Programming is Fun
An introduction to Python
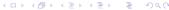
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http://ilugcbe.org.in

Purpose

- Learn art of computer programming with one of the easiest programming language in the world.
- Get ready to enjoy the joy of programming in Python.

Warning

- Starting from zero
- Hands on
- Listen, Practice
- Our volunteers are here to healp you in practicing
- Be courageous enough to try
- We are leaning Python not rocket science
- Be simple and think in a simplistic way

Are You Ready !

Why Python

Why

- Used almost everywhere
- Fun
- Concise
- Simple
- Powerful
- Filled with spices to write effective programs

Installation

Already installed in GNU/Linux systems
If you are using M$ Windows download Python from python.org
If you are downloading Python for Windows remember to
download Python 2.7 only.

Interactive Interpreter

Interpreter

Contains REPL

- Read
- Evaluate
- Print
- Loop

```
$ python
Python 2.6.6 (r266:84292, Feb
26 2011, 23:10:42)
[GCC 4.3.4] on linux2
Type "help", "copyright",
"credits" or "license" for
more information.
>>>
```

Hello World!!

Why Hello World

Writing 'Hello World' program is the ritual to please the
programming gods to be a good programmer!!

```
>>> print "Hello World"
Hello world
```

Create a file hello.py

type print "Hello World"

Listen to the screen for instructions.

Incase of any issues just raise your hand our volunteers will be there to help you.

Run the program

```
$python hello.py
```

Time to make your hands dirty

Note

Make sure that you have understood the first step.
Incase of trouble we can practice it for couple of minutes.

Variables

```
age = 33                # Integer
avg = 33.35             # Float
name = "linux"          # String
bool = True             # Boolean
another = "44"          # String
```

Variables - naming

- use lowercase
- use underscore between words my_age
- do not start with numbers
- do not use built-ins
- do not use keywords

Reserved

and del for is raise assert elif from lambda return break else global not try class except if or while continue exec import pass yield def finally in print

Time to make your hands dirty

Everything is an object

- Everything in python is an object

An object has

- identity (id)
- type (type)
- value (mutable or immutable)

```
>>> age = 33
>>> type(age)
<type 'int'>
>>> id(age)
167263248
>>> age 34
>>> id(age)
167263236
```

Casting


```
>>> age = 33
>>> str(age)
'33'
>>> float(age)
33.0
>>> long(age)
33L
>>> int(age)
33
```

Time for some maths

+ , - , * , ** (power),% (modulo), // (floor division), < (less than)
> greater than, <=, >=, ==