

\*Forenote: Process on Windows and other non-school-controlled MacBooks should be similar; instead of downloading from manager though, visit [here](#) for the Android Studio download and [here](#) for the GitHub Desktop download. JDK should automatically download if needed during Android Studio install.

VirtualBot on MacBooks (Instructions):

1) Download apps from manager

- a) JDK (might not be used, download anyways!)
- b) Android Studio
- c) GitHub Desktop

2) Download FTC Virtual Robot

- a) Visit [github.com/Beta8397/virtual\\_robot](https://github.com/Beta8397/virtual_robot) OR Type "FTC Virtual Robot" and click the first GITHUB link
  - i) If you aren't logged in, press sign in!!!
- b) Click the green box that says "Code," and from the dropdown list select "Open with GitHub Desktop"
  - i) GitHub desktop may require you to sign in again
- c) After it opens, you should have a box with the URL, local path, and a button that says "Clone." Press that button.

### 3) Make sure git is installed

- a) Open your terminal
- b) Type in "git" and press enter
  - i) Write it exactly as shown above, no capitalization!
- c) In the popup, press "install" to properly install git

### 4) Open Virtual Robot in Android Studio

- a) Open Android Studio
  - i) If it asks you to import settings, click "Don't import settings"
- b) Go through the setup wizard. Keep everything as the default, click through until you get to the terms and conditions. Click accept and finish.
  - i) Get a piña colada or something, it's gonna take a while.
    - (1) If you want to look smart for the notebook, click "show more"
- c) After it's completed, click finish. Android Studio is now ready!
- d) From the home screen, double-click "Open"

- i) Navigate to your GitHub folder (likely in Documents), select the virtual robot folder, and press "open"
    - (1) Make sure you're selecting the folder, not its contents!
  - ii) If Android Studio requests access to your Documents folder, click "allow"
- e) Now go to File -> Project Structure, and click the Project SDK dropdown.
- i) In the menu, select "Download JDK"
    - (1) IMPORTANT!!! Don't click "Download Android SDK"! It won't work! Make sure you're clicking on JDK!
  - ii) Set the version to 11, and select "BellSoft Liberica JDK (full)" from the vendor.
    - (1) Make sure to select FULL!
  - iii) Now press download and wait.
  - iv) Once it downloads, change the "Project language level" to 11

f) Once it's done, exit the Project Structure tab and click the dropdown that says "Main" next to the greyed-out run button.

i) Click "edit configurations"

ii) In the first box under "build and run," open the dropdown and select "liberica-full-11"

5) Now run!

a) You should have a new application pop up with your virtual robot! You can try out some presets.

Common errors:

1) "X" appears over "main" in the program selection, you program returns "No Android SDK/JSK selected/installed," and/or the application selection menu cannot find "virtual\_robot.controller.VirtualRobotApplication":

a) You haven't downloaded Liberica yet/your download has an issue! Return to 4(e).

i) You may have downloaded the Android SDK version instead of the JDK!

b) If above doesn't work, reinstall Android Studio and make sure to reset to default if prompted.