

Lets learn Python

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Lesson 1

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Why should you learn Python? Coding Standards or PEP8 Python Basics

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- -Naming Conventions
- -Types in Python
- -Accepting user input
- -Displaying output
- -Arithmetic operators
- -Logical operators
- -Conditional operators
- -If condition
- -Order of if statements
- -One line condition

The End



Why should you learn Python?

Python is a general purpose programming language. By learning python you can do:

- Web Development with frameworks like Flask and Django
- Build machine learning models with Scikit, NumPy and Pandas
- Data Science
- Game Development etc



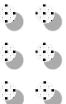
Coding Standards in Python

PEP8 is the coding standard followed by developers in Python. Your organisation might have their own specialized guidelines for coding standards.



Coding Standards in Python

- Variable names can start with lower case alphabet or underscore
- Use snake case while naming variables like: total_amount
- Pascal case is used for naming Classes in Python like: MyProgram
- Always use meaningful names so as to avoid confusion in code.
 Like: is_upper_case , principal, interest
- Avoid names like: x, y or z as they are not meaningful



Naming Conventions

- Variables are used to store information which can be used later in the program
- Python is a weakly typed language as such we don't need to provide type of variable in advance.
- A single variable can contain String, Integer, Float, None or Boolean values
- Variables are case sensitive. Like: a_variable != a_Variable







Python Basics Types in Python

 $a_number = 5$

a_string = "Hello"

a_boolean = True

 $a_{float} = 5.75$

a_boolean = False

a none = None

PS: None means no value



Accepting user input

- entered string = input("Enter a string")
- entered_number = int(input("Enter a number"))
- entered_float = float(input("Enter a decimal number"))

PS: input function always returns a string so we have to change the type to fit our needs



Python Basics Displaying Output

- print(a_number, another_number)
- print("Hello "+ name)
- print("Hello", end="|")

PS: end parameter is always a newline character or \n unless specified



Arithmetic Operators

Arithmetic Operators

- sum = a number + another number
- difference = a number another number
- product = a_number * multiplier
- number_raised_to_the_power = a_number ** power
- float division = a number / another number
- integer division = a number // another number
- remainder = a_number % another_number

PS: if your variable is of type float then the result will always be a float







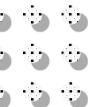
Logical Operators

Logical operators

- and: &&
- or: ||
- not:!

De Morgans Law:

- not(a or b) = not(a) and not(b)
- not(a and b) = not(a) or not(b)



Conditional Operators

Conditional operators

- > greater than
- < less than
- == equal to
- != not equal to
- >= greater than equal to
- <= less than equal to



Python Basics If Condition

Conditions in Python

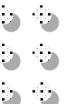
```
if a_number < 5:
    print("Number is less than 5")
elif a_number > 10:
    print("Number is greater than 10")
else:
    print("Number is greater than 5 and it is less than 10")
```



Order of If Statements

Order of if statements

- 1) if
- 2) elif (any number of elif are permitted in a condition)
- 3) else



One line condition

One line condition in Python

choice = "Okay" if a_number < 5 else "Not Okay"

The End

Thank You

