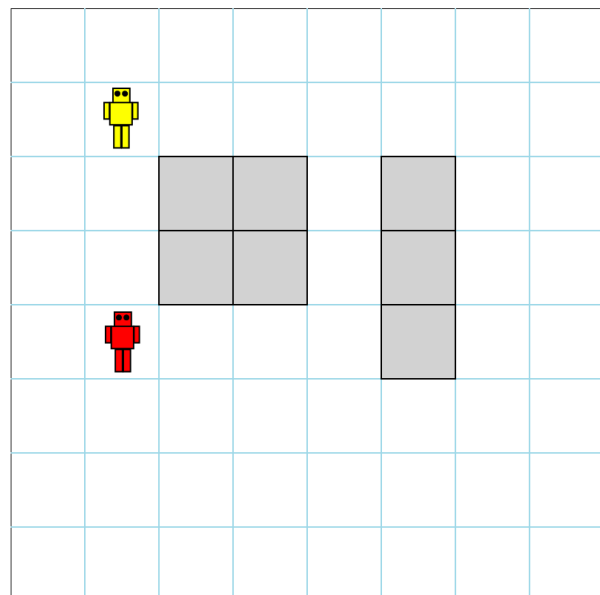
- Click at the end of Line 45
- Click Enter
- On Line 46 click Enter
- On Line 47 type: tiktok.setVelocity(0.0, -1.0);
- Click at the end of Line 47
- Click Enter
- On Line 48 type: robbie.setVelocity(-1.0, 0.0);
- Click at the end of Line 48
- Click Enter
- On Line 49 type: maze.turn();
- Click at the end of Line 49
- Click Enter
- On Line 50 type: maze.turn();
- Click at the end of Line 50
- Click Enter
- On Line 51 type: maze.turn();
- Delete lines to move curly brackets to Lines 53 and 54
- Click Run
- The red robot, Robbie, should be chasing the Yellow Robot, Tiktok, through the labyrinth

```
// drive the robots around
robbie.setVelocity(1.0, 0.0);
maze.turn();
maze.turn();
maze.turn();
maze.turn();

robbie.setVelocity(0.0, 1.0);
tiktok.setVelocity(0.0, 1.0);
maze.turn();

tiktok.setVelocity(-1.0, 0.0);
maze.turn();
maze.turn();
maze.turn();

tiktok.setVelocity(0.0, -1.0);
robbie.setVelocity(-1.0, 0.0);
maze.turn();
maze.turn();
maze.turn();
```



✓ Succeeded