

# Mathython (=Math+Python)

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<http://github.com/debdut/mathython>

# Preface

Mathython as you guessed means Math + Python. This book guides you through how can you enrich your mathematical creativity with the master tool Python. This book requires neither any previous knowledge of Python nor any experience with programming. But some experience with middle school mathematics and eagerness to explore is expected. The format of this book is almost like story-telling although it covers some serious topics. I earnestly hope that you will enjoy it. If you find any error feel free to contact me or commit your fix at <http://github.com/debdut/mathython> . I will be very happy to receive any comments or ideas about this book.

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# Chapter 1

## Creating Mathython Environment

### 1.1 Introduction

In this chapter we will create the [Mathython](#) Environment. I have been using GNU/Linux environment while writing this book and will assume that you are also running some GNU/Linux distribution or atleast some Unix-type operating system. I hope that does not deter you from reading this book! [Don't worry! this chapter includes instructions for setting up a GNU/Linux distribution.](#) Or if you can import my instructions for use in windows, I won't mind. If you are in MacOS, feel happy because you are already in a Unix-type environment but still there will be some little differences.

Choose any GNU/Linux distribution based on Debian/Ubuntu, some of the preferred distributions for beginners are :

- [GNU Trisquel](#)
- [Elementary OS \(Mac-Like\)](#)
- [Xubuntu](#)
- [Ubuntu](#)
- [Linux Mint \(Windows-Like\)](#)

Out of this, I prefer [Elementary OS](#)<sup>1</sup> for beginners. Note The instructions in the whole book for all of this distributions is same.

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<sup>1</sup>I have some special instructions for Elementary OS [here](#) to make it the nicest workplace. Experiment with it and have some fun!

## 1.2 Starting Python

Open Terminal or console, type `python` followed by `<Enter>` and you will probably see this:

```
Python 2.7.3 (default, Apr 10 2013, 05:46:21)
[GCC 4.6.3] on linux2
Type "help", "copyright", "credits" or "license" for more information.
>>>
```

Did you see the same thing (without colors)? Yeppy! You are running python. If not, then probably your distribution does not have python installed. Go to [Downloads](#) and save the file. Change to directory of download and do the following to install python :

```
$tar -xvzf Python-2.7.9.tar.xz
$cd Python-2.7.9
$./configure
$make
$./python
$sudo make install
```

Ok, now you must be able to open python by typing `python` in terminal.

## 1.3 Installing Python Packages

## Chapter 2

# Python & Numbers

### 2.1 Hello Numbers

Lets get our hands dirty! We start with this [Hello Numbers](#) example :

```
# This program prints the counting numbers 1, 2, 3, 4 ... 10  
  
print 1, 2, 3, 4, 5, 6, 7, 8, 9, 10
```

Write or copy this code into file [hellonum.py](#), save it and run it. You will probably get this :

```
1 2 3 4 5 6 7 8 9 10
```



# Appendix A

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