



Python programming

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Way to Learn

What

Why

Who

When

How

Where

Agenda

What

- What is Python?
- What You Should Already Know?
- What we are going to learn in this course?

Why

- Why Python programming?

Who

- Who developed Python?
- Who should use Python programming?

When

- When to use Python
- When Python release dates

How

- How Python is different from other Scripting and programming languages?
- How to develop Python code ?

Where

- Where to do Python programming?
- Where to find more about Python?

Accessible

Everywhere



pythonTM

Open Source

Popular

Python is clear, readable,
and expressive

What is Python?

- Python is a general-purpose, interpreted, interactive, multiplatform, object-oriented programming language.
- It is an ideal language for those, who are new to programming.
- Python is a Beginner's Language
- Python was initially developed by *Guido van Rossum*. It was first released in 1991.
- Python is open source software.
- One of its most visible features is that it does not use semicolons nor brackets.
- Python uses indentation instead.
- Today, Python is maintained by a large group of volunteers worldwide.

Portable



**Platform Specific
Installation**



OSX

ubuntu 

Python Implementations

CPython → Written in C



Jython



Java

IronPython



.NET



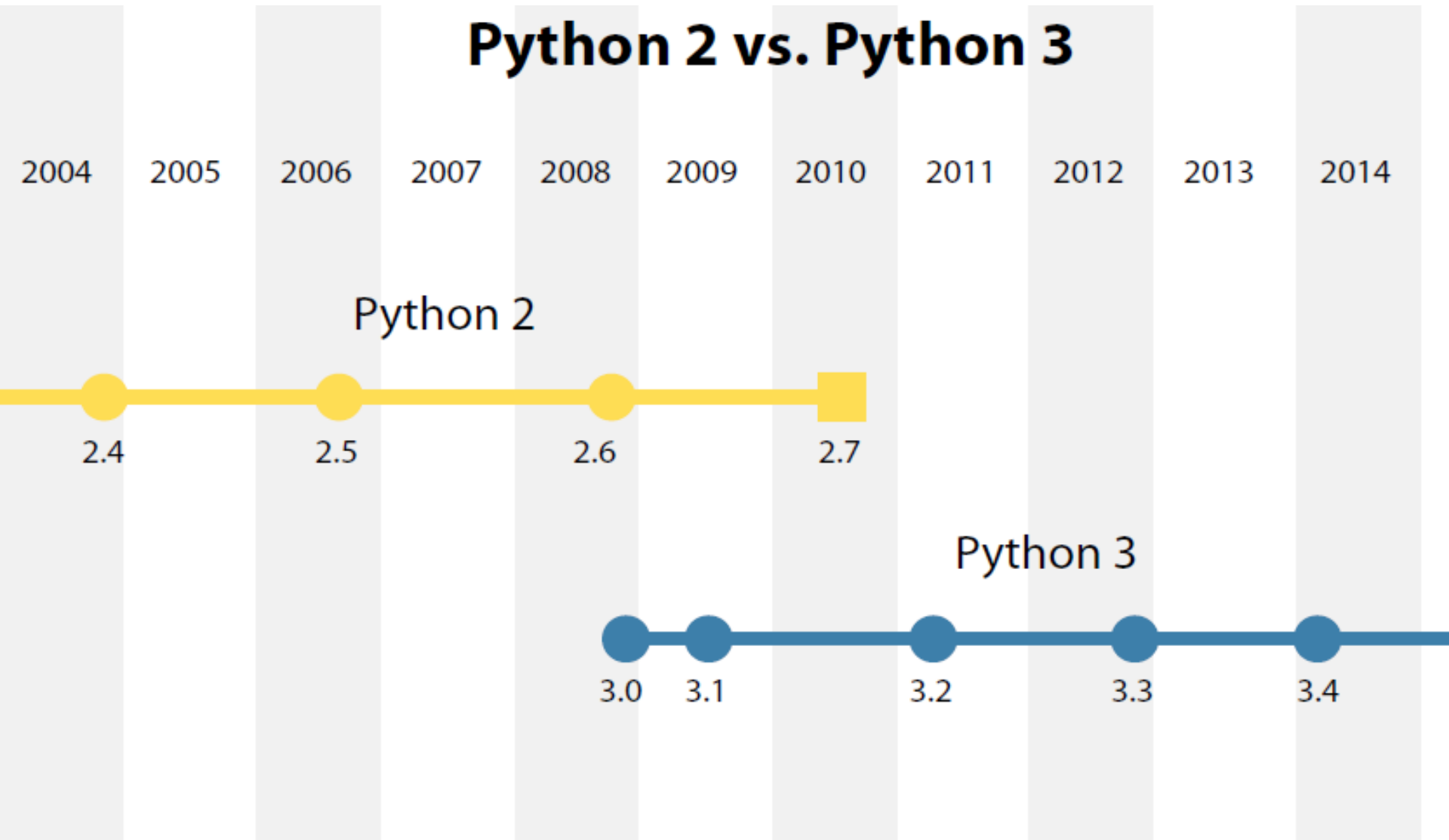
pypy



RPython

Python versions

Python 2 vs. Python 3



Python Release Timeline

2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014

Python 2

2.4

2.5

2.6

2.7

straightforward
upgrade path

Python 3

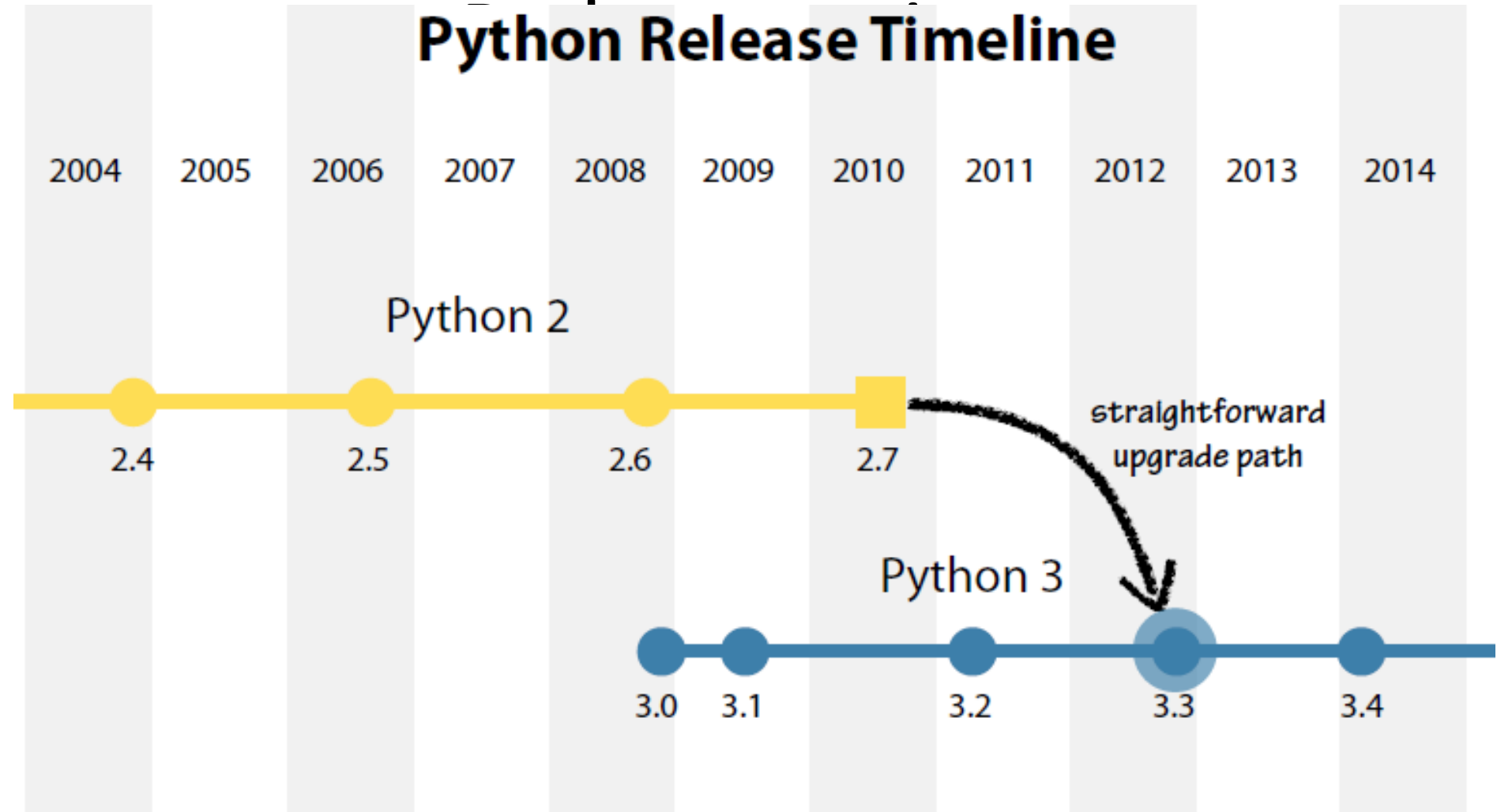
3.0

3.1

3.2

3.3

3.4



Who developed Python?



Python is developed under an OSI-approved open source license, making it freely usable and distributable, even for commercial use.

Python was created in the early 1990s by Guido Van Rossum in Netherlands

Python's license is administered by the Python Software Foundation

Who should use Python?

Software professionals who wish to automate the manual tasks in the areas of database programming, excel programming

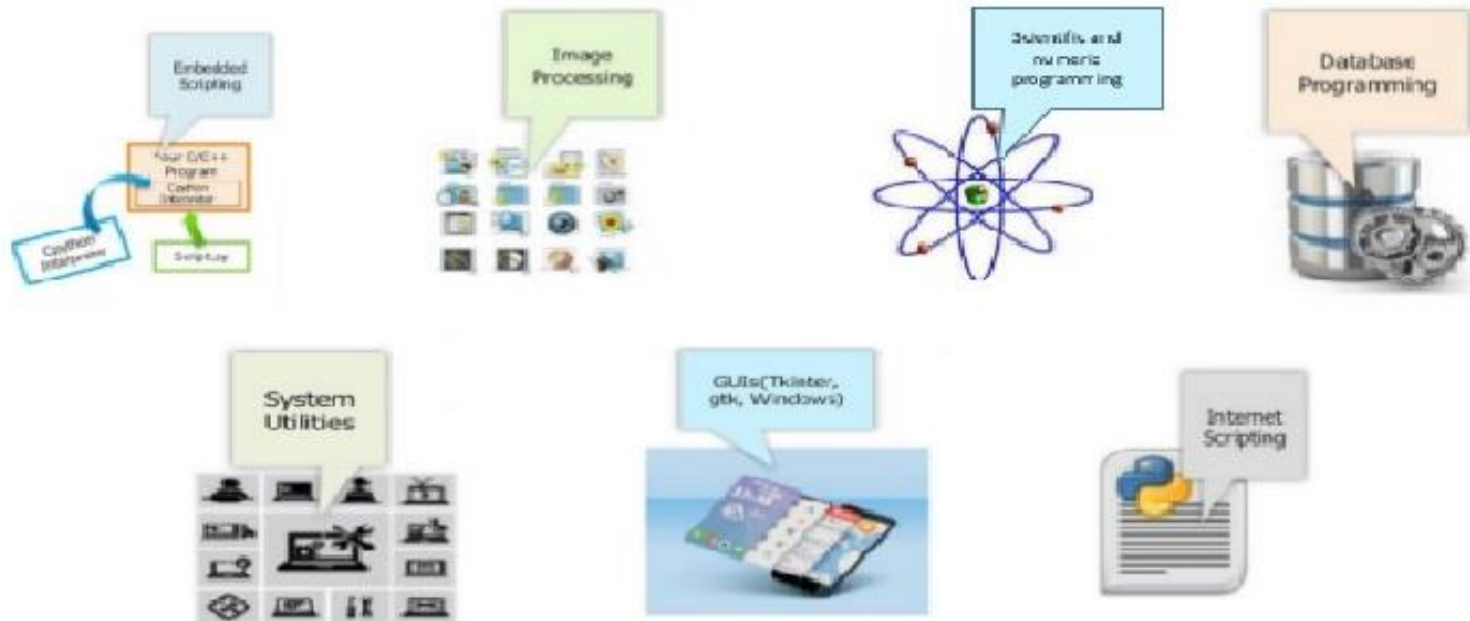
Data scientists who wish to do statistical research

Software professionals who wish to develop web applications with Django framewrok

Professionals interested in developing test frameworks, GUI applications, Image processing etc.

Major uses of Python

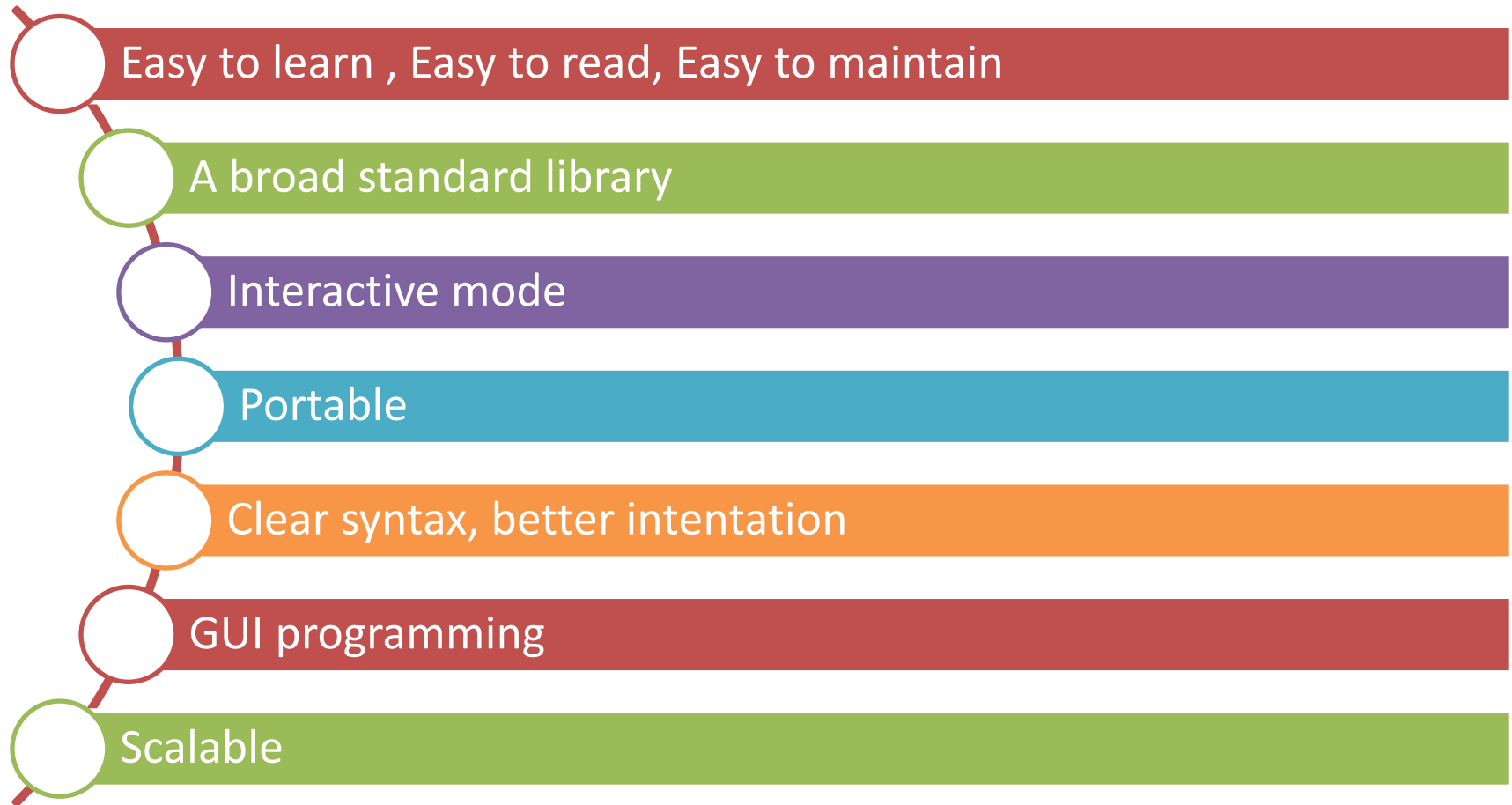
Major uses of Python



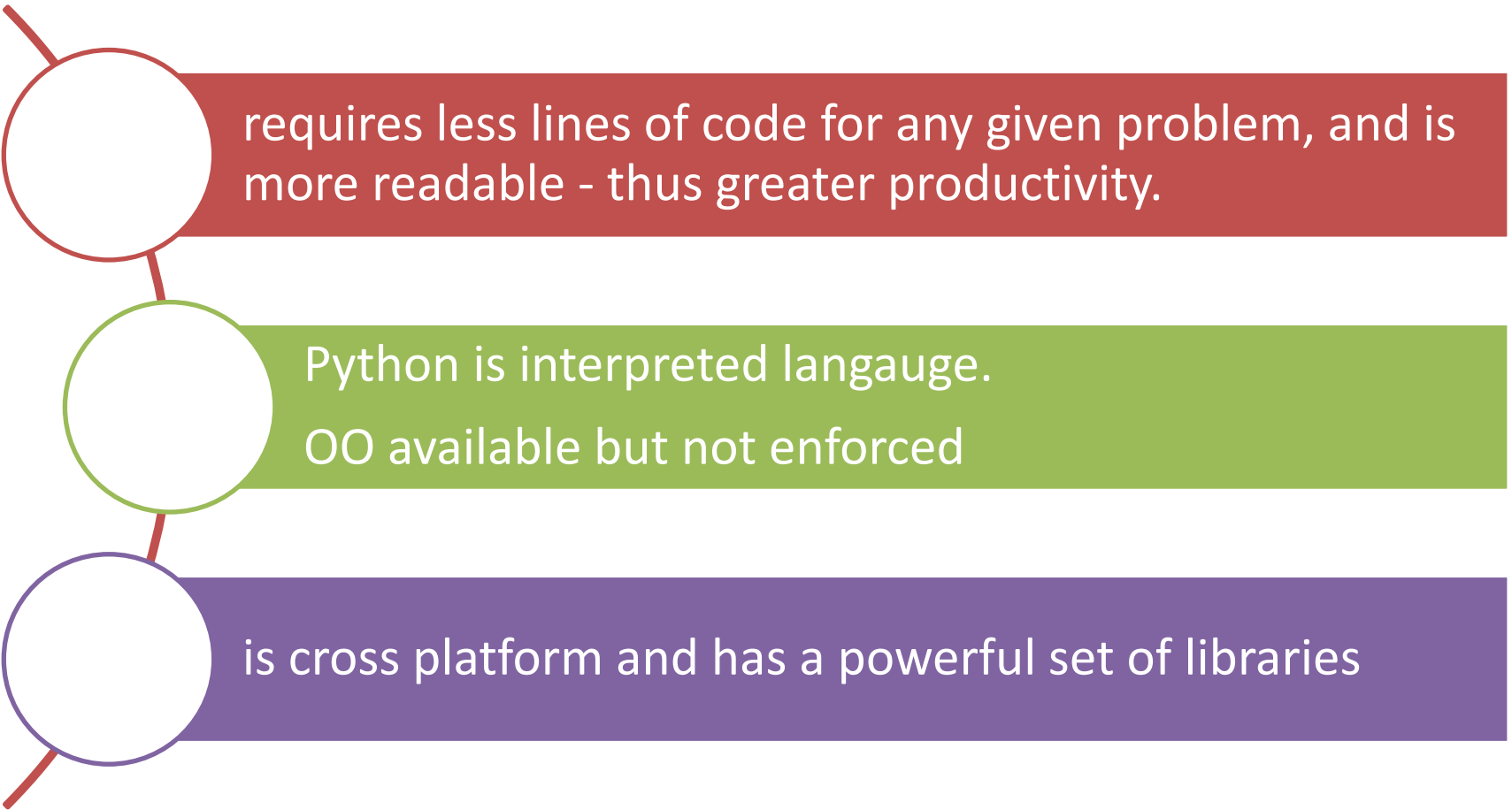
What You Should Already Know?

- In general prior programming experience is not required.
- Python is called as Beginners language.
- But it would be helpful if anyone has basic level exposure in any of the languages like C or C++ or Java but not mandatory

Why Python programming?



Features



requires less lines of code for any given problem, and is more readable - thus greater productivity.

Python is interpreted language.
OO available but not enforced

is cross platform and has a powerful set of libraries

Python script execution



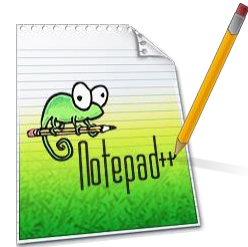
When to use Python?

- File processing/data processing
- Data analytics/data science/data scientists
- Build large scale web applications
- Developing GUI tools
- easy-to-maintain
- Cross platform programming language
- Best suitable language in network programming
- Code is already available. We have to use it
- less code and get more functionality

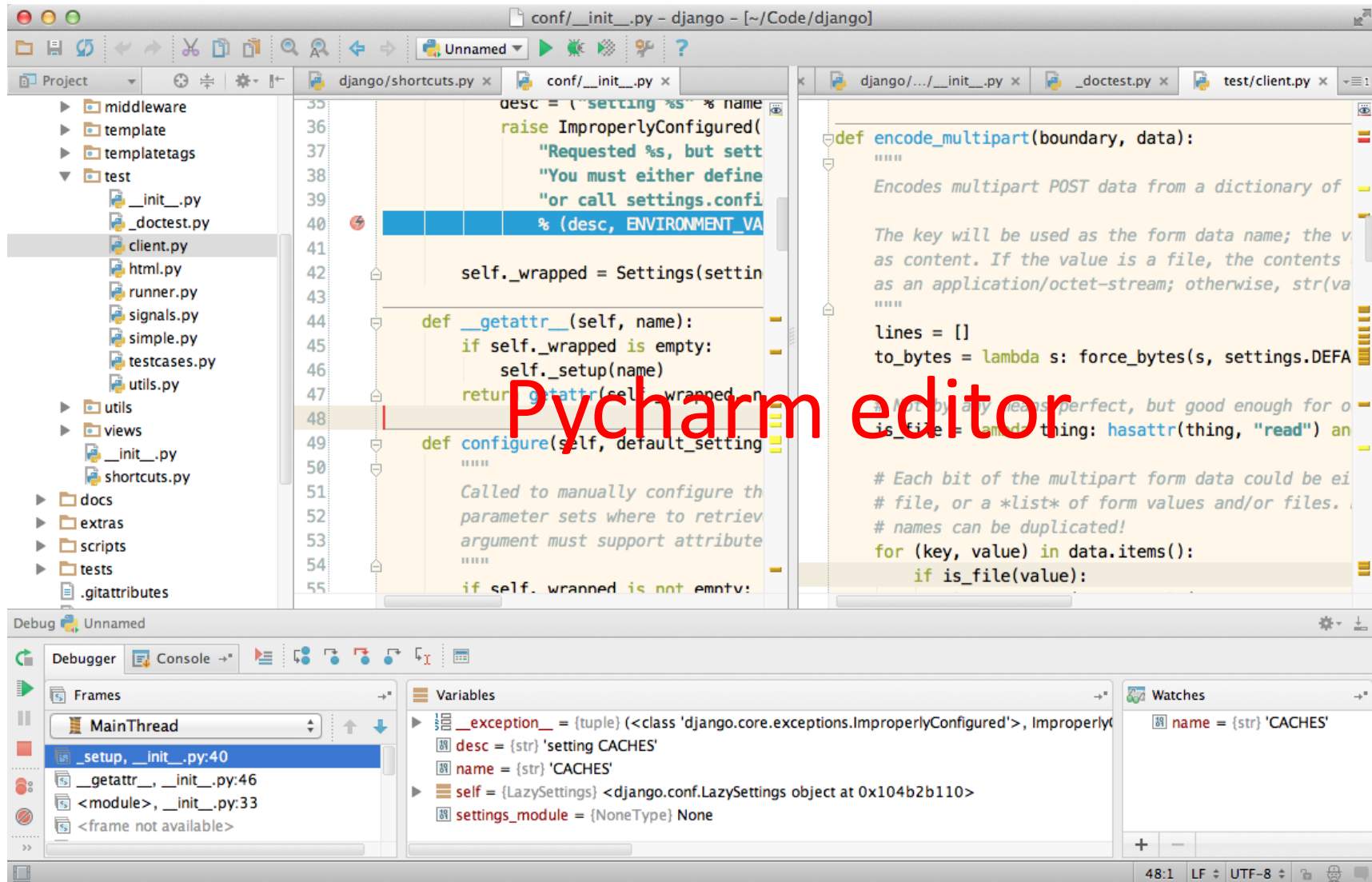
Python release dates?

- Python 1.0 - January 1994.
- Python 1.5 - December 31, 1997.
- Python 1.6 - September 5, 2000.
- Python 2.0 - October 16, 2000.
- Python 2.1 - April 17, 2001.
- Python 2.2 - December 21, 2001. ...
- Python 3.0 - December 3, 2008.
- Python 3.1 - June 27, 2009.
- Python 3.2 - February 20, 2011.
- Python 3.3 - November 13, 2013.
- Python 3.5 – April 13, 2015.

Where to do Python programming?



Where to do Python programming?



Where to do Python programming?

views.py (23quotes/quotes): 23quotes project: Wing IDE

models.py views.py

home

```
def home(request):
    all_quotes = Quote.objects.filter(is_quote_of_the_day=True)
    quotes = paginate_request(request, all_quotes)
    grouped_quotes = utils.grouper(3, quotes)

    args = {'quotes': quotes,
            'grouped_quotes': grouped_quotes,
            }
    return render(request, "main.html", args)
```

Project: 23quotes proj Options

- 23quotes
 - project
 - settings.py
 - urls.py
 - wsgi.py
 - __init__.py
 - quotes
 - static
 - templates
 - admin.py

Search in Files Stack Data Exception Debug I/O Debug Probe Watch Modules Python Shell

__main__ #0x7ff4 home(): views.py, line 36

Variable	Value
locals	<dict 0x107b72248; len=...
globals	<dict 0x107b70ea8; len=...

Commands execute in current stack frame. Use arr Options

```
>>> quotes
<Page 1 of 1>
>>>
```

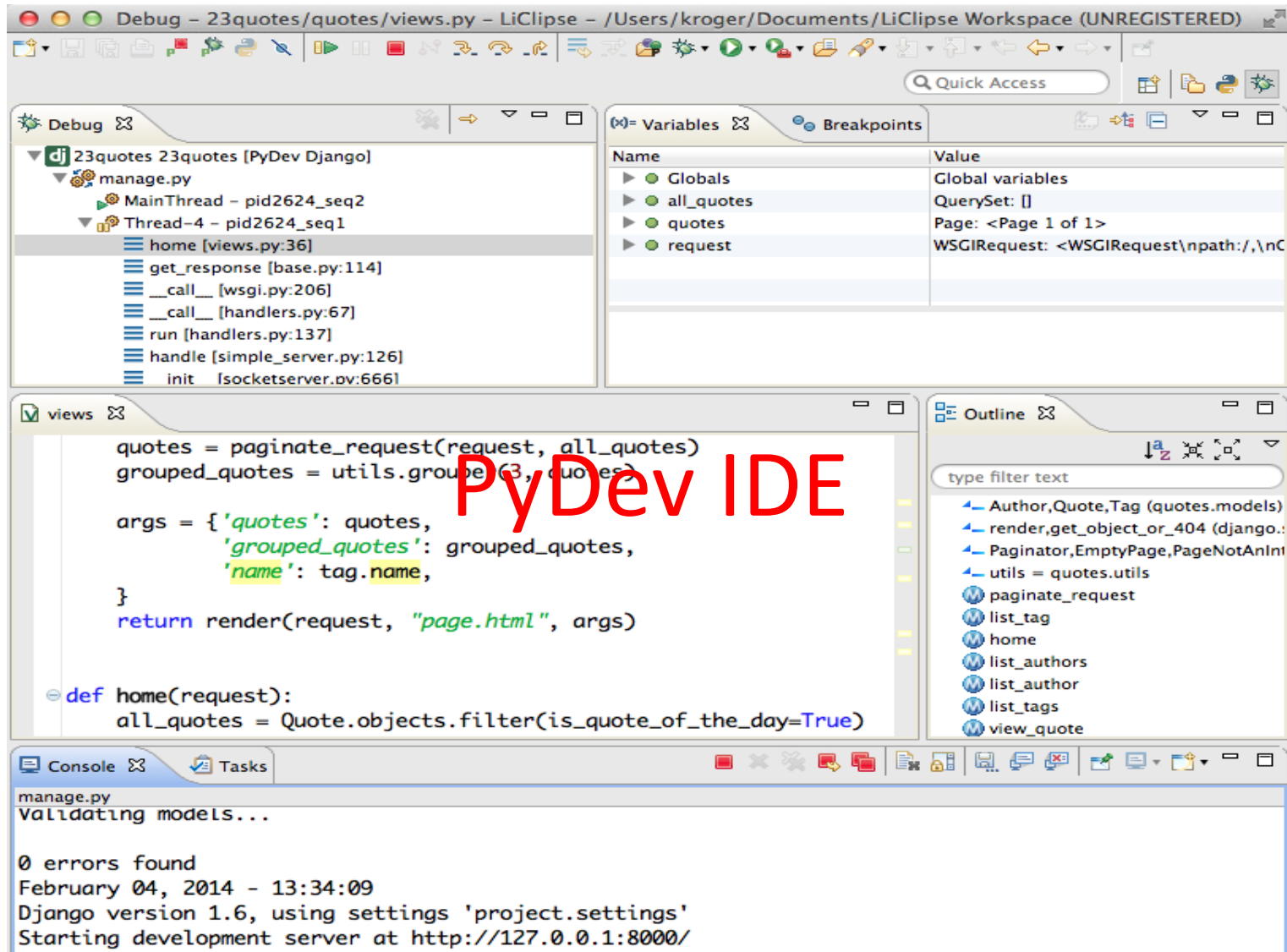
Symbol: Quote
Likely type: class ModelBase

Quote(id, text, author_id, slug, is_published, is_quote_of_the_day, popularity_index)
Current Value: <class 'quotes.models Quote'>

Line 34 Col 19 - [User]

WingIDE

Where to do Python programming?



How to develop Python applications?

- Step 1 – Open notepad
- Step 2 – type as below
`print("hello world")`
- Step 3 – save the file with demo.py
- Step 4 – Open command prompt
- Step 5 – Navigate to path where file is been saved.
- Step 6 - `python demo.py`

Where to find more about Python?

- <https://python.org/>
- <https://docs.python.org/>

Summary

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