Python Tutorial

Part I

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April 3, 2012

Outline

What is Python?

Python is an easy to learn, powerful programming language. It has efficient high-level data structures and a simple but effective approach to object-oriented programming. Pythons elegant syntax and dynamic typing, together with its interpreted nature, make it an ideal language for scripting and rapid application development in many areas on most platforms.

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- has *Vast Libraries (batteries included)*

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- is *Portable*
- is *Object Oriented*
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- is *Simple and non-obtrucive*

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- Interface with C libraries

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- Having code on top level
- Huge imports

```
>>> from foo import *
```

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- ```
  if __name__ == "__main__":
      main()
  ```
  ```

Outline

Numeric types

- int (limitless :-D)

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- float (53 bits precision)

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- complex $(1 + 2j)$

Operators

- + (add)

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- = (assign)

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```
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'H'
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- Slicing:
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    `'H'`
  - `>>> 'HelloWorld'[6:]`
    `'orld'`
- Unicode Strings:

```
>>> ur'Hello\u0020World !'
u'Hello World !'
```

Lists

```
>>> a = ['spam', 'eggs', 100, 1234]
>>> a
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- Comprehension:
  ```
  for i in a:
      print i
  ```
  ```

Tuples

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- Indexed
- Nested

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  - a & b (in a and in b)
  - a ^b (in a or b but not in both)
  ```

Dictionaries

Maps of objects

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- Easy to create

```
>>> dict([('sape', 4139), ('guido', 4127), ('jack', 4098)])
{'sape': 4139, 'jack': 4098, 'guido': 4127}
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```

- Simple to use

```
>>> tel = dict([('sape', 4139), ('guido', 4127), ('jack', 4098)])
>>> tel['jack']
4098
```

Questions??

Ask! :)

Thanks

- Thanks for watching
- Thanks to foss-ntua for hosting