

Q&A: Program Installation

If you would like to use your own laptop/desktop to do the assignment, please make sure that it contains the following programs. If you are using a desktop in the Lab, you do not need to install these programs as they are already inside the desktops.

1. Install Python 3.1.1. The setup file is available for download at:
 - <http://www.python.org/download/>
2. Install PySerial. You may download the setup file
 - pyserial-py3k-2.5-rc1.win32.exe,
 - at <http://sourceforge.net/projects/pyserial/files/>
3. Save pyRobot.py to the same directory as the Python program you will be writing for the assignment.
4. You may try to run a robot or garment demo program. The Python file for demo is available on the COMP201 course website.

Q&A: Bluetooth Communication

1. In your Bluetooth connection program, you should search the Bluetooth device named "GroupXX" where XX is the number labeled on the Bluetooth dongle connected with the i-Catch board. E.g. If your Bluetooth dongle on the i-Catch board is 44, then you should connect your Bluetooth device to Group44.
2. If you are asked for a password for the Bluetooth connection, type 1234 (the default password).
3. Remember to check the (outgoing) COM port occupied by your Bluetooth device in your computer.

Q&A: Running your demo or assignment program with Python

1. To Run the demo program, you may follow the steps
 - put the demo program (e.g. robotDemo.py or garmentDemo.py) and pyRobot.py in the same directory (e.g. D:\)
 - open Windows command prompt (Start->run->cmd), go to the Python installation directory. (typically e.g. C:\Python31)
 - type ***python [the Python demo program with the directory path]***
e.g. python d:\robotDemo.py

2. Each chip has its own address, which is labeled on one side of the chip, e.g. address of speaker = 54. You may take a look at the table that gives a summary of addresses for all the chips:

<http://www4.comp.polyu.edu.hk/~csgngai/comp201/icatch/documentation/#iCatchBoard>

e.g. in robotDemo.py,

- robot.ledOn(92, 1): // turn on the "1st LED bulb" of the "LED Chip with address 92",
- robot.ledOff(92, 4): // turn off the "4th LED bulb" of the "LED Chip with address 92",

Remember to use the correct address of the chip when you want to instruct it to do something. In addition to that, make sure that you use the correct Bluetooth COM port in your program. For instance, if the COM port occupied by your Bluetooth device is COM5, then in the demo or assignment program, you should change it to `robot.connect("COM5") # connect this program to i*Catch`

3. The address of your switch can either be any one of the following: 78, 80, 82 or 84. <http://www4.comp.polyu.edu.hk/~csgngai/comp201/icatch/documentation/#touchSensor>
Check carefully the address of your switch (on one side of the switch as different groups may have a different address)

4. There are some API functions that can be called by your program in order to activate the corresponding functions of the chips. E.g. in the demo program, you find `robot.ledOn(92, 1)`. This means that when the function `ledON` is called, the white LED light on the switch will be turned on. See all the API functions at <http://www4.comp.polyu.edu.hk/~csgngai/comp201/icatch/documentation/iCatchAPI.html>

Q&A: Important Notices

[I. For robot]

1. For every time you start using your robot,
 - turn OFF the power switch
 - plug in the batteries in the battery rack
 - turn ON the power switch
2. For every time you finish using your robot,
 - take out the batteries
3. Don't use AC supply
4. For every time you plug-in or plug-out any chip, you MUST switch off the power.

[II. For garment]

1. Don't cut or fold the wiring cloth.
2. ALWAYS tap a chip's button on a wiring cloth's button ONLY, NEVER tap two buttons together on the wiring cloth when the power is ON. IF not, it may cause short circuit and damage the entire set of components.
3. Everytime you plug-in or plug-out any chip, you MUST make sure that the power is OFF (e.g. by removing one battery from the battery rack).
4. Since the battery rack (with 8 batteries) is very heavy, you are recommended to make a pocket on the blue cloth in order to carry the battery rack.
5. Read the HOW-TO document on the course website before starting any cutting work.