

## Team Bionics

### **Steps to run the project from a distributed executable:**

#### **On macOS**

1. Extract to “macOS.zip” folder.
2. Extract the folder.
3. Right click on line\_robots.app file.
4. Select “Open”
5. If a dialog box appears, click open. If open is not a choice, click cancel and repeat starting at step 3.

#### **On Windows OS**

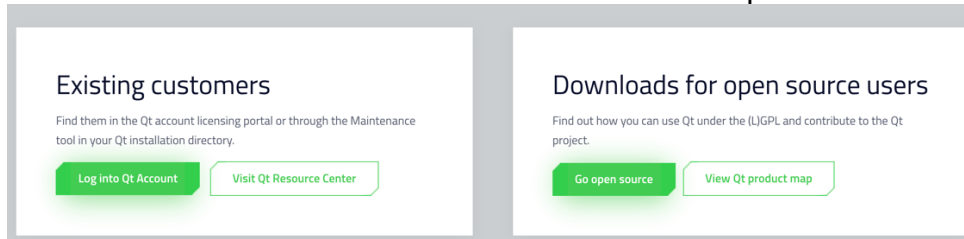
(make sure you have Microsoft Visual C++ Redistributable for Visual Studio 2015, 2017 and 2019. or higher installed.)

Link: <https://support.microsoft.com/en-us/help/2977003/the-latest-supported-visual-c-downloads>

6. Extract to “WindowsVersion.zip” folder.
7. Click on line\_robots.exe in the release subfolder.
8. Select “Open”

### **Steps to compile the project from the source code**

1. Download Qt from <https://www.qt.io/download>
2. Download the Qt where it states “Downloads for open source users”



3. Scroll down and click on “Download the Qt Online Installer”



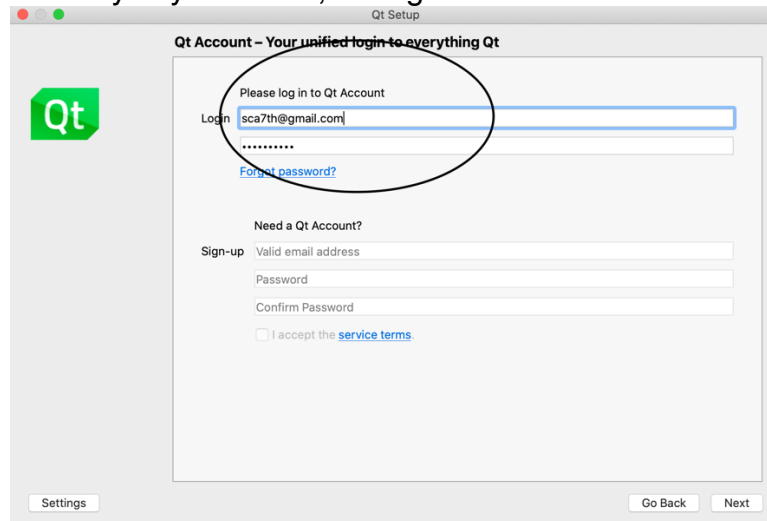
- A. The Browser will automatically detect the operating system.
- B. Click “Download” button.

If you are installing under a Qt open source license, please be sure you are in full compliance with the legal obligations of the (L)GPL v2/3 before installation. For a brief overview visit the [main download page](#) or for more details see the [FAQ](#).



#### 4. Installation

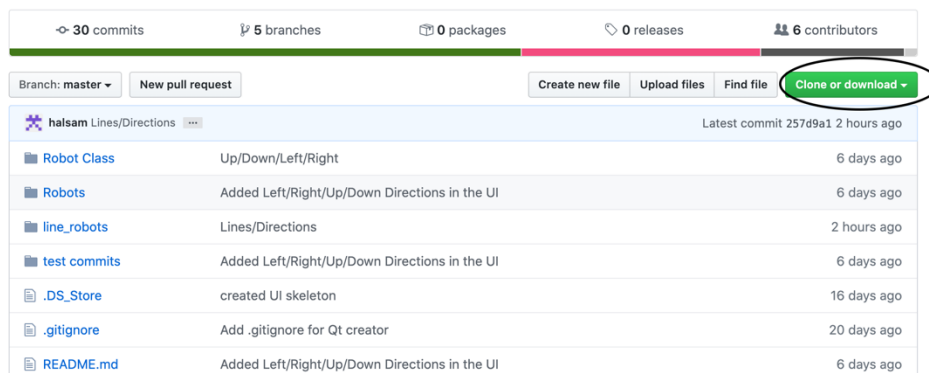
- A. On macOS/Windows (Prerequisites: Have latest version of XCode installed)
- Download qt-unified-mac-x64-3.2.2-online.dmg or qt-unified-windows-x86-3.2.2-online.exe
  - Double Click to install
  - Create an account for Qt (program will ask this due to being open source).
  - Verify in your email, then go back to the installation and login.



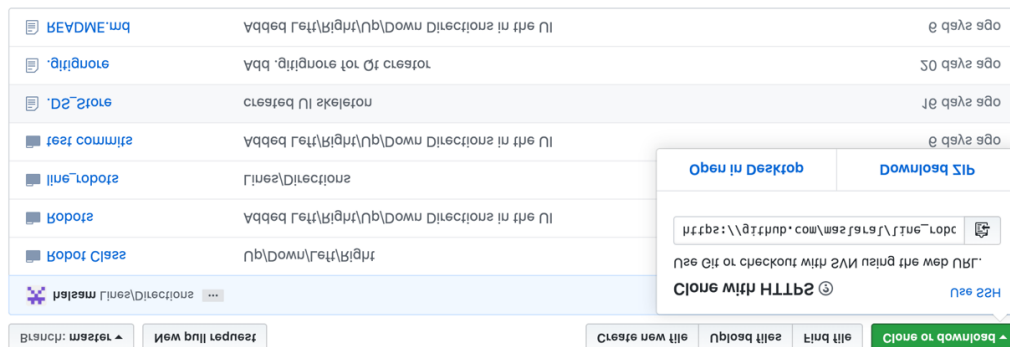
- Qt will authenticate the login, then will ask for user to agree to the terms. Place a checkmark and agree.
- Press “continue” twice.
- Choose if you want to contribute to Qt, “press continue”
  - select Qt 5.14.2 then click next.
  - agree to the terms
  - Set shortcut and continue.
- Choose an installation directory for Qt. Then press “Continue”
- Finish the installation.

#### 5. Download source from GitHub

- A. [https://github.com/maslara/line\\_robots](https://github.com/maslara/line_robots)
- B. Download source from GitHub, by clicking on the “Clone or Download”,



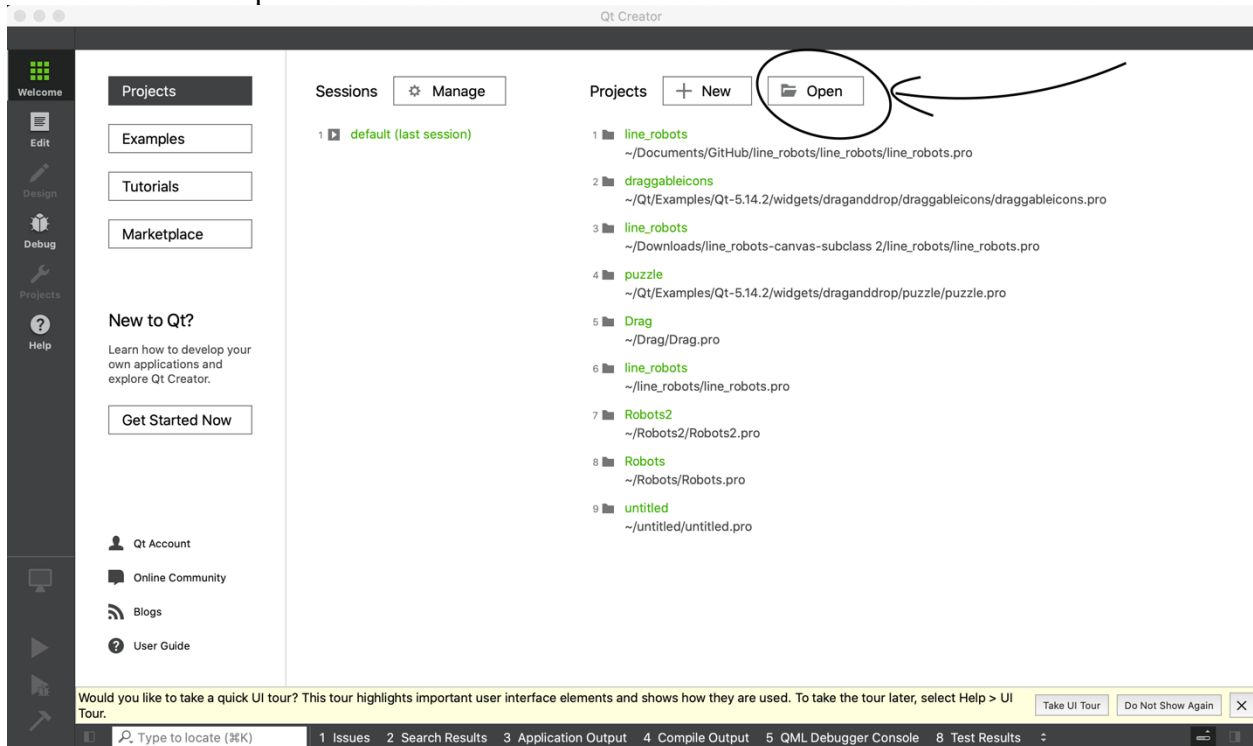
C. “Download Zip” the extract the zip to any directory which would be easily accessible. (have 7zip, WinRAR or any unarchiving software to extract the files. Built in software can be used also)



## 6. Running the Program

A. Open Qt Creator

B. Click “Open”

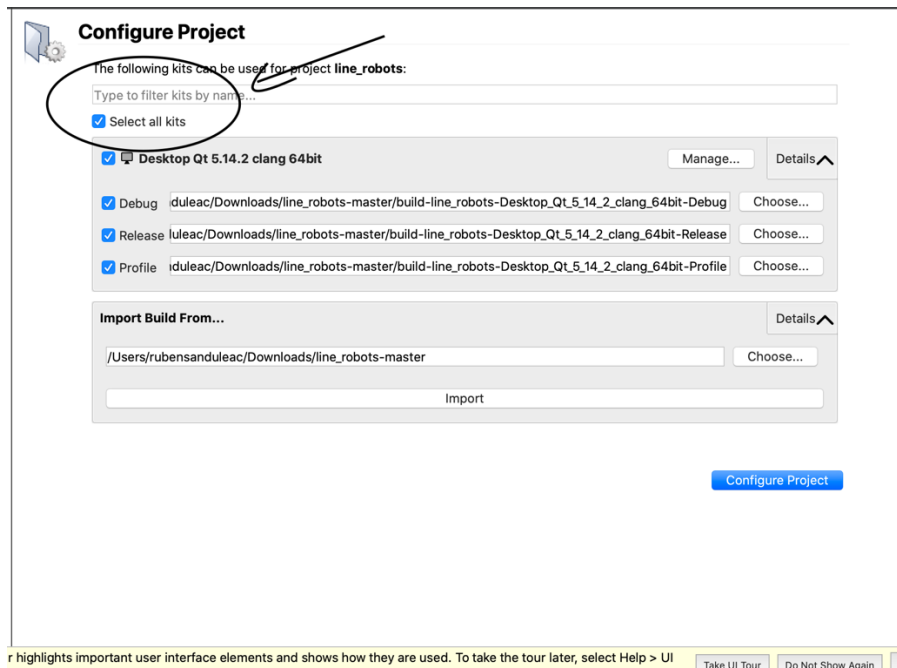


C. Navigate to the unarchived files to the folder and select “line\_robots-master” → “line\_robots” → line\_robots.pro file.

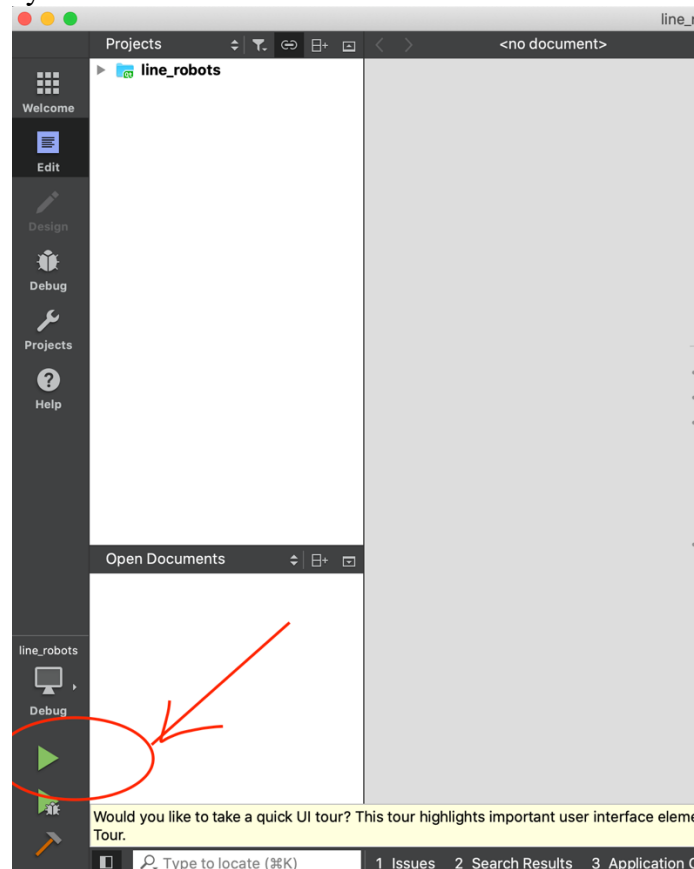
D. Click Open.

E. An error might occur, disregard it click “ok”

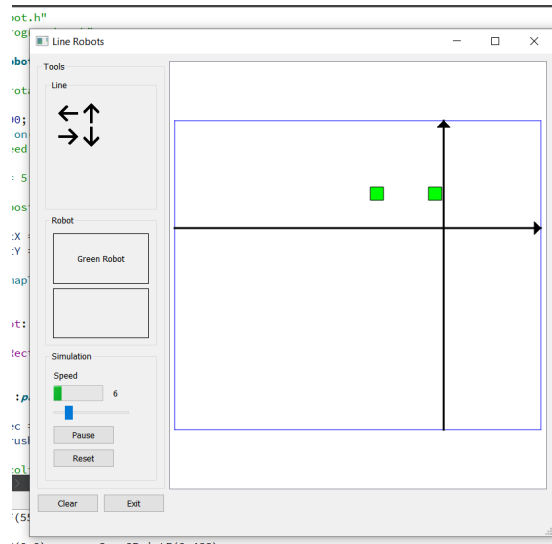
F. Make sure “Select all kits” is checked



- G. Press Configure Project
- 7. Running the program
  - A. Press the play button



- B. The program will then run and will look like this:



### How to use the `line_robots.app`

1. Currently, the Play button Green Robot box starts the simulation
2. The clear button clears the canvas
3. Arrows place lines on the canvas. They can be dragged to the white canvas. Corresponds to the direction where line faces.
4. Running the simulation:
  - a. Drag a line anywhere on the canvas.
  - b. Set the speed of the robot by dragging the dialer to the right or left.
  - c. Press the “Green Robot box” for the robot to appear.
  - d. The robot will move from one side of the canvas to another.
  - e. The robot will turn red if it’s about to collide with something.
  - f. The robot will turn 180 degrees if it hits another robot, the canvas or the line.
5. Press the “exit button” to exit the program.

### Bugs

1. Robot doesn’t stay on the line.
2. Robot rotates instead of slowing down.
3. Pause and Reset Button doesn’t work.
4. UI for speed on macOS is a bit off.