Institut for Matematik og Datalogi
Syddansk Universitet

August 18, 2012

Peter Schneider-Kamp

Programming A – Getting Started

This small note is for getting you started with the computer system at IMADA for the purpose of attending DM536. If you already know how to use the "IMADA terminalrum" *and* Python, stop reading here.

Setting up your account

The computers at IMADA run a version of the Linux operating system called "Ubuntu" with "Gnome" as the default desktop. It is operated similarly to other Linux distributions, to Mac OS X, and in many ways also to Windows.

Please go through the following list to set up your account for use with DM536:

1. Log into a terminal room machine using your IMADA account. If you did not receive an account yet, please contact Per Jansen or Peter Schneider-Kamp as soon as possible.

2. Change your password, by going to `Applications -> Accessories -> Terminal`: This starts a terminal prompt, where you can interact with Linux (and later with Python). Write `passwdch` and follow the instructions to select a new password. Your password should have at least 8 characters and include lower-case letters, upper-case letters, and digits.

3. Create a folder `DM536` for the course:

   ```
   mkdir ~/DM536/
   ```

   You can change into the folder by using `cd DM536` from your home directory. If you are unsure whether you are in your home directory, just type `pwd` to find out where you are and `cd` to change to your home directory. It might be useful to create some subfolders for individual weeks, projects etc.

4. Never forget to log out using the button on the top right!

Start and test the Python interpreter

To start the Python interpreter, just write `python` at your terminal prompt. Try input such as `23 + 19` and `2 ** 5 + 2 * 5`. What is the output? Use `Ctrl-D` to exit the interpreter.

Write and run your first program

Use a text editor to create the file `hello.py`, e.g., by performing the following commands:

```
cd ~/DM536
mkdir week1
cd week1
nano -w hello.py
```

Write the following content into the file:

```
# My first Python program!
print 'Hello World!'
```

Save the file using `Ctrl-X` and then `Y`. Now all you need to do to execute the program is to execute Python with the file name as argument:

```
python hello.py
```

Then the computer should greet all world. Now go and customize the program such that the computer greets you with your name!

Printing source code

You can print source code by using your editor or some text processing software. But for a good result, consider using the command `a2ps` at your terminal prompt:

```
a2ps -Pd3 hello.py
```

`a2ps` is an abbreviation for "Anything to PostScript" and `-Pd3` specifies that you want to use the printer "d3" outside the terminal room.