

Visual Studio Code (VS Code)

Installation

Editing, Run/Debug

JUnit

Installation

Why did we build Visual Studio Code? <https://code.visualstudio.com/docs/editor/whyvscode>

Modern, lightweight (compared to Eclipse)!

Download Visual Studio Code from here: <https://code.visualstudio.com/download>

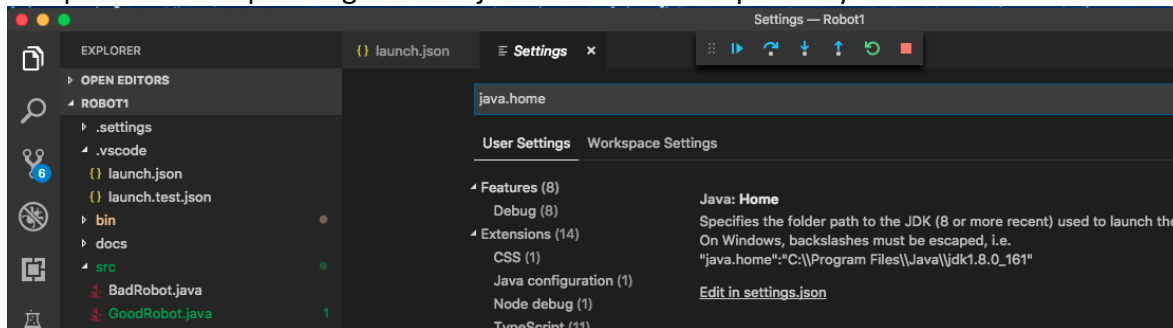
Go ahead and launch VS Code!

Make sure you have Java (the language) installed

Make sure you have Java installed. You will need at least one of these environment variables set to the location of your Java installation: JAVA_HOME, JDK_HOME or PATH.

You can check this by entering: `javac -version`

Once you have Visual Studio Code installed, you can review (or edit) JAVA_HOME by clicking Code or File | Preferences | Settings. Enter 'java.home' and the path to your Java installation is displayed:



Once you load the editor, install the **Java Extension Pack**, which includes these Extensions:

Language Support for Java™ by Red Hat

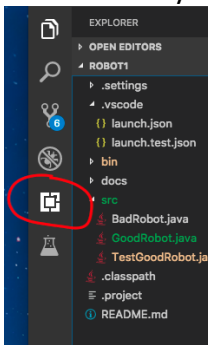
Debugger for Java

Maven for Java

Java Test Runner (JUNIT)

Java Dependency Viewer

In the editor you can click the Extensions button. Enter 'Java Extension Pack' in the search bar to install.



Here's a nice video to walk through installation and setup:

<https://www.youtube.com/watch?v=KQ433E2R3U0>

Edit, Run, Debug

Run (GoodRobot.java)

Debug Console window shows output

If you have Input (like Scanner.next()) – that is displayed in Terminal window



```
20 private static WheelController robotWheels;
21
22 // instantiate a Random number generator object, and all robot systems
23 public static void initRobot() {
24     randomNumberGenerator = new Random();
25     xbox = new XboxController();
26     lightSensor = new LightSensor();
27     robotWheels = new WheelController();
28 }
29
30 public static void main(String[] args) {
31     // initialize random generator, Xbox controller and light sensor
32     initRobot();
33
34     int sensorReading;
35     int xboxButton;
36
37     // robot loop will run forever (robotActive will always be true)
```

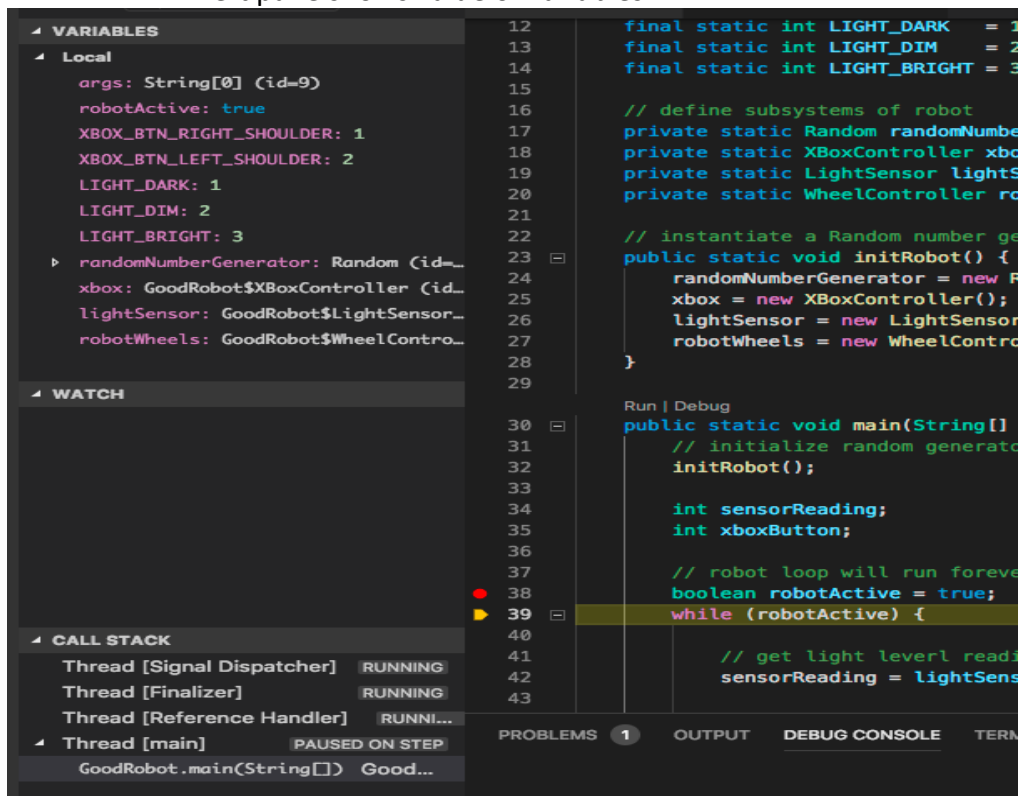
Debug

Click left of the line-numbers to set/unset a breakpoint

Click “Debug” to start program

Program will stop on breakpoints

Left pane shows value of variables

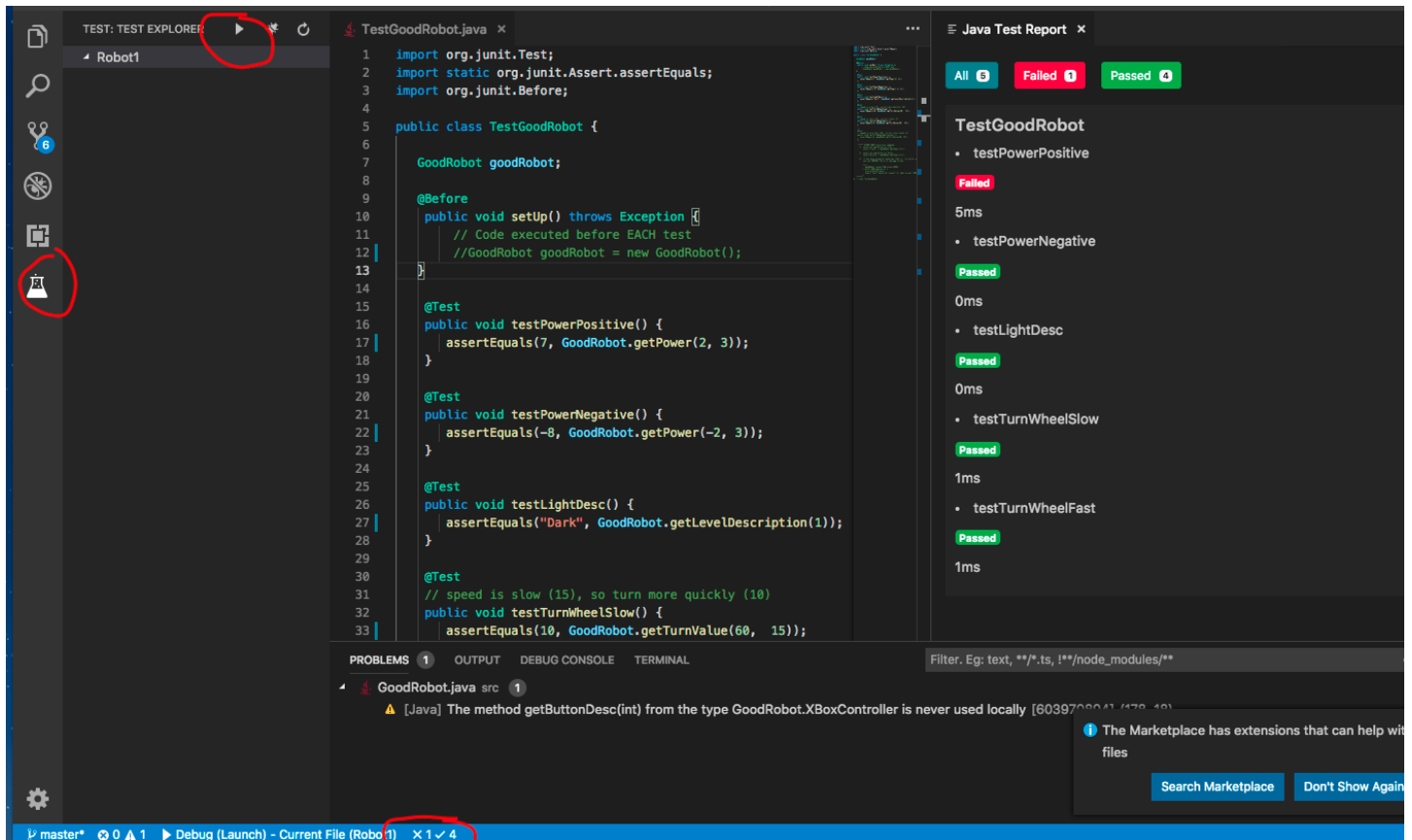


```
12 final static int LIGHT_DARK = 1;
13 final static int LIGHT_DIM = 2;
14 final static int LIGHT_BRIGHT = 3;
15
16 // define subsystems of robot
17 private static Random randomNumberGenerator;
18 private static XboxController xbox;
19 private static LightSensor lightSensor;
20 private static WheelController robotWheels;
21
22 // instantiate a Random number generator object, and all robot systems
23 public static void initRobot() {
24     randomNumberGenerator = new Random();
25     xbox = new XboxController();
26     lightSensor = new LightSensor();
27     robotWheels = new WheelController();
28 }
29
30 public static void main(String[] args) {
31     // initialize random generator, Xbox controller and light sensor
32     initRobot();
33
34     int sensorReading;
35     int xboxButton;
36
37     // robot loop will run forever (robotActive will always be true)
38     boolean robotActive = true;
39     while (robotActive) {
40
41         // get light lever1 reading
42         sensorReading = lightSensor.read();
43     }
```

Junit

Click the Test icon on left pane (look like a beaker)

Then click 'Run' button on the top (circled – the “play” button) – this will run your Junit tests.



On the bottom margin, click on the results to bring up the Java Test Report. (the red circle on the bottom)

The Java Test Report display which of your Java Tests passed and failed.

A nice web page with more details:

Debugging Java in Visual Studio Code. <https://code.visualstudio.com/docs/java/java-debugging>