FRC Development Software Installation and Code Deployment

# Installation

## For code development

In order to be able to write and build code on a new computer, you need to go through these steps.

1. Toolchain (code compiler, etc.)

1. Run "FRC-2016 Windows Toolchain 4.9.3.msi" to install
2. Go to Control Panel -> System -> Advanced System Settings
3. Click Environment Variables and add C:\frc\bin\ to the system PATH

2. Java Development Kit (needed for Java apps including Eclipse)

1. Run "jdk-8u###-windows-x64.exe" to install.

3. Eclipse (code development environment)

1. Open "eclipse-cpp-mars-1-win32-x86\_64.zip"
2. Extract the zipped "eclipse" folder to C:\Program Files\
3. Create an icon for C:\Program Files\eclipse\eclipse.exe
4. Start Eclipse
5. Choose a place to create your workspace (default is fine)
6. Click the Workbench arrow in the top right
7. Go to Window -> Preferences
8. Go to General -> Workspace and check "Save automatically before build"
9. Click OK

4. FRC Eclipse plugins

1. In Eclipse, go to Help -> Install New Software
2. Click Add...
3. For Name, enter FRC Plugins
4. For Location, enter http://first.wpi.edu/FRC/roborio/release/eclipse/
5. Click OK
6. Click the drop-arrow next to WPILib Robot Development (in the middle window)
7. Check Robot C++ Development
8. Click Next, Next, accept, Finish and accept the warning
9. Restart Eclipse when prompted
10. Go to Window -> Preferences -> WPILib Preferences and enter 4917 for the Team Number

5. GitHub Desktop App (for source code collaboration and backups)

1. Run "GitHubSetup.exe" to install
2. See a coach or mentor for access to 4917’s repos
3. Login and clone this season’s repo (e.g. 2017repo)

6. Import the code into Eclipse

1. Open Eclipse and go to File -> Import...
2. General -> Existing Project into Workspace, Next
3. For Root directory, click Browse and go to the directory where you cloned the repo
4. Select the 4917 project(s) you are interested in and click Finish

7. Build and deploy code

1. Make sure you are connected to the robot via USB, Ethernet of Wi-Fi
2. To build, right-click the project and select Build Project
3. To deploy code to robot, right-click the project, select Run As..., and select WPILib C++ Deploy.

## To be able to drive the robot

Labview software (driver station, etc)

* 1. Unzip FRCUpdate2016.1.0.zip
  2. Run setup.exe
  3. Click Next
  4. Uncheck the auto-updates and click Next
  5. For user information enter
  6. Full Name: frc4917
  7. Organization: EDSS
  8. Serial Number: *(ask a coach or mentor)*
  9. Accept and Next
  10. Accept and Next (again)
  11. Next
  12. Wait for long install
  13. Next
  14. Automatically register via internet (e-mail: frc4917@gmail.com, pass: *(ask a coach or mentor)*)
  15. Finish
  16. Reboot