

# Advantages of Python and Program Execution



# Advantages of Python

## System programming

Python is an ideal language for writing portable, maintainable system-administration tools and utilities.

## GUI programming

Python comes with a standard object-oriented interface to the **Tk** GUI API called **Tkinter** that allows implementation of portable GUIs with a native feel and look.

# Advantages of Python

## Internet Scripting

Python comes with standard Internet modules that allows python programs to perform a wide variety of networking tasks, in client and server modes.

## Component Integration

Python can be embedded in **C** and **C++** systems making it a useful **glue language** for scripting the behavior of other systems and components.



# Advantages of Python

## Rapid Prototyping

Python is small and readable allowing you to build prototypes rapidly hence it can be used as prototyping tool.

## Numeric and Scientific programming

Python comes with various in-built modules for numeric and scientific programming such as:

- NumPy
- SciPy
- SymPy etc.

# Advantages of Python

## Database Programming

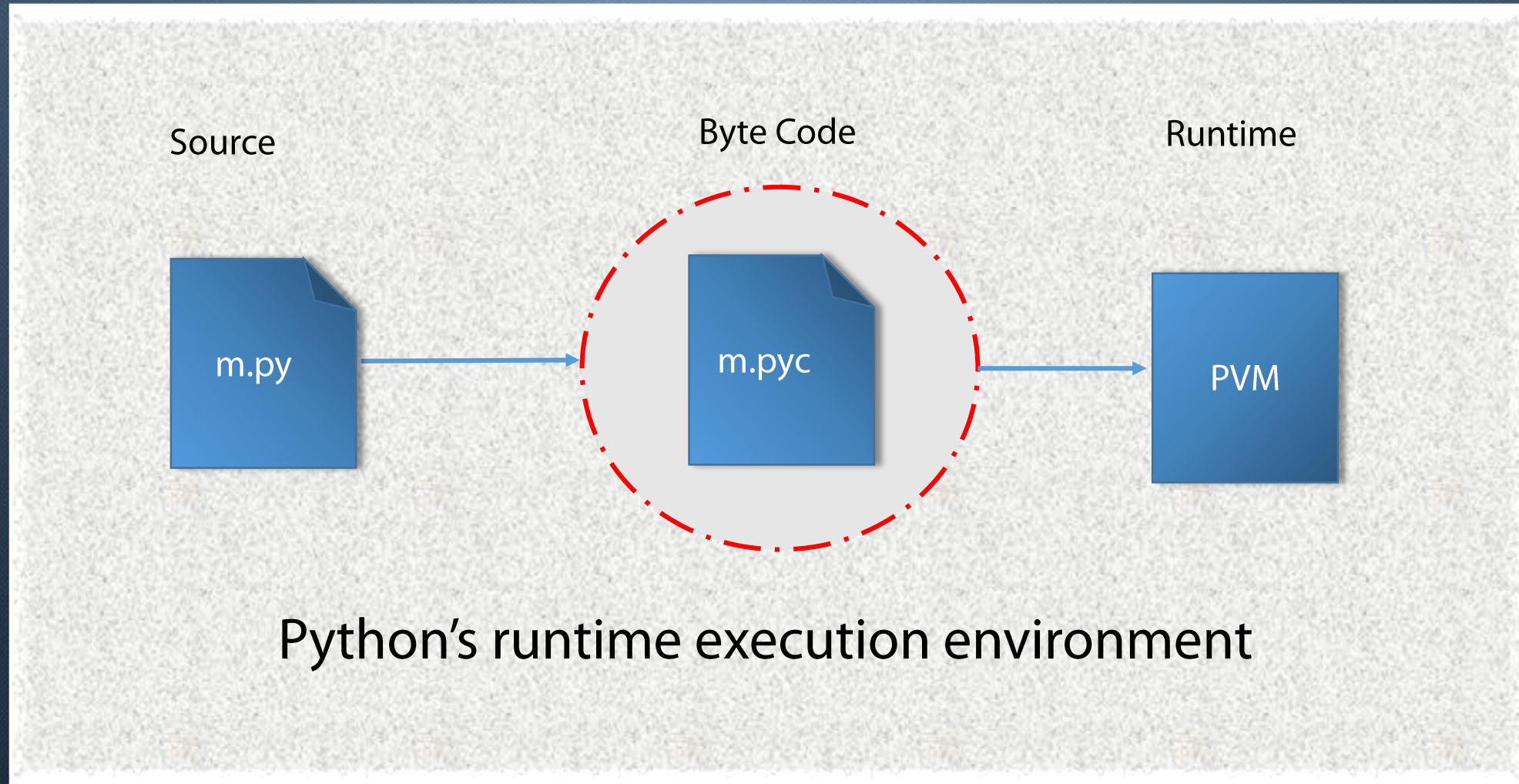
Python provides interfaces to all commonly used relational database systems like:

- Oracle
- MySQL
- SyBase
- SQLite etc.





# Program Execution in Python



❑ IDE is “Integrated Development Environment” which is used as the code editor, including a series of peripheral components and attachments.

❑ The IDE, we will be using is Python IDLE

❑ IDLE comes by default with python setup. You just need to initiate it which can be done using search or command line.



# Python IDLE



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- ❑ IDLE has the following features:
  - Coded in 100% pure Python
  - Cross-platform:  
works on Windows and Unix

A screenshot of the Python 2.7.8 Shell window. The window has a green title bar with the text 'Python 2.7.8 Shell' and standard window controls. Below the title bar is a menu bar with 'File', 'Edit', 'Shell', 'Debug', 'Options', 'Windows', and 'Help'. The main text area shows the Python interpreter's startup message: 'Python 2.7.8 (default, Jun 30 2014, 16:03:49) [MSC v.1500 32 bit (Intel)] on win32' followed by instructions to type 'copyright', 'credits', or 'license()'. Then, the command '>>> print "Hello World"' is entered, and the output 'Hello World' is displayed. The prompt '>>>' is followed by a cursor. The status bar at the bottom right shows 'Ln: 5 Col: 4'.

```
Python 2.7.8 Shell
File Edit Shell Debug Options Windows Help
Python 2.7.8 (default, Jun 30 2014, 16:03:49) [MSC
v.1500 32 bit (Intel)] on win32
Type "copyright", "credits" or "license()" for more
information.
>>> print "Hello World"
Hello World
>>> |
Ln: 5 Col: 4
```





# *Hands-On*

