TDDD63 EV3: INSTALLATION

Martin Söderén

September 25, 2014

1 First time

1.1 Download necessary files

1. Download the TDDD63-EV3.zip from `https://www.ida.liu.se/~TDDD63/projects/2014/mindstorms/EV3/` into a folder of your choice and unzip it.

1.2 Setup Python

1. Open TDDD63\installation\folder.
2. Extract Python27.zip to Z:

1.3 Setup Eclipse

1. Start eclipse-GWT
2. When asked to select a workspace press "OK" if you are happy with the default location
3. When Eclipse has loaded press on "help" on the select bar then press "Install New Software" then press "add"
4. in the namefield write "pydev", in the locationfield enter `http://pydev.org/updates`
5. It will say "pending" for a while and when done select "PyDev" and press "Next" and then "Next" again
6. If you are interested you can read all the terms and when your are done with that you can select that you accept them and then press "Finish"
7. Select the Brainwy certificate when promted and press "OK"
8. Restart Eclipse when installation is finished
9. When restarted press on "file" in the select bar and choose new->Project...->PyDev/PyDev Project
10. Name it "EV3" for example
11. press "please configure and interpreter before proceeding" ->Manual config ->New and enter "python27" as name and point the Interpreter Executable to Z:\python27\python.exe
12. Press "OK" ->"OK"
13. select "Create 'src' folder and add it to the PYTHONPATH"
14. press "finished"
15. When asked if you want to open Pydev perspective select "Yes"
16. Expand the PyDev Package Explorer to the left
17. Find a folder called "src" and right-click on it and press import
18. Select General->Archive File and press next then select the "ev3forstudent.zip" file in the "code required for the project" folder from the course webpage
19. Press "Finish"
20. Press ctrl+F11, if everything is set up right a window should appear that will allow you to connect to the robot

2 Every time

2.1 Setup WLAN

1. Connect the USB-Dongle to your computer
2. Connect to "TDDD63-HT14" the password is "TDDD63-HT14"

DO NOT REMOVE THE DONGLE IN THE EV3.

2.2 Start the robot

1. Make shure the EV3 has fully charged batteries
2. Press any button on the EV3

2.3 Establish a connection to the robot

This step can be skipped in the future by removing two comment in "main_startup.sh" located in the same folder as "start.sh". Then this will be done automatically on startup but it can be nice to log onto to EV3 in the beginning and see possible error codes.

1. Start Putty on your computer
2. Enter the EV3s ip-adress into Host Name entry
3. Press "Open"
4. Login as:root
5. Password:password
6. Run the command "./start.sh"

2.4 Make the robot do something

1. Do all steps above
2. Make a program in the "main_program.py" file
3. Save it and run "start.py" in Eclipse
4. Enter the EV3s ip-adress in the windows that appeared and press connect. The ip-adress is "192.168.0.***" where the last three is written on the EV3. If the connection fails it will show in the terminal-window in Eclipse. Fix the problem, press shutdown program and start it again.
5. Press start program to run the program. When the program is finished you can edit it directly in Eclipse, save it and run it again by pressing the start program button without terminating the open window.
6. When you are done for the day just press shutdown robot and it will poweroff. If this does not work for some reason, follow steps 1-5 for establishing a connection to the robot and run the command "poweroff".