Tutorial 1

What is Python

Python is a general purpose, dynamic, high-level, and interpreted programming language. It supports Object Oriented programming approach to develop applications. It is simple and easy to learn and provides lots of high-level data structures.

Why learn Python?

- Easy to use and Learn
- Expressive Language
- Interpreted Language
- Object-Oriented Language
- Open Source Language
- Extensible
- Learn Standard Library
- GUI Programming Support
- Integrated
- Embeddable
- Dynamic Memory Allocation
- Wide Range of Libraries and Frameworks

Where is Python used?

- Data Science
- Date Mining
- Desktop Applications
- Console-based Applications
- Mobile Applications
- Software Development
- Artificial Intelligence
- Web Applications
- Enterprise Applications
- 3D CAD Applications
- Machine Learning
- Computer Vision or Image Processing Applications.
- speech Recognitions

Tutorial 2

Hellow World Program

```
print("hellow World!")
```

Print function

- The Python print () method is used to print a given message to the screen .
- Print function is In-built function

Tutorial3

Variable

- Variable is a type of container .It stores the data .data maybe in the form of int ,char ,float ,double ,bool ,and so on .
- Python variable is also known as an identifier.
- In Python, we don't need to specify the type of variable because Python is smart enough to get variable type 😂.
- Python is a case sensitive .that means ,
  Suppose you have two variable name Abhay and abhay both are different variable but pronunciation is same .

Rule of define variable name

-
- All the characters except the first character may be an alphabet of lower-case(a-z), upper-case (A-Z), underscore, or digit (0-9).
- Identifier name must not contain any white-space, or special character (!, @, #, %, ^, &, *).
- Identifier name must not be similar to any keyword defined in the language.

type() In-built function

The type() function is used to **get the type of an object**.

Let me explain you with an example suppose you have a variable

Num =234

And you want to get the ,what is the data-type of this variable then you can directly go for -----

type(Num)

Multiple assignment

a=b=40

abhay=Abhay=234.34

a,b=40,20

Delete a variable

del <variable_name>

example:

del num1 ,now here num1 is the variable name .

tutorial 4

Datatypes

Variables can hold values, and every value has a data-type.In python , we do not need to define the type of the variable while declaring it

Example : a=5

variable **a** holds integer 5 and we did not define its type. interpreter will automatically interpret variables **a** as an integer type.

For check type of variable **a** datatype then you will write **type(a).**

```
a=293
b="Abhay singh"
c = 37.3432
print(type(a))
print(type(b))
print(type(c))
```

Different types of datatypes in python

1. Int 23 , 2,10
2. Float 2.3, 343.3423, 3.243 , 2.0000, 0.02
3. Complex number 2+3j , 4+2j
4. List [2,3,43,43,23,"abhay",True]
5. Tuple (2,34,3)
6. Boolean True ,False
7. String "abhay",'ram' ,
8. Set {2,34,4343,2,"abhay"}
9. Dictionary {
   1:"abhay",
   2:"ravi",
   3: "Kishan"
   }

Type conversion of datatype in python

1. Implicit
2. Explicit

```
a=293
af=float(a)
print(a , af)
print(type(a),type(af)) # int float

b="1234"
bi=int(b)
print(b , bi)
print(type(a),type(af)) #str int

boo=True
booi=int(boo)
print(boo,booi)
print(type(boo),type(booi))  # bool ,int
```

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