

Python Basics

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By: First Last 'ClassYear





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Introduction

You don't have to be a software developer to use Python. Python can be used in accounting, mathematics, scientists to make your life easier. Let's also face it is a rewarding experience to be able to get your code to perform a task regardless of what you do.





Design of Python

Unlike many other languages such as java or C++, Python is not a type language and its design focuses on readability of the code which makes it the most user friendly language for starters in coding.





QUESTION 1

What is the most important skill for a computer scientist?

A. To think like a computer.B. To be able to write code really well.C. To be able to solve problems.D. To be really good at math.





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SECTION 1











A **value** is one of the fundamental things – like a word or a number – that a program manipulates. **VARIABLE**

A variable is a name given to a memory location.Such as name, number. However a variable name cannot be in integer or float data type. variable is a name that refers to a value.











DATA TYPES

Data Types are used to define the type of a variable. It defines what type of data we are going to store in a variable.

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String: "Ben" Int: stands for integers such as 0,1,3 Float: decimal points 3.5,6.7







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ASSIGNMENTS

To **"assign**" a variable means to symbolically associate a specific piece of information with a name.

```
message = "What's up, Doc?"
age = 17
pi = 3.14159
```













print("My name is Honorine Kwizera")
print(2 + 3)
print(3.5+8.6)







<u>INPUT</u>

Gives a user of the program a way to enter new information

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name = input("Please enter your name: ")
print("Hello", name)







SECTION 2











LISTS

mylist=["Cape Town", "Chicago", "Paris", "Rome", "Marrakesh", "Cairo", "Delhi", "Kigali", "New York", "Dubai", "Moscow", "Tokyo"]

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print(len(mylist)) :







Using len()

Using an in built function in python you can find the length of the of your lists' length. Works for finding length of characters in a string as well

```
print(len(mylist)) :
```









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if "London" in mylist:
 print("yes")
else:
 print("no")

mylist.append("London")
print(mylist)











FOR LOOPS

for city in "Cape Town", "Chicago", "Paris", "Rome",
"Marrakesh", "Cairo", "Delhi", "Kigali", "New York",
"Dubai", "Moscow", "Tokyo", "London"]:
 print("One day I will gaze upon the amazing "+ city)









DICTIONARIES

A dictionary consists of a collection of key-value pairs. Each key-value pair maps the key to its associated value.







DICTIONARIES

mydict =["Cape Town: \$2500", "Chicago: \$1000", "Paris: \$3500", "Rome: \$3500", "Marrakesh: \$2500", "Cairo: \$2500", "Delhi: \$2000", "Kigali: \$2500", "New York: : \$1000", "Dubai: \$2500", "Moscow: \$2000", "Tokyo: \$2800"]











FUNCTIONS A function is a block of code which only runs when it is called. For Python to create a function the key word " def " is used





RESOURCES

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| | FREE TEXTBOOKS | https://github.com/pamoroso/fre e-python-books#whats-in-the-li st | LISTS OF : INTRODUCTORY LEVEL INTERMEDIATE LEVEL ADVANCED LEVEL FREEBOOKS |
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