Lets learn Python

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Lesson 1

Why should you learn Python ?

Coding Standards or PEP8

Python Basics

-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

Python Basics

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

Python Basics

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

Python Basics

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

Python Basics

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)

Python Basics

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”)
```

Python Basics

Order of If Statements

Order of if statements

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

Python Basics

One line condition

One line condition in Python

```
choice =  “Okay” if a_number < 5 else “Not Okay”
```

The End

Thank You