

# Python (a Computer Language)

- As we know that in order to communicate with a computer system, we need a language. This language may be C, C++, Java, Python or any other computer language. Here we will discuss PYTHON.
- Python was developed by Guido Van Rossum in 1991 when he was working with National Research Institute of Mathematics and Science in Netherland.
- Python was named from a comedy series “Monty Python’s Flying Circus” telecasted on BBC.
- Python can be used as OOL and POL.

# Python (a Computer Language)

- Actually, Python is inspired by two languages -
  1. ABC language which was an optional language of BASIC language.
  2. Modula-3
- Python is very easy learning language as most of its syntax seems to be like in English.
- It is possible to get desired output in minimum instructions.
- It's an Interpreted language.
- It's a complete language in itself and it is very easy to download and install.
- It is a platform independent and portable language.
- It is Free Open Source.

# Python (a Computer Language)

- It is possible to develop various Apps with Python like—
  - GUI Apps
  - Web Apps
  - Games
  - DBMS Apps
  - Scripting etc.

# Python (a Computer Language)

## Limitations-

There are few limitations in Python which can be neglected because of its vast usage.

- It is not a Fast Language.
- Libraries are very less.
- It is weak in Type binding.
- It is not easy to convert in some other language.

# Python (a Computer Language)

## HOW TO INSTALL?

- Python can be downloaded from [www.python.org](http://www.python.org).
- It is available in two versions-
  - Python 2.x
  - Python 3.x
- We will download 3.6.5 here.
- Open [www.python.org](http://www.python.org) on any browser.

# Python (a Computer Language)

## HOW TO INSTALL?

The screenshot shows the Python.org website. The top navigation bar includes links for Python, PSF, Docs, PyPI, Jobs, and Community. The main header features the Python logo, a search bar, and social media links. The central content area displays a code snippet for a Fibonacci series and a section titled 'Functions Defined'. The code snippet is as follows:

```
# Python 3: Fibonacci series up to n
>>> def fib(n):
>>>     a, b = 0, 1
>>>     while a < n:
>>>         print(a, end=' ')
>>>         a, b = b, a+b
>>>     print()
>>> fib(1000)
0 1 1 2 3 5 8 13 21 34 55 89 144 233 377 610 987
```

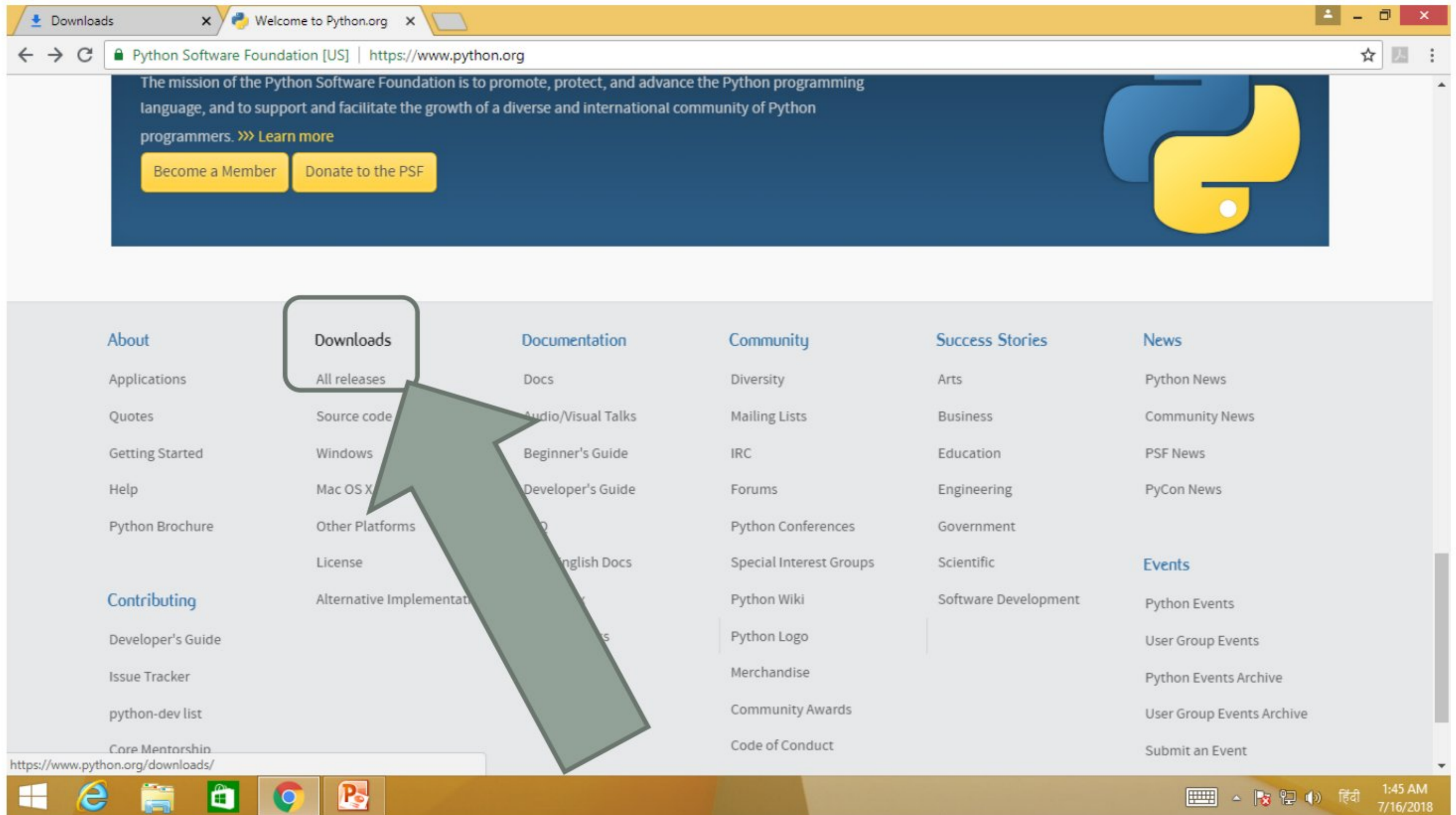
The 'Functions Defined' section explains that the core of extensible programming is defining functions, and it provides a link to 'More about defining functions in Python 3'. Below this, a message states: 'Python is a programming language that lets you work quickly and integrate systems more effectively. >>> [Learn More](#)'.

The footer contains four main sections: 'Get Started' (Whether you're new to...), 'Download' (Python source code and installers), 'Docs' (Documentation for Python's...), and 'Jobs' (Looking for work or have a Python...).

- SCROLL DOWN.

# Python (a Computer Language)

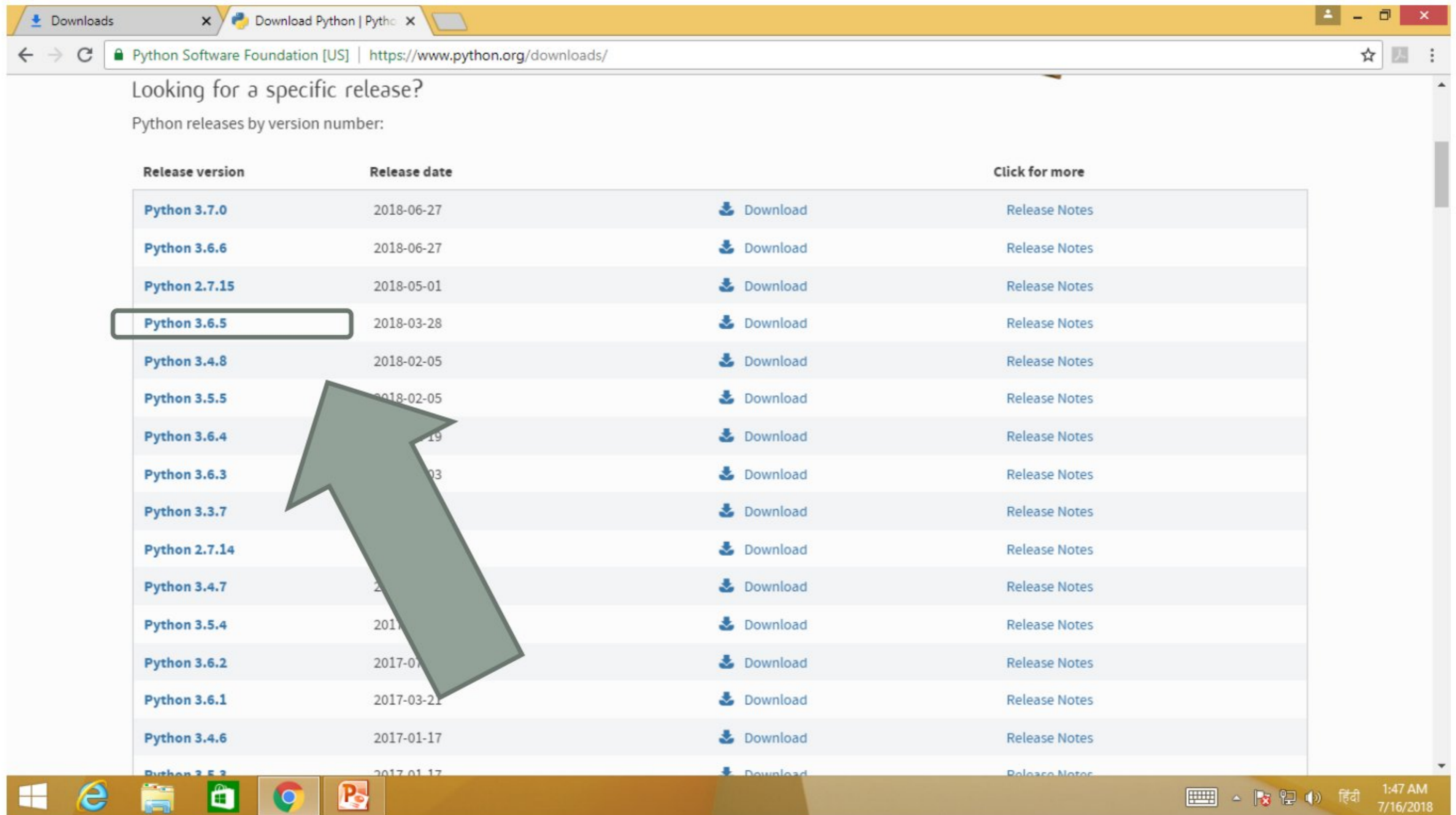
## HOW TO INSTALL?



Click on Downloads.

# Python (a Computer Language)

## HOW TO INSTALL?



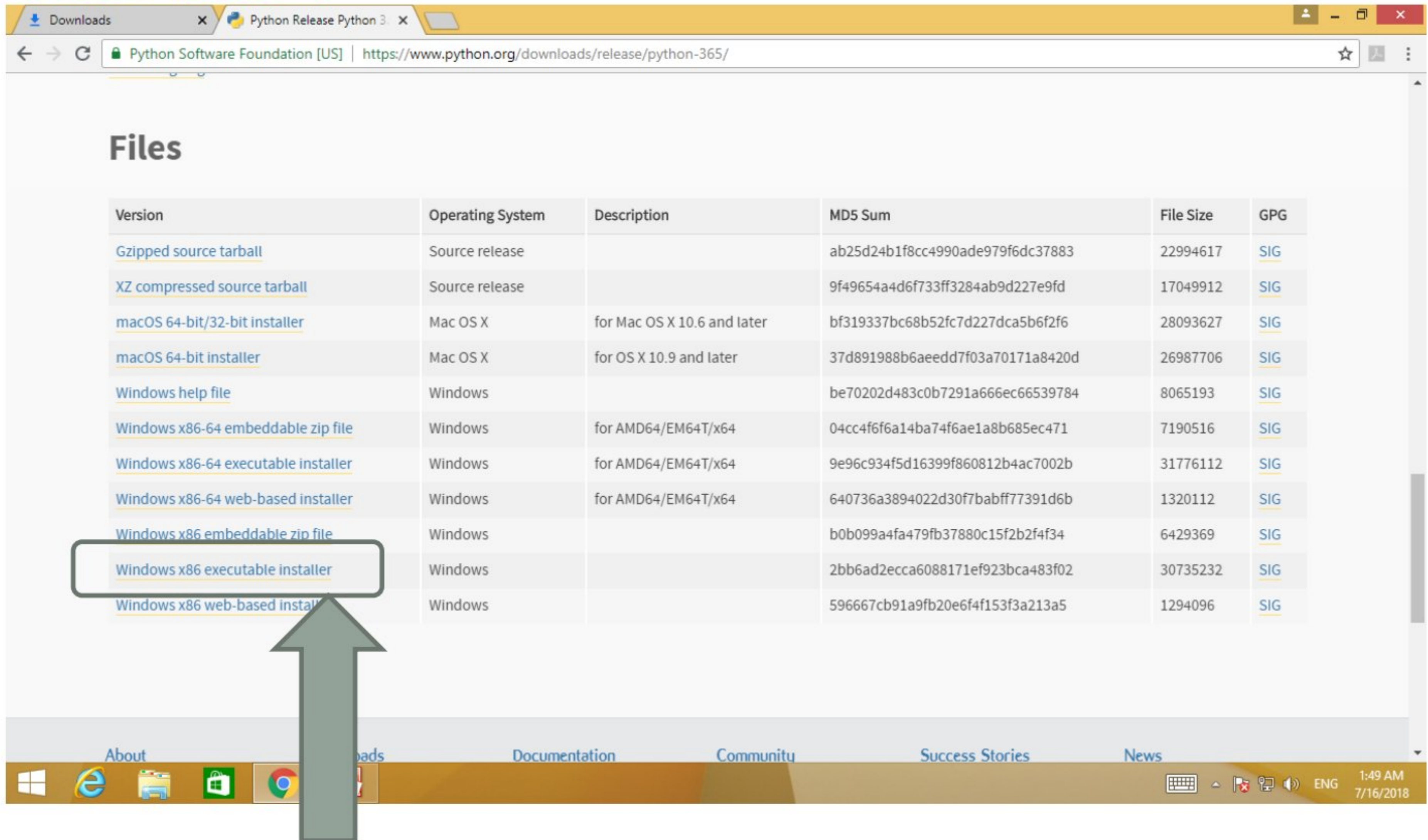
The screenshot shows the Python Software Foundation's download page. The browser's address bar displays the URL <https://www.python.org/downloads/>. The page title is "Looking for a specific release?" and the subtitle is "Python releases by version number:". A table lists various Python releases with columns for "Release version", "Release date", and "Click for more". The row for "Python 3.6.5" is highlighted with a black border, and a large green arrow points to it from the bottom left. The table includes links for "Download" and "Release Notes" for each version.

Release version	Release date	Click for more
Python 3.7.0	2018-06-27	<a href="#">Download</a> <a href="#">Release Notes</a>
Python 3.6.6	2018-06-27	<a href="#">Download</a> <a href="#">Release Notes</a>
Python 2.7.15	2018-05-01	<a href="#">Download</a> <a href="#">Release Notes</a>
Python 3.6.5	2018-03-28	<a href="#">Download</a> <a href="#">Release Notes</a>
Python 3.4.8	2018-02-05	<a href="#">Download</a> <a href="#">Release Notes</a>
Python 3.5.5	2018-02-05	<a href="#">Download</a> <a href="#">Release Notes</a>
Python 3.6.4	2018-01-19	<a href="#">Download</a> <a href="#">Release Notes</a>
Python 3.6.3	2017-12-03	<a href="#">Download</a> <a href="#">Release Notes</a>
Python 3.3.7		<a href="#">Download</a> <a href="#">Release Notes</a>
Python 2.7.14		<a href="#">Download</a> <a href="#">Release Notes</a>
Python 3.4.7	2017-11-24	<a href="#">Download</a> <a href="#">Release Notes</a>
Python 3.5.4	2017-11-13	<a href="#">Download</a> <a href="#">Release Notes</a>
Python 3.6.2	2017-07-16	<a href="#">Download</a> <a href="#">Release Notes</a>
Python 3.6.1	2017-03-21	<a href="#">Download</a> <a href="#">Release Notes</a>
Python 3.4.6	2017-01-17	<a href="#">Download</a> <a href="#">Release Notes</a>
Python 3.5.3	2017-01-17	<a href="#">Download</a> <a href="#">Release Notes</a>

Click on Python3.6.5.

# Python (a Computer Language)

## HOW TO INSTALL?



The screenshot shows the Python Software Foundation's download page for Python 3.6.5. The page lists various download options categorized by operating system. A large grey arrow points to the 'Windows x86 executable installer' link, which is highlighted with a black box. The table below provides details for each download option.

Version	Operating System	Description	MD5 Sum	File Size	GPG
<a href="#">Gzipped source tarball</a>	Source release		ab25d24b1f8cc4990ade979f6dc37883	22994617	<a href="#">SIG</a>
<a href="#">XZ compressed source tarball</a>	Source release		9f49654a4d6f733ff3284ab9d227e9fd	17049912	<a href="#">SIG</a>
<a href="#">macOS 64-bit/32-bit installer</a>	Mac OS X	for Mac OS X 10.6 and later	bf319337bc68b52fc7d227dca5b6f2f6	28093627	<a href="#">SIG</a>
<a href="#">macOS 64-bit installer</a>	Mac OS X	for OS X 10.9 and later	37d891988b6aeedd7f03a70171a8420d	26987706	<a href="#">SIG</a>
<a href="#">Windows help file</a>	Windows		be70202d483c0b7291a666ec66539784	8065193	<a href="#">SIG</a>
<a href="#">Windows x86-64 embeddable zip file</a>	Windows	for AMD64/EM64T/x64	04cc4f6f6a14ba74f6ae1a8b685ec471	7190516	<a href="#">SIG</a>
<a href="#">Windows x86-64 executable installer</a>	Windows	for AMD64/EM64T/x64	9e96c934f5d16399f860812b4ac7002b	31776112	<a href="#">SIG</a>
<a href="#">Windows x86-64 web-based installer</a>	Windows	for AMD64/EM64T/x64	640736a3894022d30f7babff77391d6b	1320112	<a href="#">SIG</a>
<a href="#">Windows x86 embeddable zip file</a>	Windows		b0b099a4fa479fb37880c15f2b2f4f34	6429369	<a href="#">SIG</a>
<a href="#">Windows x86 executable installer</a>	Windows		2bb6ad2ecca6088171ef923bca483f02	30735232	<a href="#">SIG</a>
<a href="#">Windows x86 web-based installer</a>	Windows		596667cb91a9fb20e6f4f153f3a213a5	1294096	<a href="#">SIG</a>

Download installer as per your Operating System (32 bit or 64 bit).

# Python (a Computer Language)

## HOW TO INSTALL?

- Now run the downloaded setup, it will look like-

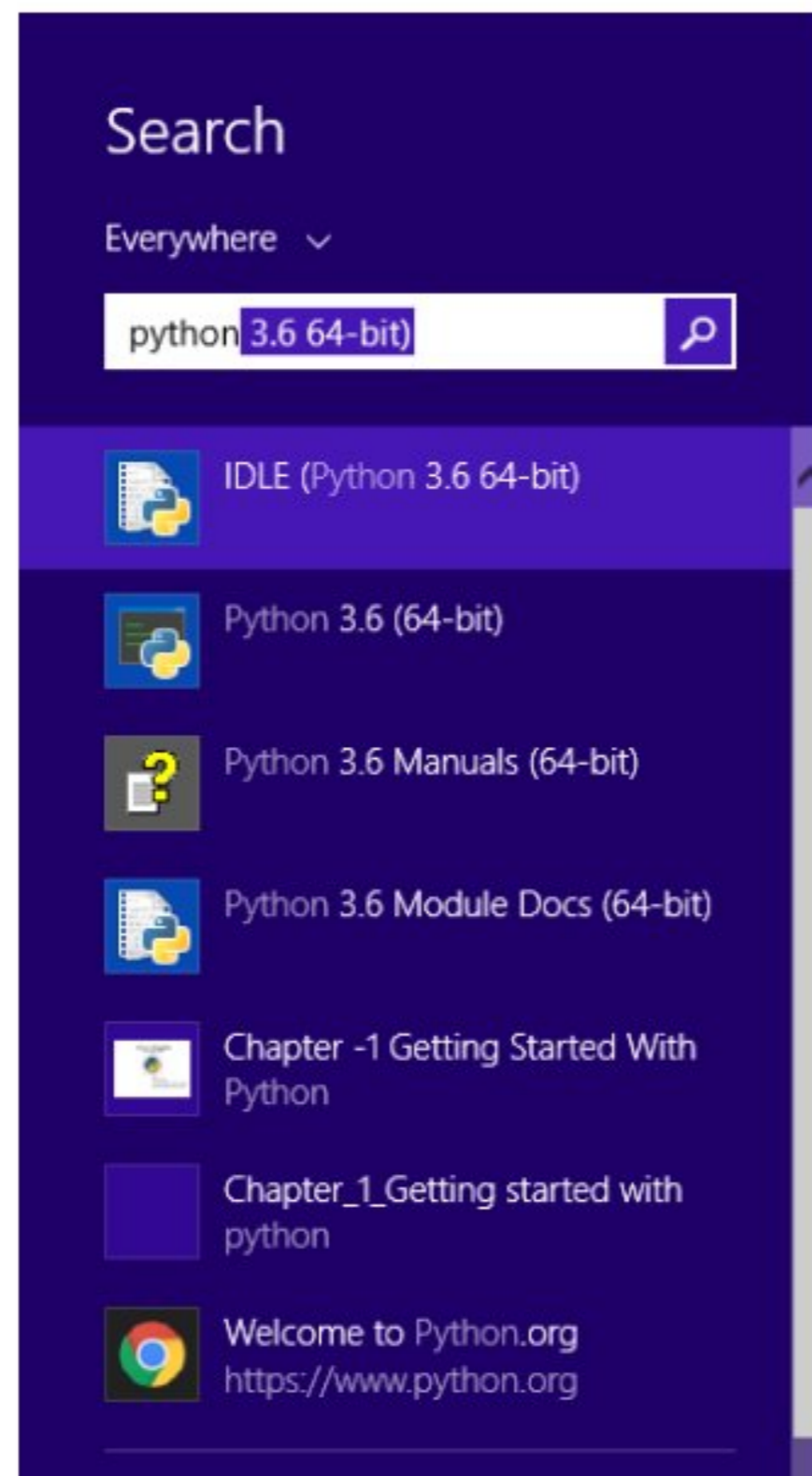


- Click on Install now.

# Python (a Computer Language)

## HOW TO INSTALL?

- You can install python in this manner.
- After installation, we will open Python IDLE 3.6.5.

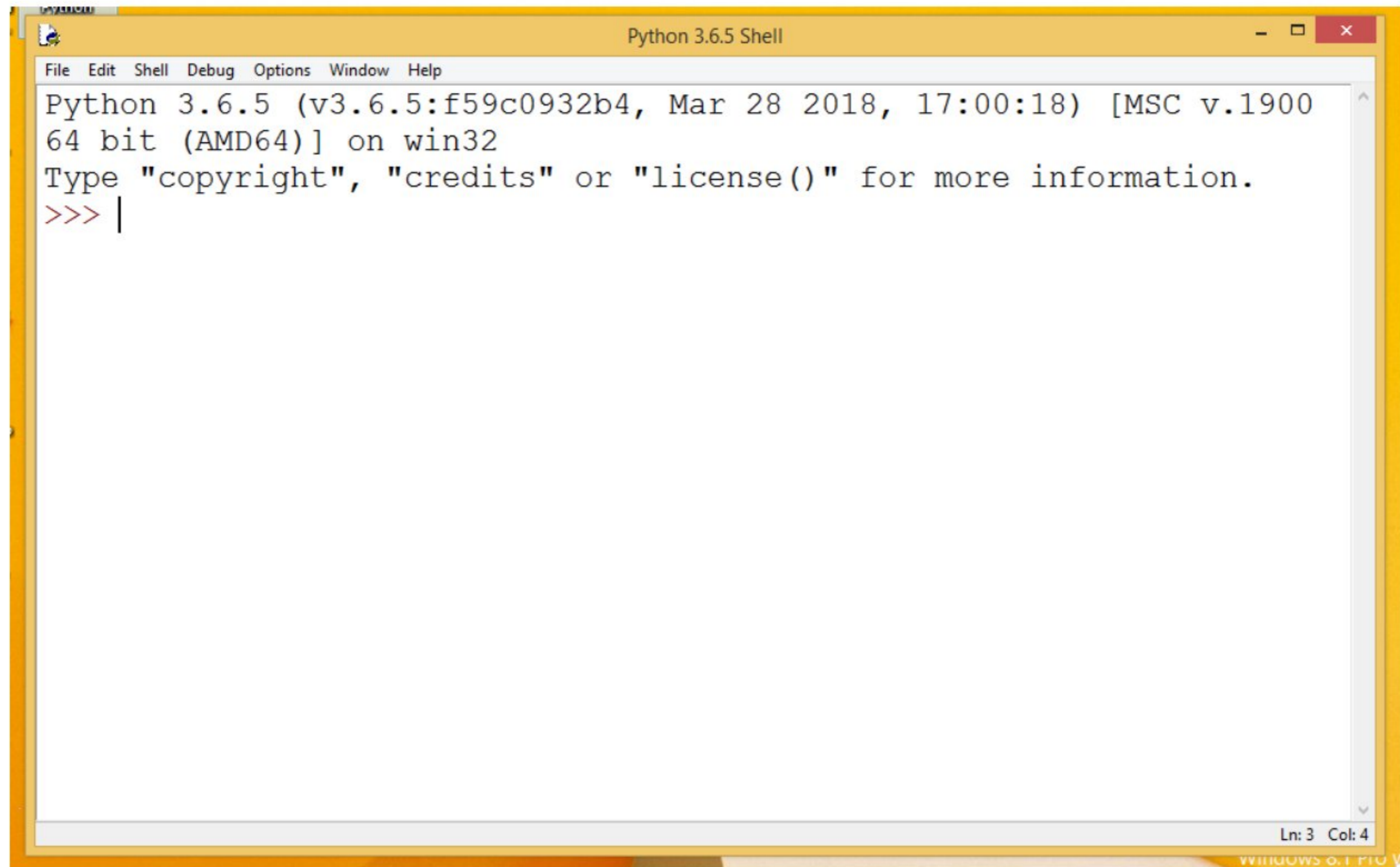


IDLE Python 3.6.5

# Python (a Computer Language)

## HOW TO INSTALL?

- On opening Python IDLE 3.6.5, a window will be opened which will look like-



# Python (a Computer Language)

## HOW TO WORK?

- We can work in Python in two ways-

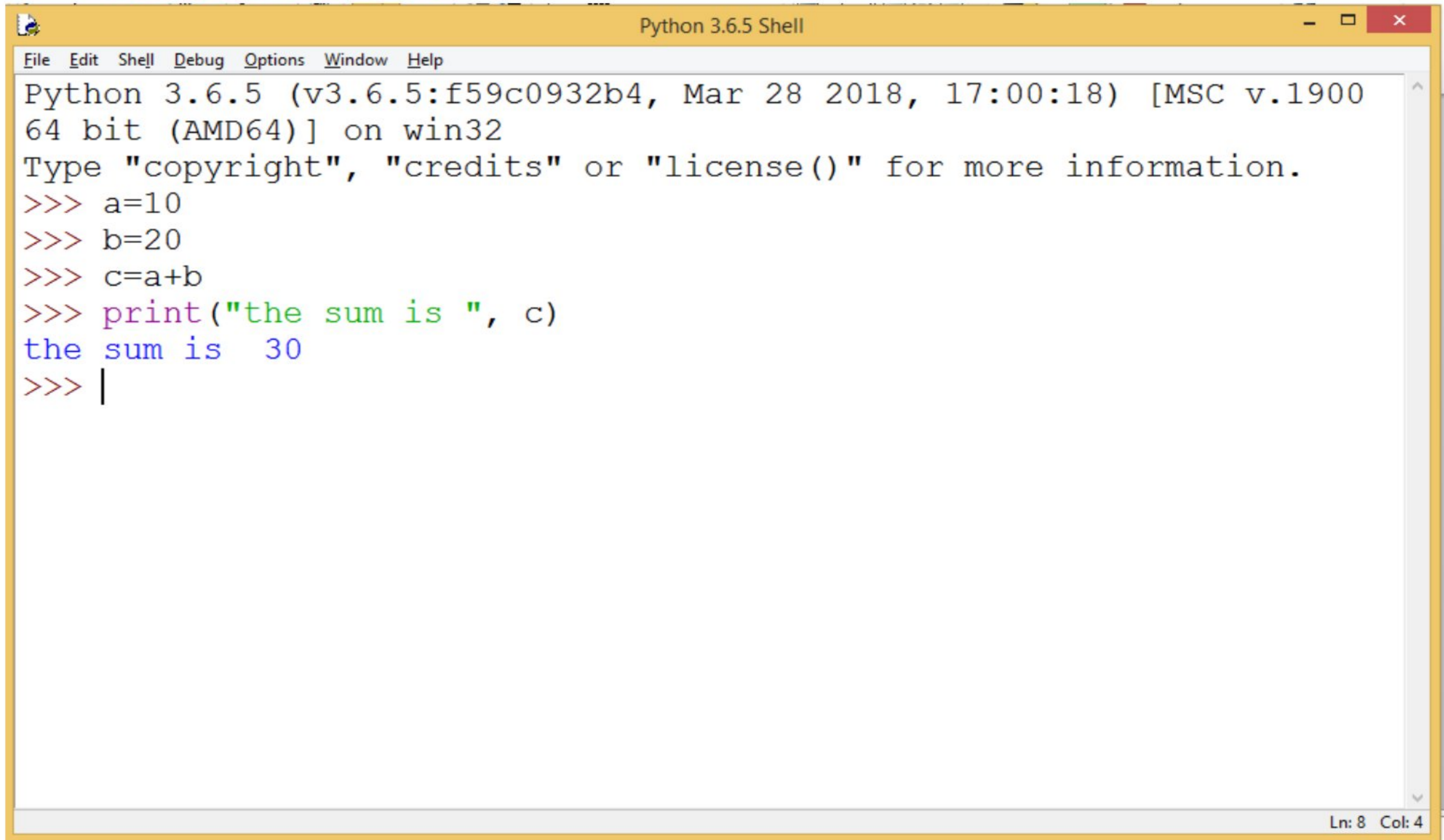
Interactive Mode

Script Mode

- Both have their own style of working.
- Interactive mode works like a Command Interpreter as Shell Prompt works in DOS Prompt or Linux..
- (`>>>`) we can execute any instruction of Python with this.
- We can run a complete program by writing in Script mode.

# Python (a Computer Language)

## Interactive mode

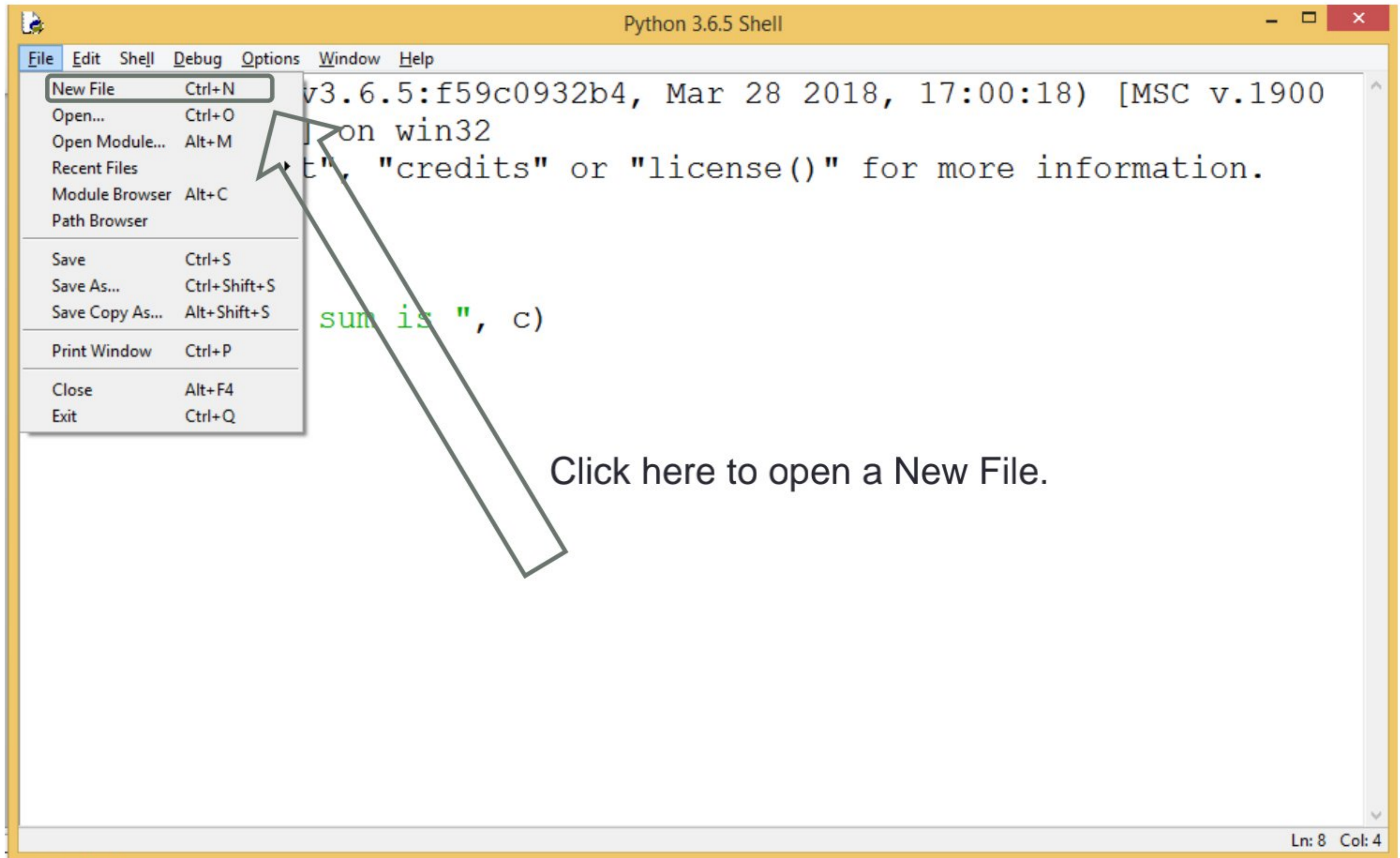
A screenshot of a Windows-style application window titled "Python 3.6.5 Shell". The window has a yellow title bar and a menu bar with "File", "Edit", "Shell", "Debug", "Options", "Window", and "Help". The main text area shows the Python 3.6.5 startup message: "Python 3.6.5 (v3.6.5:f59c0932b4, Mar 28 2018, 17:00:18) [MSC v.1900 64 bit (AMD64)] on win32". It then prompts the user to type "copyright", "credits", or "license()" for more information. The user has entered several commands: ">>> a=10", ">>> b=20", ">>> c=a+b", and ">>> print('the sum is ', c)". The output of the last command is "the sum is 30". The prompt ">>>|" is shown on the next line. The status bar at the bottom right indicates "Ln: 8 Col: 4".

```
Python 3.6.5 Shell
File Edit Shell Debug Options Window Help
Python 3.6.5 (v3.6.5:f59c0932b4, Mar 28 2018, 17:00:18) [MSC v.1900
64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>> a=10
>>> b=20
>>> c=a+b
>>> print("the sum is ", c)
the sum is 30
>>> |
```

Ln: 8 Col: 4

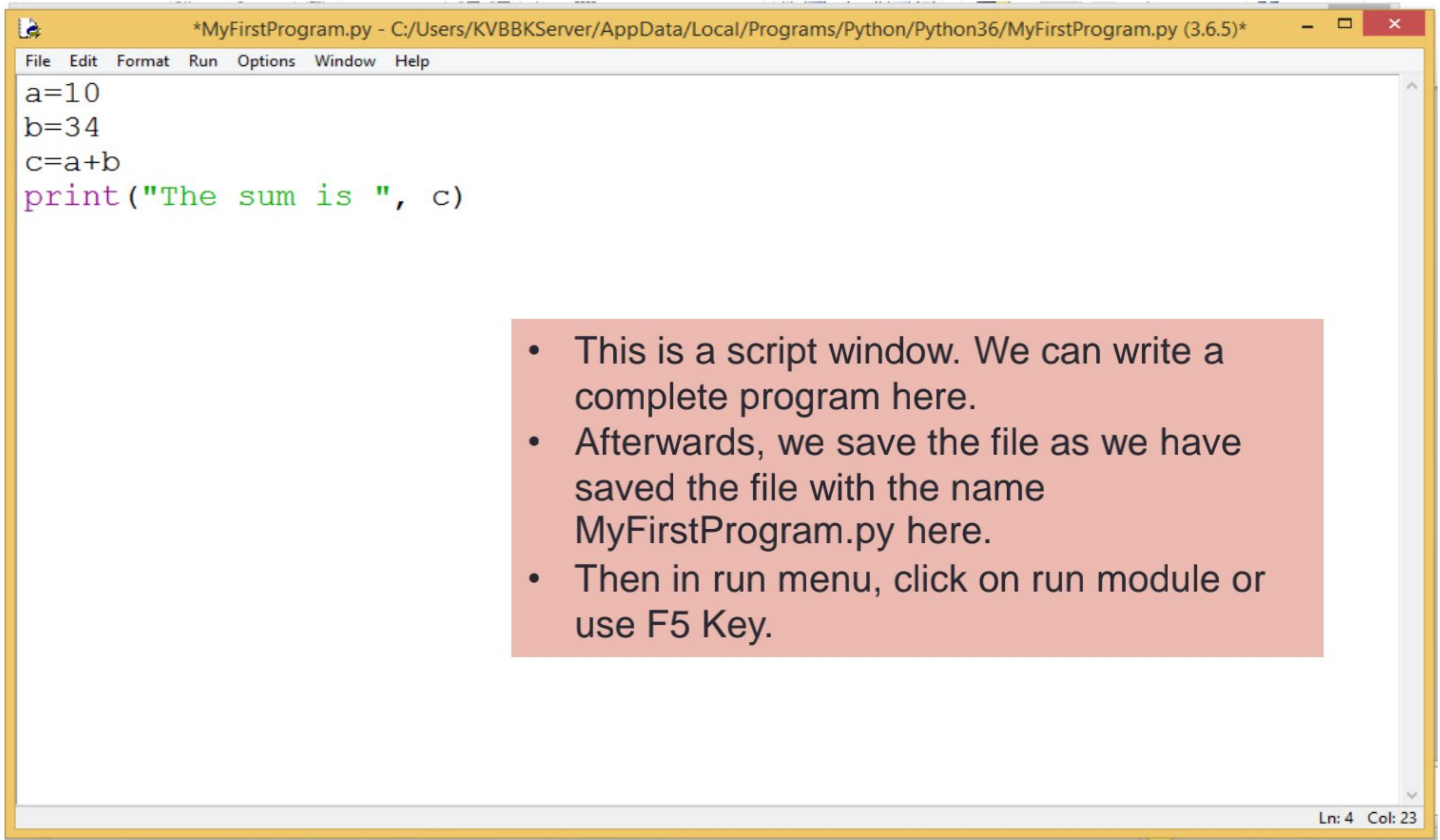
# Python (a Computer Language)

## Script mode



# Python (a Computer Language)

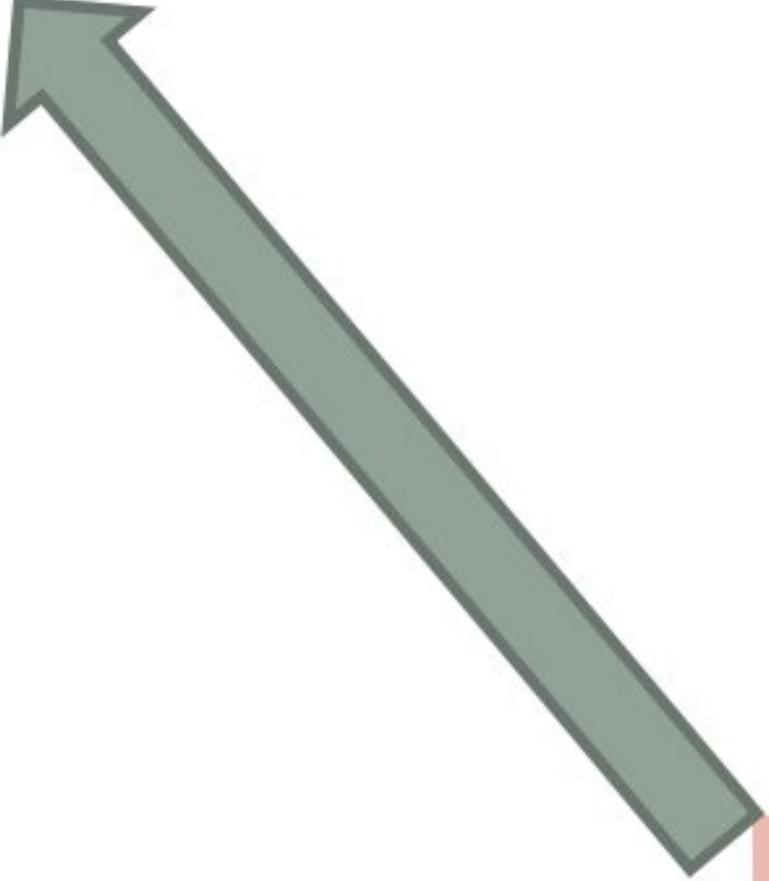
## Script mode



# Python (a Computer Language)

## Script mode

```
File Edit Shell Debug Options Window Help
Python 3.6.5 (v3.6.5:f59c0932b4, Mar 28 2018, 17:00:18) [MSC v.1900 64 bit (AMD64)] on win32
Type "copyright", "credits" or "license()" for more information.
>>>
RESTART: C:\Users\KVBBKServer\AppData\Local\Programs\Python\Python36\MyFirstProgram.py
The sum is 44
>>> |
```

- 
- As we click on run module or use F5, we switch to interactive mode where we get output of the program.