

Cheat Sheet

For Python on Windows or MacOSX, you should have 3 windows open:

- the Python shell where you can type in 'live' Python commands and see what they do straight away
- a text editor like nano (MacOSX) or notepad (Windows), to edit your scripts and save them with as .py files
- a command terminal: search for cmd.exe (Windows) or /Application/Utilities/terminal.app (MacOSX)

Opening a Python shell

Windows

Open Python from the program menu. If you see the >>> prompt, then you are in the Python shell and can execute Python live.

If you are in the cmd terminal, you can just type `py -3` to run a Python3 shell. If you don't have Python3 on a netbook, just type 'py' to open a Python2 shell. If you run Python2, you will need to use `raw_input()` instead of `input()`, and `print` only uses the double quote " instead of curved brackets (and).

MacOSX and Linux

Open terminal from /Applications/Utilities/terminal.app then type `python3`.

Text Editor Help

Nano Text Editor (MacOSX and Linux)

Using finder, open terminal up from /Applications/Utilities/terminal.app

Use the arrow keys and the commands below, to navigate. You won't be able to use the mouse to move around in nano. This is because you are running a command terminal, which is also one way we can connect to our robots and the Raspberry Pi.

Reference: <http://www.tuxradar.com/content/text-editing-nano-made-easy>

- Ctrl+X Exit the editor. If you've edited text without saving, you'll be prompted as to whether you really want to exit.
- Ctrl+O Write (output) the current contents of the text buffer to a file. A filename prompt will appear; press Ctrl+T to open the file navigator shown above.
- Ctrl+R Read a text file into the current editing session. At the filename prompt, hit Ctrl+T for the file navigator.
- Ctrl+K Cut a line into the clipboard. You can press this repeatedly to copy multiple lines, which are then stored as one chunk.
- Ctrl+J Justify (fill out) a paragraph of text. By default, this reflows text to match the width of the editing window.
- Ctrl+U Uncut text, or rather, paste it from the clipboard. Note that after a Justify operation, this turns into unjustify.
- Ctrl+T Check spelling.
- Ctrl+W Find a word or phrase. At the prompt, use the cursor keys to go through previous search terms, or hit Ctrl+R to move into replace mode. Alternatively you can hit Ctrl+T to go to a specific line.
- Ctrl+C Show current line number and file information.
- Ctrl+G Get help; this provides information on navigating through files and common keyboard commands.

Notepad (Windows)

Press control-r and type 'notepad'. Remember to use spaces and not tabs to indent Python code.

Running your Python scripts

Command Terminal

Make sure you know where you have saved your Python script.

On Windows, open a command terminal by searching for cmd.exe and then you should see a window with a black background. You can use the following commands to navigate in the command terminal:

- `dir` - list the files in a directory
- `cd` - change to a directory
- `md` - make a directory
- `rename file1 file2` - rename file1 to file2

On MacOSX or Linux, you can use the following commands:

- `ls` - list the files in a directory
- `cd` - change to a directory
- `mkdir` - make a directory
- `mv file1 file2` - rename file1 to file2

Once you can see your Python script (the filename should end in .py and not .txt) you can run it in the terminal.

On Windows (Macbook)

`py -3 filename`

On Windows (netbook)

`py filename`

On MacOS or Linux

`python3 filename`

Depending on which computer you have, sometimes you can just type the name of the file and it will run.