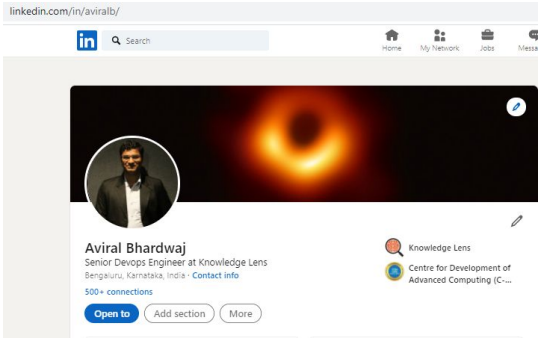
Python Language Fundamentals



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Python Identifiers

Name -Of Variable, class , Function or Method

Like a=10 then a is an identifier which is denoting 10

Like class aviral, here name of the class

Rules for Identifiers

Alphabet symbols(either lowercase or uppercase)

Digits(0 to 9)

Underscore symbol(_)

Should Not start with Digit

Case Sensitive

cannot use reserved words as identifiers

There is no length limit for Python identifiers. But not recommended to use too lengthy identifiers.

Dollar ($) Symbol is not allowed in Python

Rules for Identifiers

If identifier starts with _ symbol then it indicates that it is protected

If identifier starts with __(Two Underscore Symbols) indicating that strongly private identifier.

If the identifier starts and ends with two underscore symbols then the identifier is language defined special name, which is also known as magic methods.

Reserved Words/Keywords

In python there are 33 Reserve keywords

True, False, None

and, or ,not,

is if, elif, else while, for, break, continue, return, in, yield

 try, except, finally, raise, assert import, from, as, class, def,

pass, global, nonlocal, lambda, del, with

Import keyword-->keyword.kwlist

Data Type Introduction

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Introduction

In python type concept is available but we are not required to declare it explicitly

Everything in python ia an object

a=10 then a is object reference variable

Int ,float,complex,bool,str,list,tuple,set,frozenset,dict,byte,bytearray,range,None

Built In Function

type()- checking type of variable

id()- to check address of variable

print()- to print object

Int Data Type

Int means integer values it must have whole number

a=124

Type(a)- int

Long in Python2x

a=12387654376543

type(a)-long

Representation of Int

We can represent int values in the following ways

1) Decimal form

2) Binary form

3) Octal form

4) Hexa decimal form

Prefix	Interpretation	Base
`0b` (zero + lowercase letter `'b'`) `0B` (zero + uppercase letter `'B'`)	Binary	2
`0o` (zero + lowercase letter `'o'`) `0O` (zero + uppercase letter `'O'`)	Octal	8
`0x` (zero + lowercase letter `'x'`) `0X` (zero + uppercase letter `'X'`)	Hexadecimal	16

Binary Form

Allowed digit 0 and 1

Value 0b or 0B

a= 1111

print(a)

a=0b111

print(a)

Octal Form

Allowed digit 0 and 7

Value 0o or 0O ,zero and O

```
>>> a=0O1234567
>>> a
342391
```

Hexa Form

Allowed digit 0 to 9 and A to F

Value 0x or 0X

```
>>> a=0xface123

>>> a

262988067
```

Base Conversions

bin()

oct()

hex()

Float Data Type

f=12.456

type(f)=float

Exponential Form

f=1.2e3

f=scientific Notation

By Value can take lesser space

f=12000000000000.00

f=1.2e+16

Complex Data Type

A+bj

x=10+20j

print(x.real)

print(x.imag)