

INTRO TO PYTHON

M2U5P2





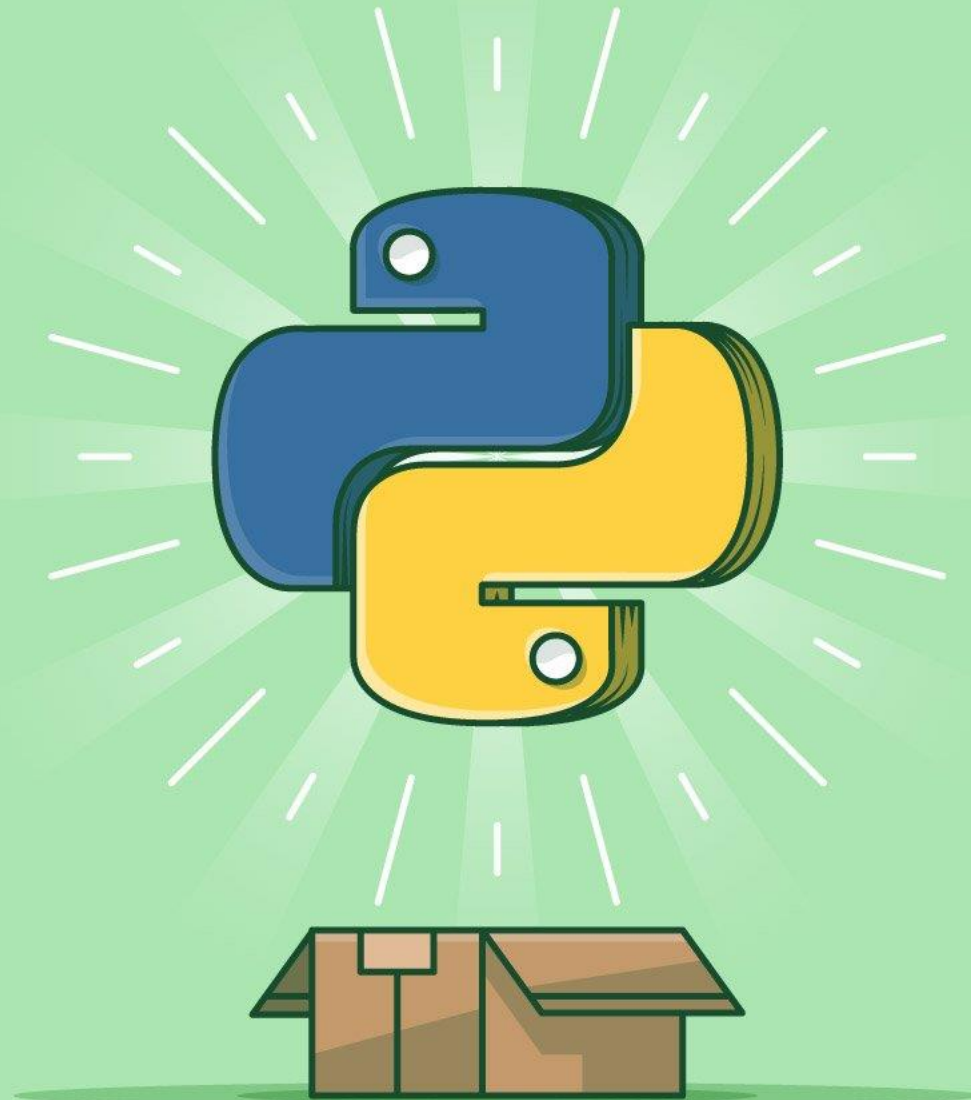
What is Python?

WHAT IS PYTHON?

- Python was created in 1990 by Guido van Rossum
- It is a general purpose programming language that is often applied in scripting roles
- It is used for:
 - Web development
 - Software development
 - Mathematics
 - System scripting
 -



WHAT CAN WE DO WITH PYTHON?



WHAT CAN WE DO WITH PYTHON?

- Can be used on a server to create web applications
- Can be used alongside software
- Can connect to database systems
- Can read and modify files
- Can handle big data and do complex math operations
- Can be used for prototyping

THESE COMPANIES USE PYTHON FOR THEIR SYSTEMS





**WHY SHOULD
YOU LEARN
PYTHON?**

WHY SHOULD YOU LEARN PYTHON?

- Python works on different platforms (Windows, Mac, Linux, Raspberry Pi...)
- Has a simple syntax that is similar to English
- Has a syntax that allows the developer to write programs with fewer lines than other programming languages
- Runs on an interpreter system, meaning that the code can be executed as soon as it is written

WHY SHOULD YOU LEARN PYTHON?

- Object-oriented programming language
- It's free (open source)
- Very powerful
- Portable (runs on almost every platform)
- Easy to use
- Easy to learn

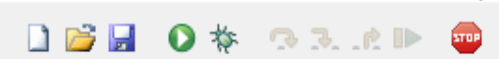


PROGRAM LANGUAGE VS SCRIPTING LANGUAGE

PROGRAM LANGUAGE	SCRIPTING LANGUAGE
<ul style="list-style-type: none">• A program is executed• It first has to be compiled and then we get the results• A program is a sequence of instructions so that the computer can perform various tasks	<ul style="list-style-type: none">• A script is interpreted• A scripting language is nothing but a type of programming language in which we can write to control another software

PROGRAM THAT WE WILL USE





<untitled> ×

```
1 |
```

Assistant ×

A vertical panel on the right side of the interface, currently blank.

Shell ×

```
Python 3.7.5 (bundled)  
>>>
```

The background is a dark blue gradient. In the corners, there are white line-art illustrations of circuit boards or neural networks, consisting of lines and small circles.

SYNTAX AND RULES

SYNTAX AND RULES

- Python can be executed by either writing in the console or by creating a python file

```
print ("Hello World!")
```

PYTHON VARIABLES

- They are created when you assign a value to it

```
x = 5  
y = "Hello, World!"
```

- We do not need to declare them first like in other programming languages

```
int x = 5  
string y = "Hello, World!"
```

PYTHON INDENTATION

- Indentation refers to space at the beginning of a code line
- In other programming languages indentation is used for readability only, but in Python it is very important
- Python uses indentation to indicate a block of code

```
if 5 > 2:  
    print("Five is greater than two!")
```

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```
if 5 > 2:  
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PYTHON INDENTATION

- It is up to you how many spaces you want in your indentation

```
if 5 > 2:  
    print("Five is greater than two!")  
if 5 > 2:  
    print("Five is greater than two!")
```

- But you have to use the same number of spaces for the same block of code

```
if 5 > 2:  
    print("Five is greater than two!")  
        print("Five is greater than two!")
```

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WHAT ARE COMMENTS AND WHY USE THEM?

PYTHON COMMENTS

- Comments can be used for explaining the code
- They can make the code more readable
- Can be used to prevent execution while testing
- A comment starts with #

```
#This is a comment  
print("Hello, World!")
```

PYTHON COMMENTS

- If a comment is placed at the end of the line Python will ignore everything after the comment if it is in the same line

```
print("Hello, World!") #This is a comment
```

PYTHON COMMENTS

- A comment doesn't have to be used only for explaining the code, it can also be used for preventing the execution

```
#print("Hello, World!")  
print("Cheers, Mate!")
```

MULTILINE COMMENTS

- Python doesn't have a syntax for a multiple line comment
- We have to use `#` for every line

```
#This is a comment  
#written in  
#more than just one line  
print("Hello, World!")
```

- Or use a trick...

MULTILINE COMMENTS

- We can use multiline strings
- If the string is not assigned to a variable, Python will ignore it and it will become a multiline comment

```
"""  
This is a comment  
written in  
more than just one line  
"""  
  
print("Hello, World!")
```



ANY QUESTIONS?



THE END