Python Tutorial: Numbers in Python

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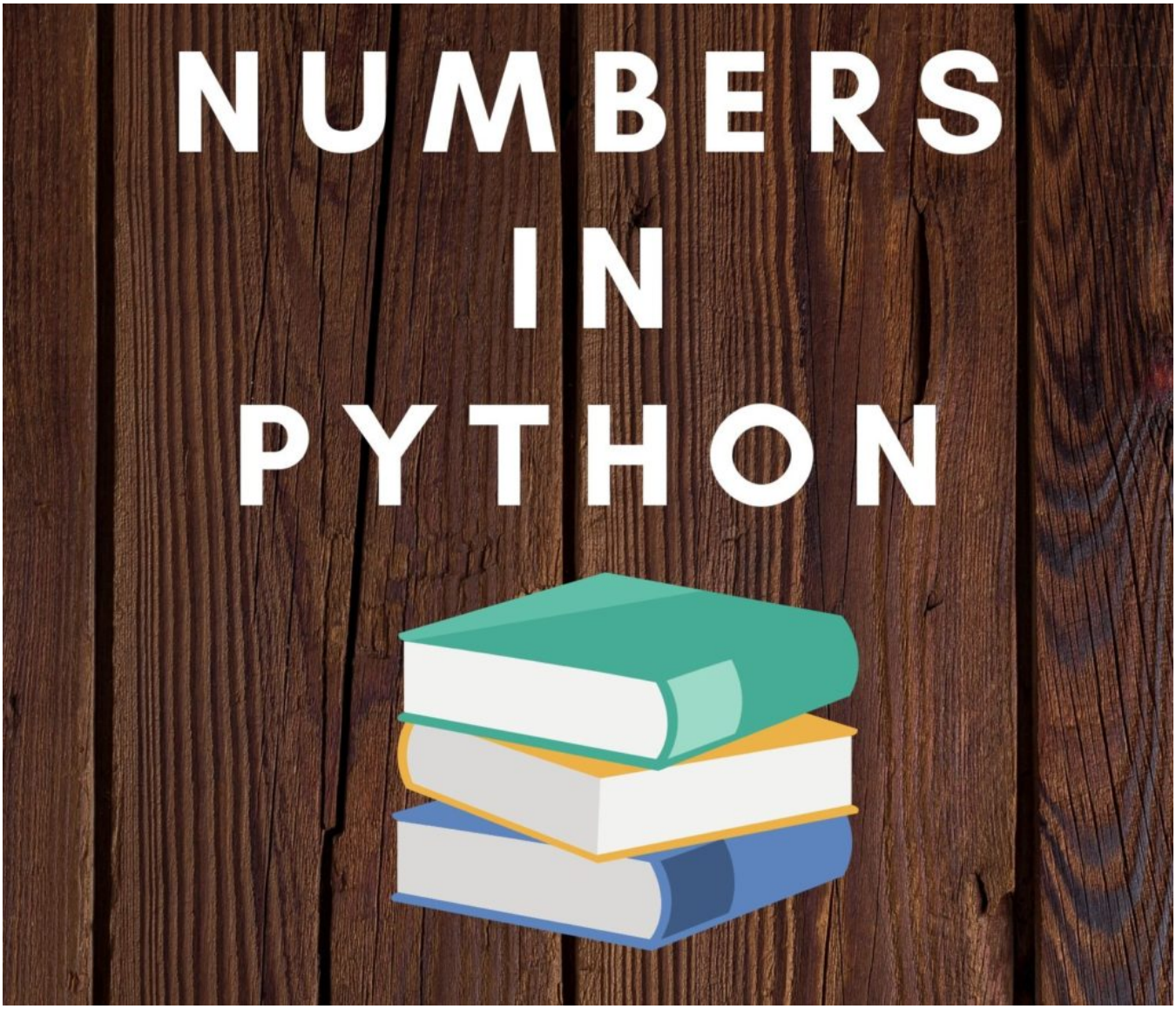

This is Python Tutorial: Numbers in Python. In this Python Tutorial, you will learn the numbers in python language. At the end of this tutorial, you will have full knowledge of

numbers.

Hello, & Welcome!

Part 2- Python Tutorial: Numbers in Python

In this article of Python Tutorial, you will learn following-

1. Types of Numbers.
2. Type Conversion
3. Basic Calculations using Python

Types of Numbers-

In Python, there are basically three types of numbers-

- **Integer Type-** The Integer type is a whole number. It may be positive or negative. It doesn't contain a decimal.

For Example-

```
a=5 #int
b= 1079876509 #int
c= -673409 #int
```

- **Float Type-** It contain a decimal, and it may be positive or negative.

For Example-

```
a= 5.20 #float
b=5.0 #float
c= -67.83 #float
```

- **Complex Type-** This type of numbers are in the form of a+bJ, where J is the square root.

```
a= 9+8j # complex
b= 9j #complex
c= -4j #complex
```

To check the type of any number, you just need to type-

```
print(type(a))
```

and it will return the type of number. For example if you want to check the type of number of a=5 so, you can check it like that-

```
a=5
print(type(a))

OUTPUT-> <class 'int'>
```

Type Conversion-

If you want to convert your number from one type to another, for example, int to float, float to complex, etc. you can simply do it.

Have a look How you can convert a type of number-

```
a= 6 #int
b=7.9 #float
c= 7+5j #complex

#from int to float-
x= float(a)

#from float to int-
y= int(b)
```

```
#from float to complex-
z= complex(b)
```

See, it is as simple as that, just by writing one line of code, you can convert from one type to another.

Note- You can't convert complex numbers to any other type.

Basic Calculations using Python-

After getting proper knowledge of types of numbers and conversion, its time to practice some basic calculations by python.

So, are you ready? Let's get started by simple maths-

- For simple **addition**, **subtraction**, **multiplication** and **division**, you just need to type as you type in the calculator. Very easy...right? Let's see, how to do it-

Write this code in your cmd, to practice with me-

```
>>> 5+5   #addition
10
>>>5-5    #substraction
0
>>>5*5    #multiplication
25
>>>5/5   #division
1.0 # float type
```

-> As you see in the division it is returning the result in a float as **1.0**. To get the result in int, you need to type it as-

```
>>>5//5   #division
1   #int type
```

-> For the **square root** of number-

```
>>>5**5
3125
```

-> For **remainder/modulus**–

```
>>>10%3
1
```

-> **BIDMAS Rule**–To perform longer calculation, you need to take care of BIDMAS Rule. Let's see an example, how it affects the whole calculation.

```
>>>5+5*3
20
```

- Here it is returning 20 as a result, just because * has more priority than + according to BIDMAS Rule.
- If you want to do addition first, put it into a bracket, because in BIDMAS Rule a bracket has more priority than *
- Let's see in this example, how result is changed just by using ().

```
>>>(5+5)*3
30
```

Store number in variables-

-> You can store numbers on variables and perform a calculation on it. Let's see how you can do it-

```
>>>age=25   #store number in variable "age"
>>>age      #print "age"
```

```
25          #OUTPUT

#perform addition on "age"
>>>age+5
30
```

->"age+5", simply add 5 to your age variable whose value is 25, but it doesn't alter the variable "age" value. If you enter "age", it returns 25 as a result. I'll show you here-

```
>>>age
5         #print 25 again
```

->If you want to update the value of "age", then you can simply do it by writing-

```
>>>age= age+5    #add 5 in variable "age", not direct.
>>>age           #print age
30              #OUTPUT
```

-> There is **one more way to update the value of variable "age"**. Have a look at it too-

```
>>>age+=5       #add 5 in variable "age", not direct.
>>>age          #print age
30              #OUTPUT
```

-> Just like addition, you can perform other calculations on a variable, by just writing a few lines of code. Let's have a look-

```
>>>age=25
>>>age-=5  #subtraction
>>>age
20
```

```
>>>age/=2   #division
>>>age
15.0
```

I hope, now you have a clear understanding of numbers in python. Now it's time to perform some high-level calculations.

Let's see one example-

```
>>>wages=1000
>>>bills=200
>>>rent=500
>>>food=200
>>>savings= wages-bills-rent-food    #formula to find saving
>>>savings
100
```

->In this example, we are calculating the total saving of month, and look it is how much simple in python, just put all values in variables, apply a formula, and get the results.

And here we go, congratulations! You successfully learned numbers in python.

In the next tutorial, we will start learning **Python Strings**.

You can simply go to the next Tutorial from Here.

Enjoy Learning Python!

All the Best!

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If you are looking for Machine Learning Algorithms, then read my Blog – Top 5 Machine Learning Algorithm.

If you are wondering about Machine Learning, read this Blog- What is Machine Learning?

```
Thank YOU!
```

Though of the Day...

> *'I am always ready to learn although I do not always like being taught."*
>
> *– Winston Churchill*

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