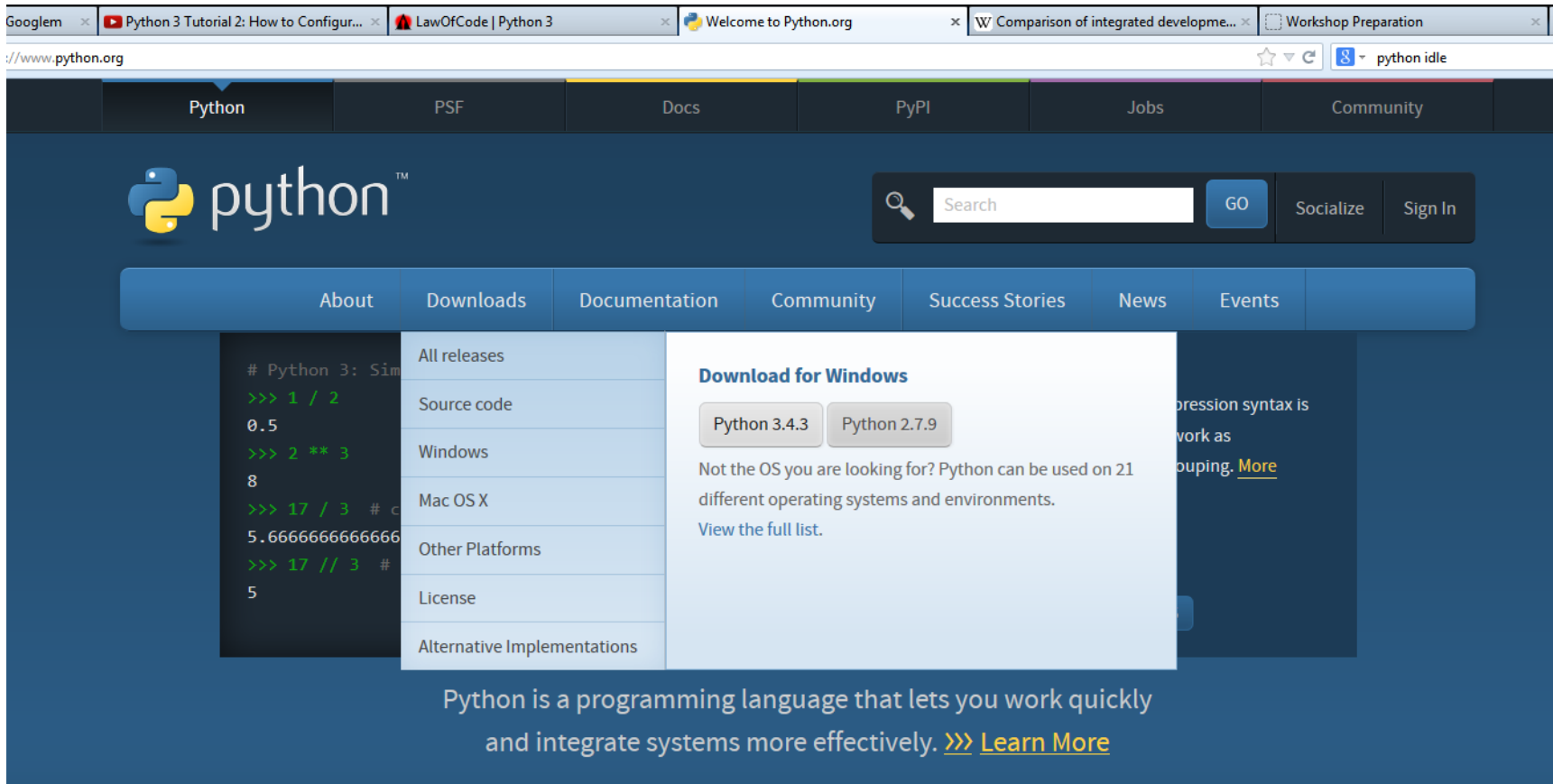
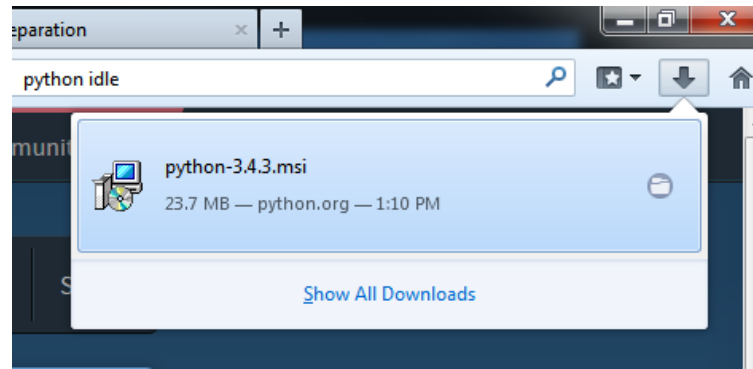


Installing and using python on Windows

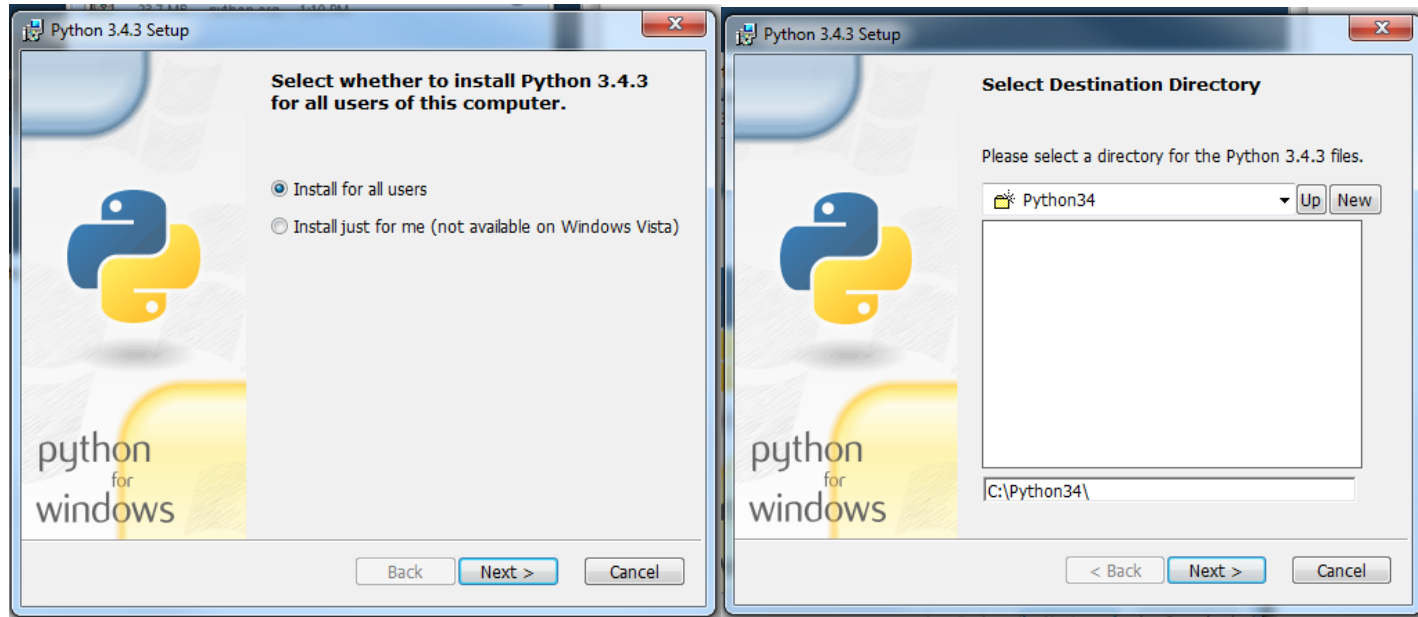
1. Go to www.python.org and download the current version of python (python 3.4.3)



2. Run the downloaded installer python-3.4.3.msi.

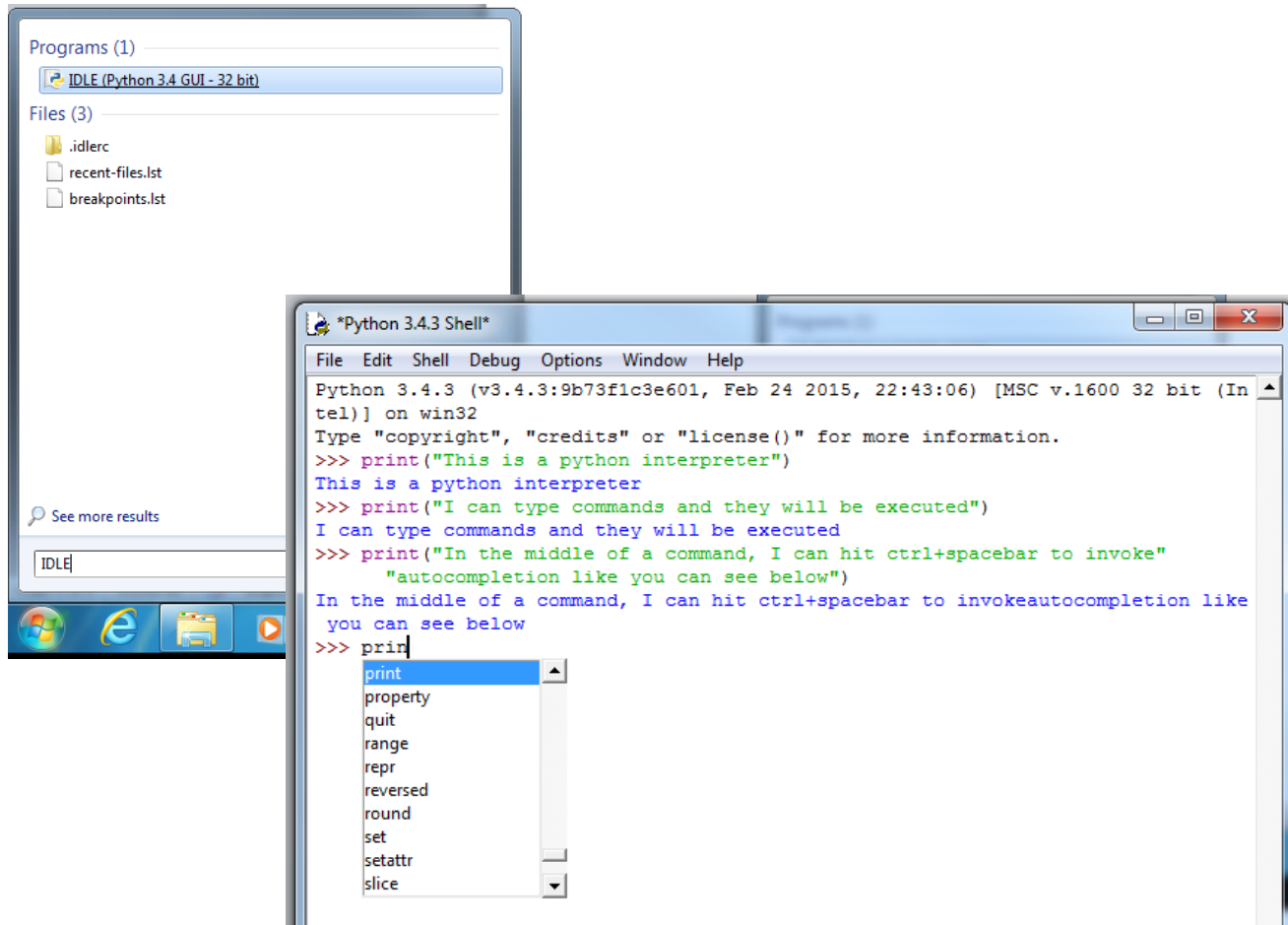


3. Follow the instructions. Install python for all the users. You can keep the default location, or you can change it. However, do allow the installer to add python to your PATH variable.

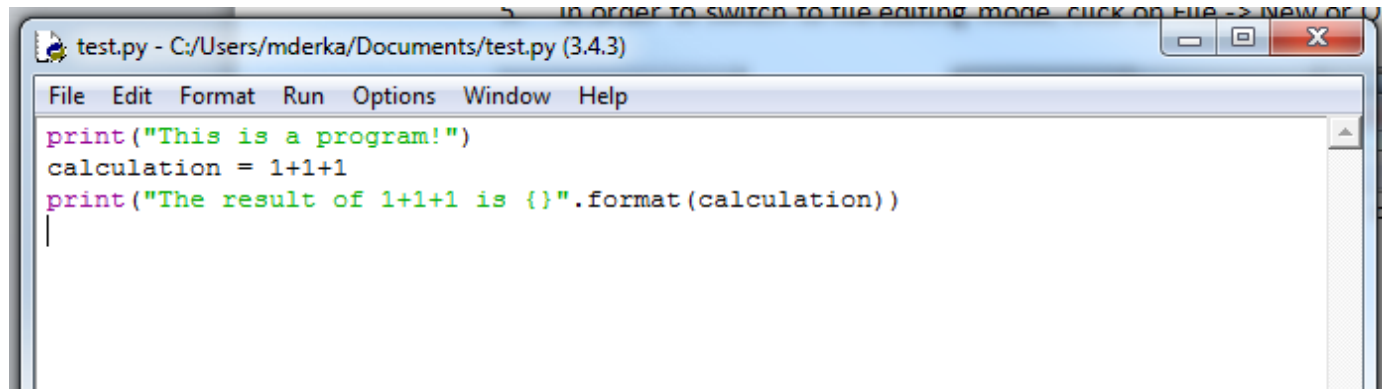
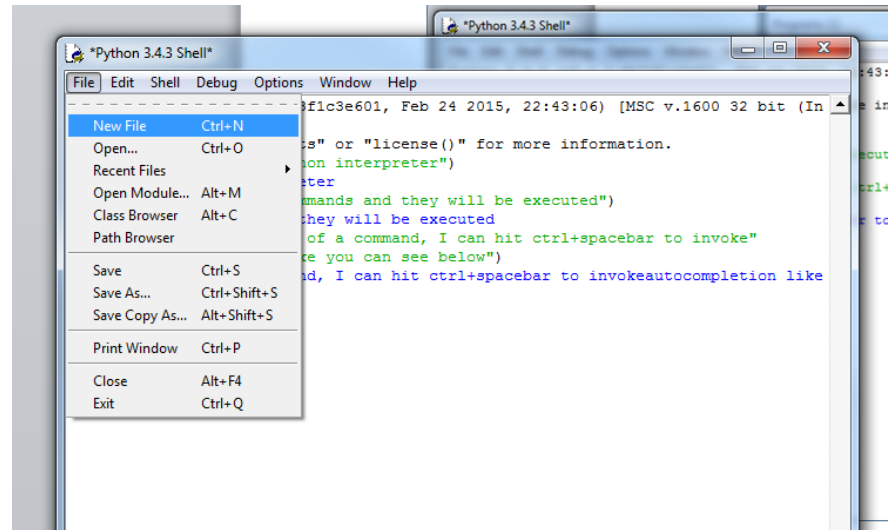




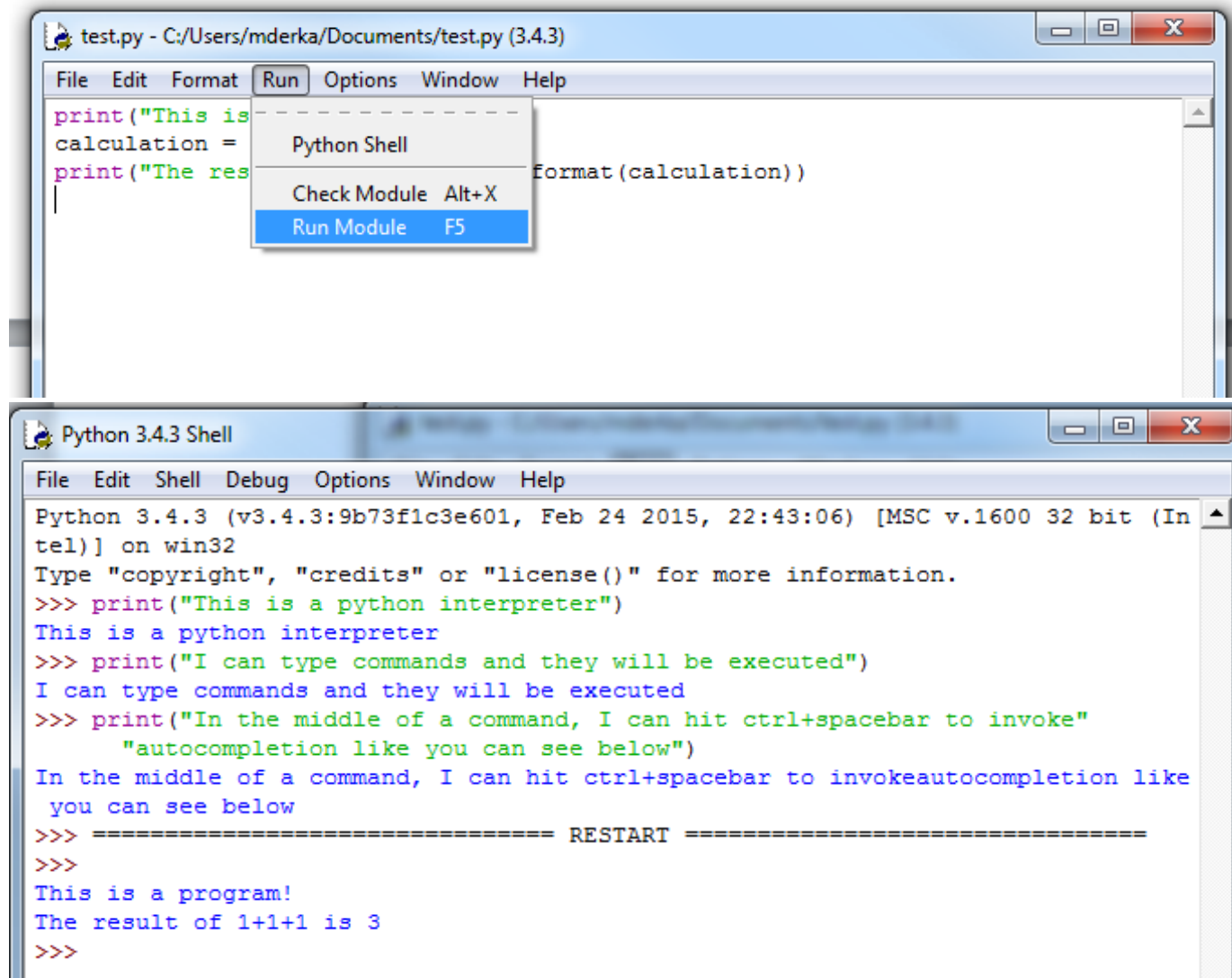
- Once you finish the installation, run IDLE. IDLE is a python interpreter which can be also used for editing programs. In the interpretation mode, every python command will be immediately executed. Note that IDLE supports automatic completion – you can any time hit ctrl+spacebar to invoke a context menu with suggestions for functions that you may have in mind.



5. In order to switch to file editing mode, click on File -> New or Open. Then you can write a python source code.

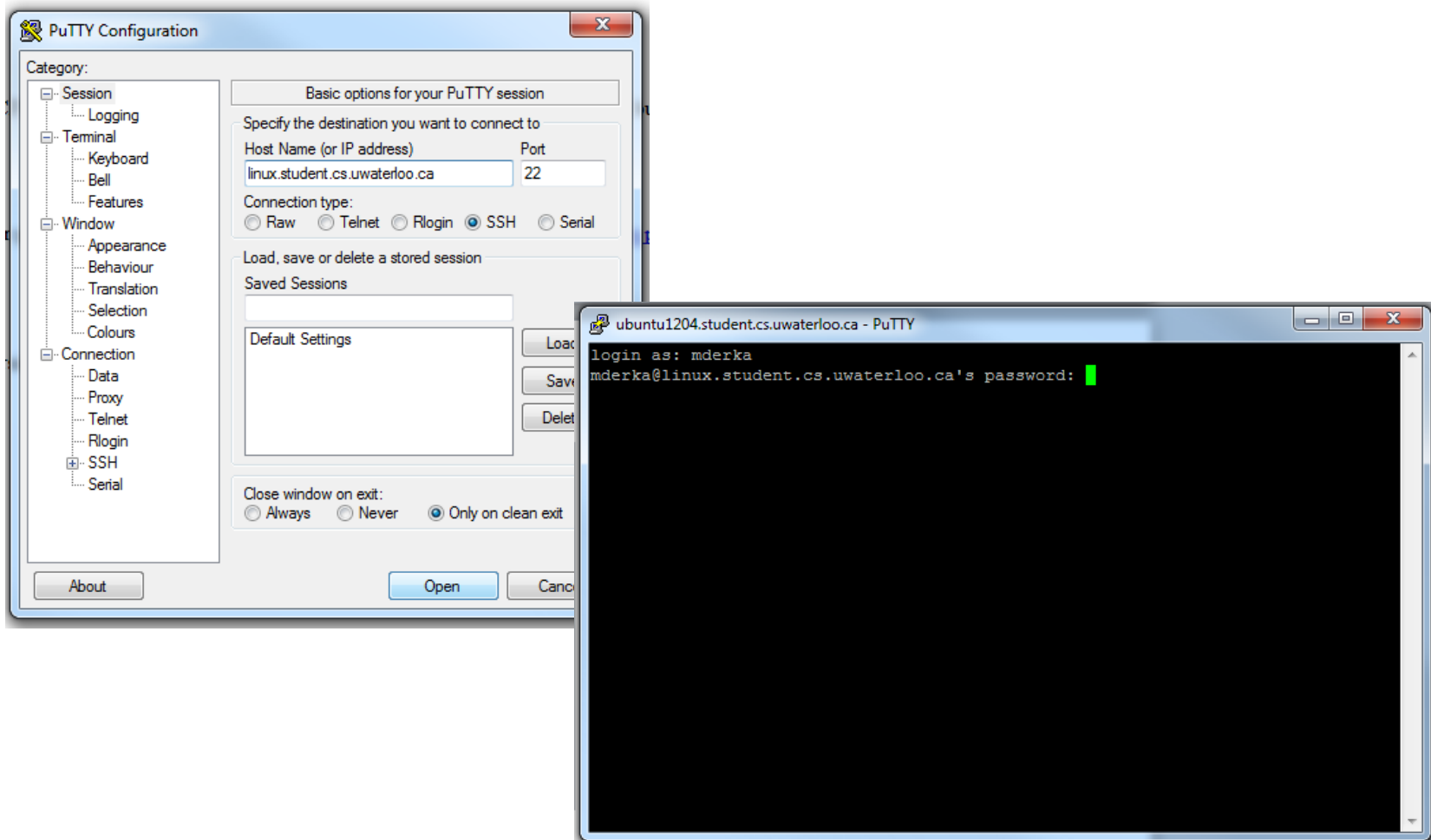


- To execute your program, save your code and click on Run -> Run Module.



Using python on school's Linux servers

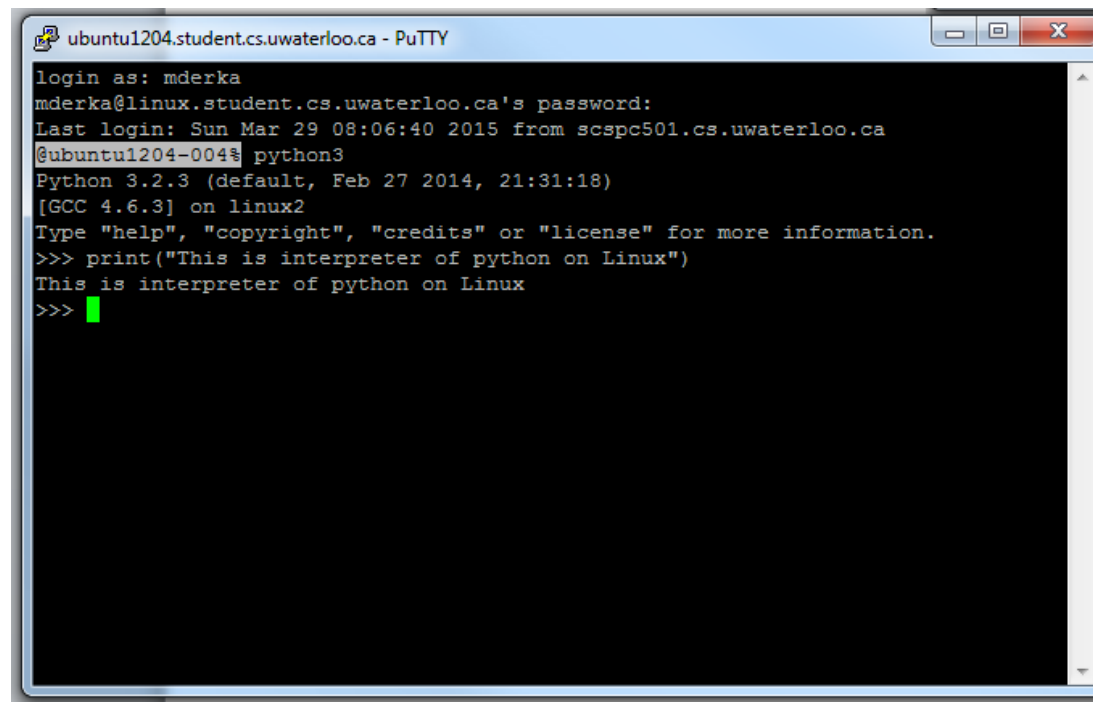
If you are on Windows, download putty from <http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html>. Fill in linux.student.cs.uwaterloo.ca as host and click connect. If this is your first time connecting to the server, you may be asked to confirm the fingerprint of the server by clicking on 'Yes'. Then you will be prompted for your user name and password. Type both in. Note that your password will not be showing on the screen as you are type (a safety feature).



If you are on Mac on Linux, simply run Terminal or xterm and type:

```
ssh uwid@linux.student.cs.uwaterloo.ca
```

where uwid is your UW username. I would be typing mderka@linux.student.cs.uwaterloo.ca. You will be prompted for your password. Type it and hit enter. This logs you into the school server where python is already installed. You can start the interpreter by typing `python3` (do not forget about 3, it really is important!). Now you can enter python commands which will be immediately executed. You can exit by pressing `ctrl+d`.

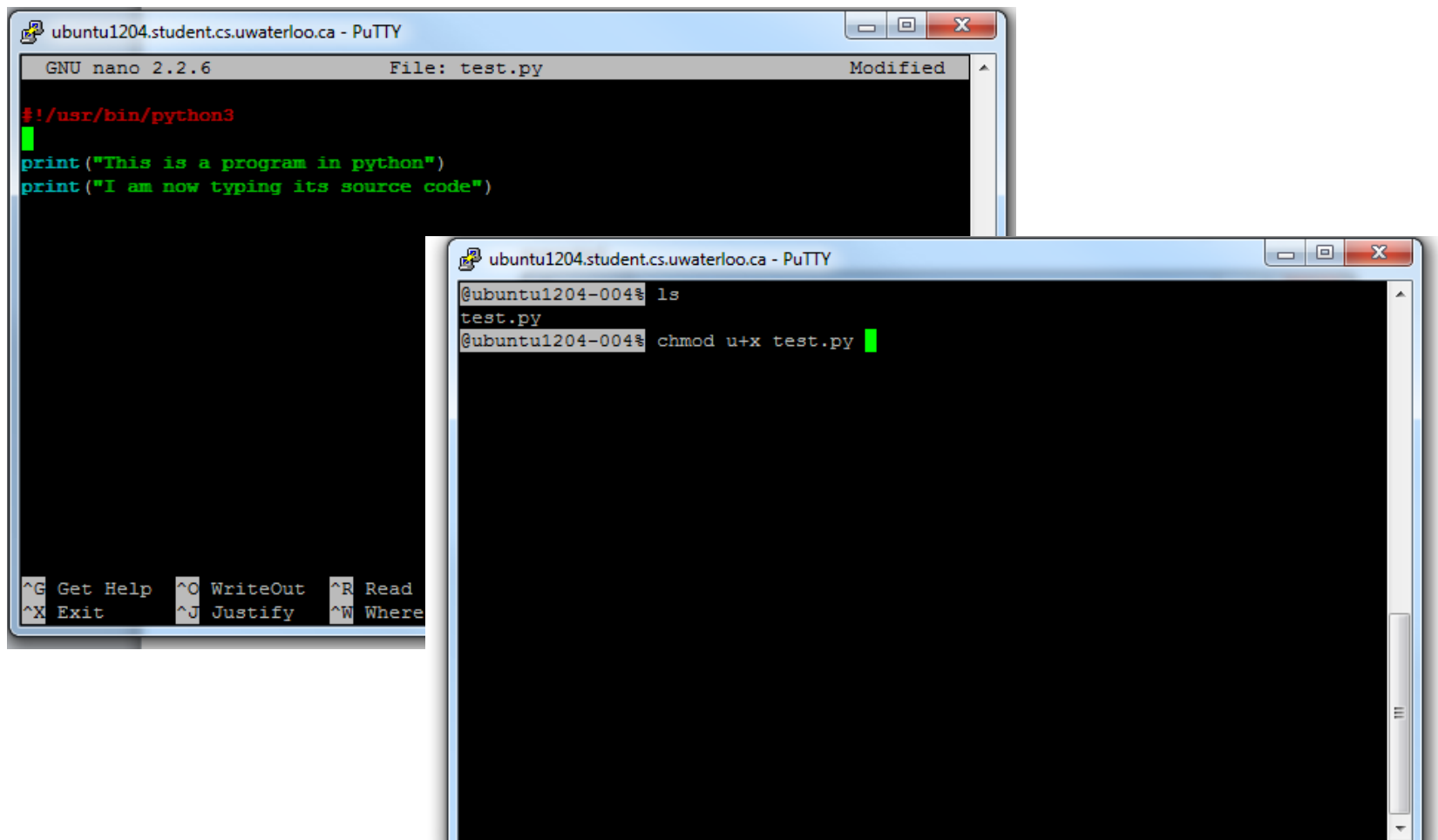


```
ubuntu1204.student.cs.uwaterloo.ca - PuTTY
login as: mderka
mderka@linux.student.cs.uwaterloo.ca's password:
Last login: Sun Mar 29 08:06:40 2015 from scspsc501.cs.uwaterloo.ca
@ubuntu1204-004% python3
Python 3.2.3 (default, Feb 27 2014, 21:31:18)
[GCC 4.6.3] on linux2
Type "help", "copyright", "credits" or "license" for more information.
>>> print("This is interpreter of python on Linux")
This is interpreter of python on Linux
>>> █
```


To write programs, run your favourite editor, for instance `nano` (by typing `nano test.py`). Start the program by typing `#!/usr/bin/python3` on the very first line. This specifies what kind of program should be used to interpret this source code when executed. Then type your source code. Save it and make it executable by running

```
chmod u+x test.py
```

where `test.py` is the name of the program.



The image shows two overlapping terminal windows from a PuTTY session on a Linux system. The top window is the GNU nano 2.2.6 editor, editing a file named `test.py`. The content of the file is:

```
#!/usr/bin/python3
print("This is a program in python")
print("I am now typing its source code")
```

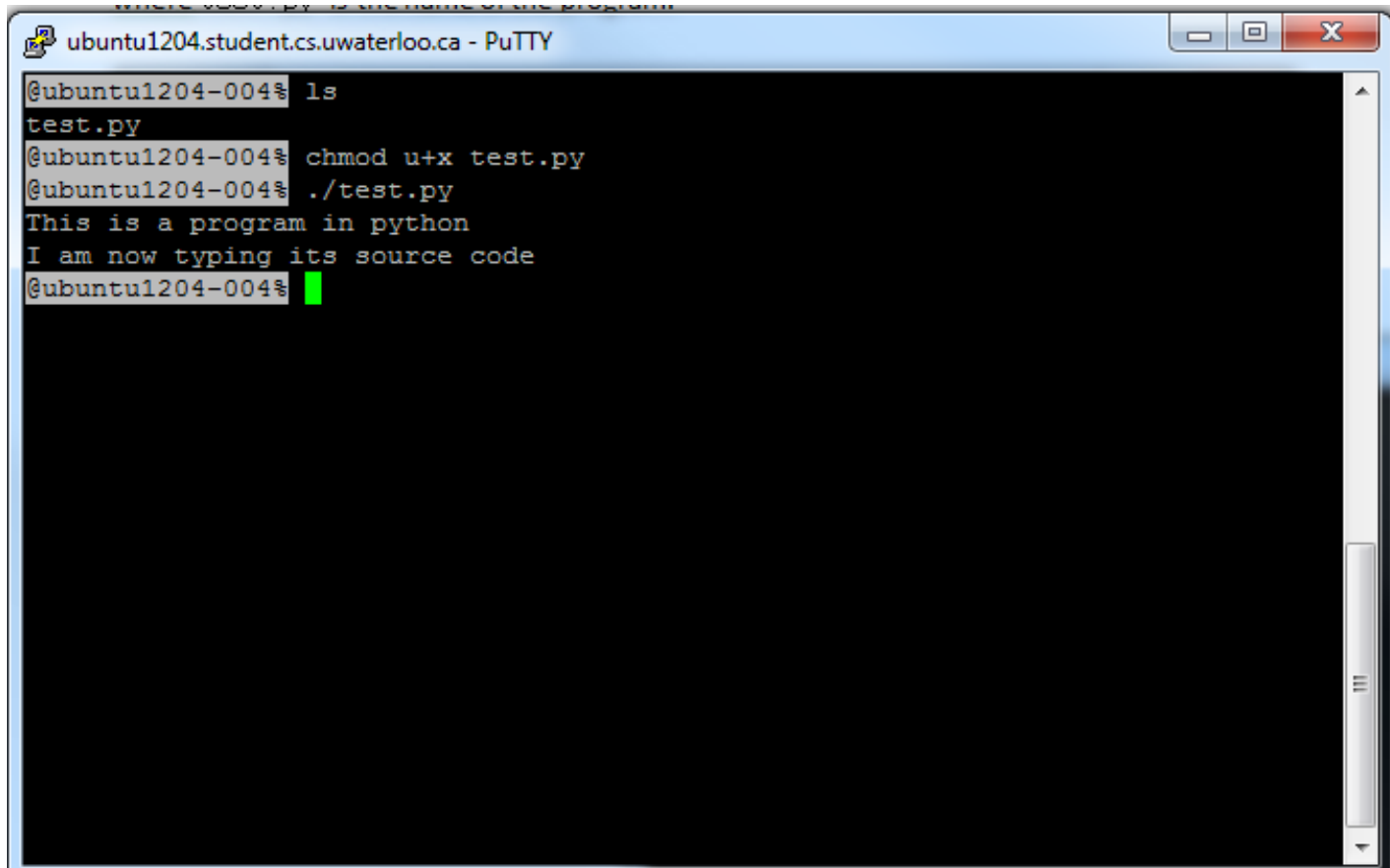
The bottom window shows the terminal prompt `@ubuntu1204-004%` with the following commands and output:

```
@ubuntu1204-004% ls
test.py
@ubuntu1204-004% chmod u+x test.py
```

At the bottom of the nano editor window, there is a help menu with the following options:

```
^G Get Help  ^O WriteOut  ^R Read
^X Exit      ^J Justify   ^W Where
```

You can now execute the code by typing `./test.py` (make sure not to forget about the dot at the beginning).



```
ubuntu1204.student.cs.uwaterloo.ca - PuTTY
@ubuntu1204-004% ls
test.py
@ubuntu1204-004% chmod u+x test.py
@ubuntu1204-004% ./test.py
This is a program in python
I am now typing its source code
@ubuntu1204-004%
```