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Python

General purpose high level programming language

Who gifted Python?

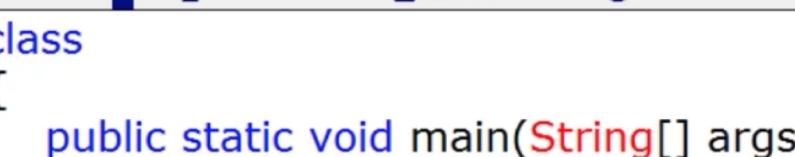
Guido Van Rossum

1989

National Research institute in Netherland

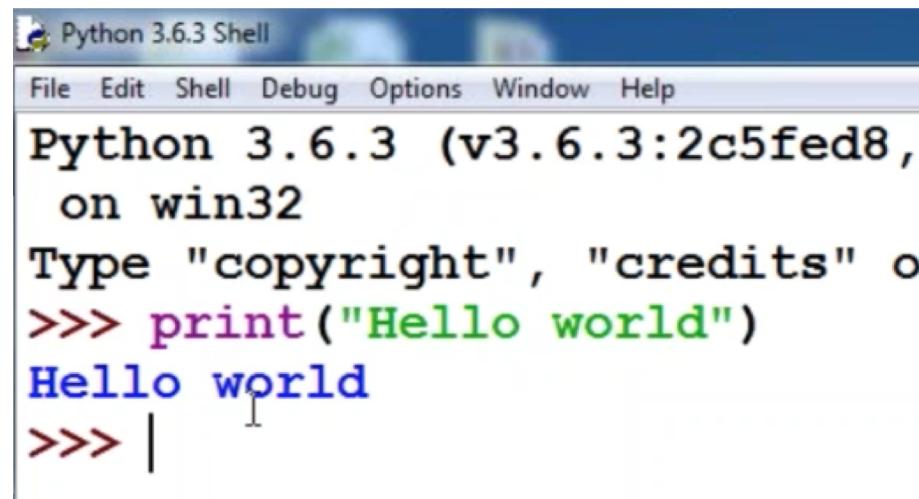
Official Birthday – Feb 20 1991





```
1 class
2 {
3     public static void main(String[] args)
4     {
5         System.out.println("Hello World!");
6     }
7 }
8
```

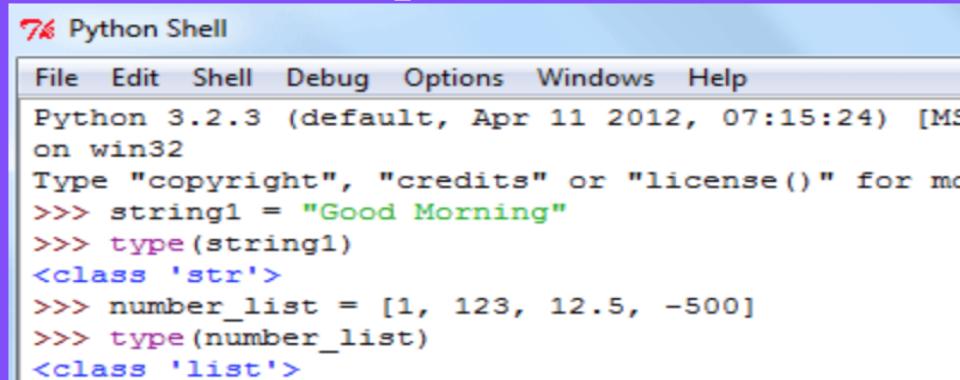
```
>>> a,b=10,20  
>>> print(a+b)  
30  
>>> a,b,c,d,e=10,20,30,40,50
```



```
//Program entry  
public static void Main(string[] args0)  
{  
    int a, b, result; //Integer variables
```

Statically typed programming - C, Java

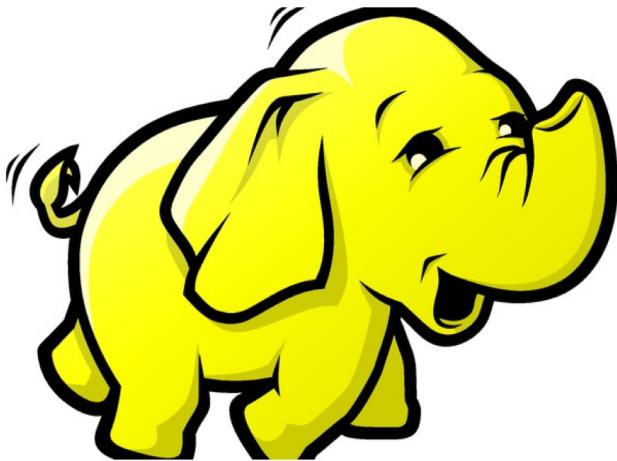
Dynamically typed programming - Python



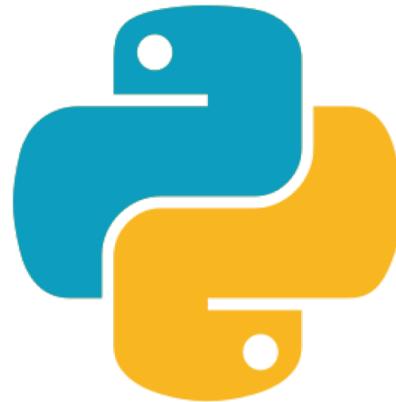
The screenshot shows a Python Shell window with the title "76 Python Shell". The menu bar includes File, Edit, Shell, Debug, Options, Windows, and Help. The console output shows:

```
Python 3.2.3 (default, Apr 11 2012, 07:15:24) [MS  
on win32]  
Type "copyright", "credits" or "license()" for mo  
>>> string1 = "Good Morning"  
>>> type(string1)  
<class 'str'>  
>>> number_list = [1, 123, 12.5, -500]  
>>> type(number_list)  
<class 'list'>
```

HADOOP



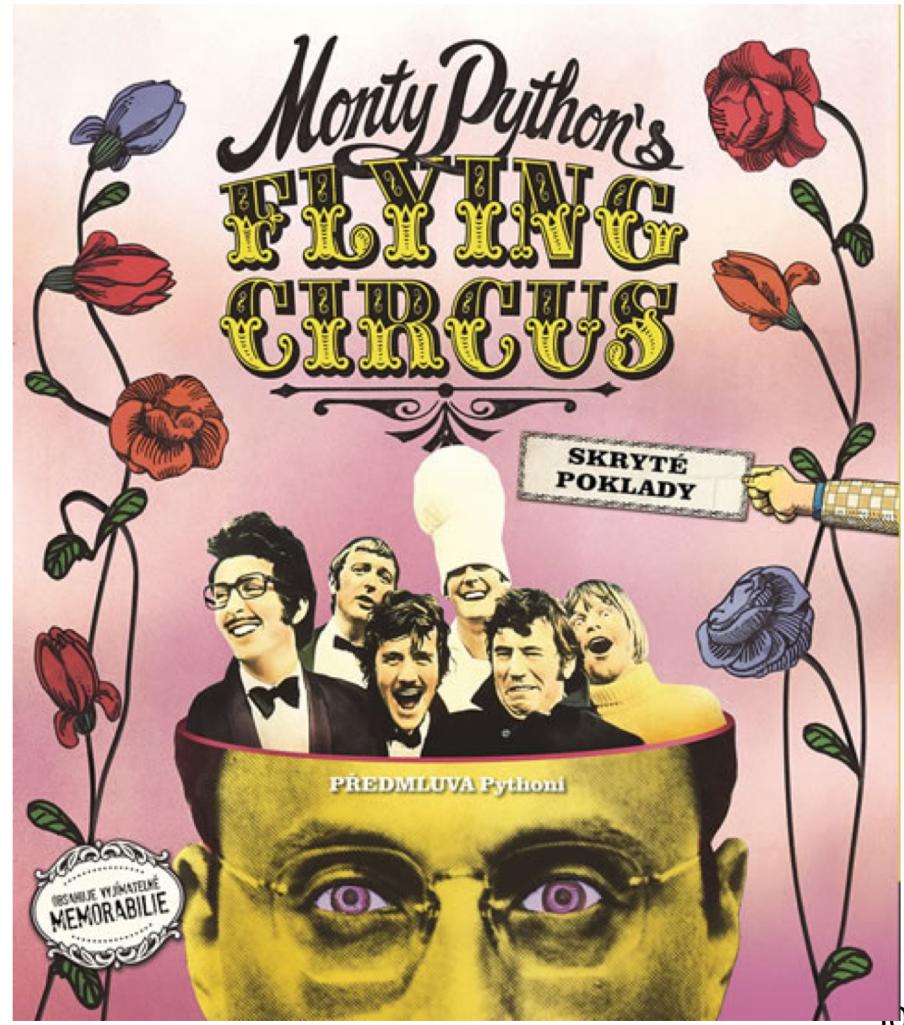
PYTHON



Why the name Python?

Monty Python circus

BBC from 1969 - 1974



Borrowed all the concept

- Functional programming from C
- OOPs from C++
- Scripting from Perl and shell script
- Modular features from Modula 3
- Syntax from C and ABC Language

Uses of Python

- Desktop Application
- Web Application(Django)
- Database Application
- Network Application
- Games
- **Data Analysis(Numpy, Pandas)**
- **Machine learning(Scikit-learn)**
- **AI(Tensorflow, caffe, Keras, etc..)**
- IOT
- Not good for mobile application

Features of Python

- Simple and easy to learn
- Freeware and open source
- Platform independent
- Portability
- Dynamically typed
- Both procedure oriented and object oriented
- Interpreted
- Extensible (Native support)
- Extensive Library

Flavours of Python

- CPython – Cython
- JPython – Jython
- IronPython
- PyPy - Performance using JIT
- RubyPthon
- Anaconda
- Stackless(Python for concurrency)

Version of Python

- Python 1 introduced in Jan 1994
- Python 2.0 introduced in Oct 2000
- Python 3.0 introduced in Dec 2008

Any new version should provide support for old version program
Exception in python

Python 3 is not backward compatibility with Python 2

Python 2 support is not supported after 2020

Disadvantages of Python

- Weak in mobile computing
- Get slow in speed
- Run time errors
- Underdeveloped Database access layers

Which companies using python?

Who all are using Python?



YAHOO!

Google

YouTube



reddit



IBM



redhat

CANONICAL

NETFLIX

Quora



and the list goes on...

Anaconda Installation

Environment to run Python

- Immediate mode - cmd- python
- Script mode - python file.py
- IDE - Integrated Development environment- spyder, pycharm, jupyter notebook

**For coding
refer GitHub repository**

THANK YOU