



A Python Tutorial

Computer Science and
Engineering Association

NIT Calicut

Code Maestros

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Why Python?

- Popular
- Open Source
- Cross Platform
- Easy to learn
- Forces the programmer to write readable code
- General purpose - used almost everywhere from games to robotics

Interpreter Fun

- Python interpreter - good for little experiments
- read-eval-print loop
- No need to declare variables
- Variables don't have types, but values do

```
k4rtik@PlatinumLight ~ $ python
```

```
Python 2.7.2+ (default, Oct 4 2011, 20:06:09)
```

```
[GCC 4.6.1] on linux2
```

```
Type "help", "copyright", "credits" or  
"license" for more information.
```

```
>>>
```

Live demo

Scripts (like bash!)

```
#!/usr/bin/python
import sys
a = 123
def cat(filename):
    """Given filename, print its text contents."""
    print filename, '====='
    f = open(filename, 'r')

    for line in f:
        print line,
    f.close()
```

Continues...

```
def main():
    args = sys.argv[1:]
    for filename in args:
        if filename == 'voldemort' or filename == 'vader':
            print 'this file is very worrying'
            cat(filename, 123, bad_variable)
        else:
            cat(filename)
    print 'all done'

if __name__ == '__main__':
    main()
```

Examples and QA

Python in...

- Web
 - Django, ZOPe, WebPy, TurboGears
- Scientific Computing
 - NumPy, SAGE
- GUI Development
 - PyGtk, PyQt
- Game Dev
 - PyGame
- Network Programming
 - Twisted

References

- Python in One Easy Lesson - <http://www-cs-faculty.stanford.edu/~nick/python-in-one-easy-lesson/>
- Google's Python Class - <http://code.google.com/edu/languages/google-python-class/index.html>

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