Python Programming

Features

• It is high level programming language, and it is freeware

• It is platform independent. (Any os system)

• It is machine independent. (h/w independent)

• It supports garbage collector, no memory leakage problem is there.

• It supports multithreading, multiprocessing.

• It supports network programming.

• It is easy to use, easy to learn

• Database connectivity is possible to do using python.

• Modules and packages

• The code is readable, so finding errors become very easy, because of indentation is must

To install python use following link

https://www.python.org/downloads/

Where the python is installed? In Linux

$whereis python

$apt-get install python3

$apt-get install idle

$python3 --version

In windows system python gets installed at the following location

C:\Users\anilk\AppData\Local\Programs\Python

In python, variables are dynamically typed-→ data type of a variable will be decided at run time, based on the value you are assigning to the variable.

Basic data types in python, All basic data type variable are immutable

Number--- int, float, complex

String

Boolean-→ True, False

Data structure in python

List, tuple, set, frozenset, dictionary

Structure of python program

- The code in python has to be indented, minimum 4 spaces

- No { , } curly braces are there for if statement, while loop and for loop and for user defined functions, () brackets are not required for the condition

Strings

- Strings can be enclosed in single quote(‘this is string’) or double quotes(“this is string”) - If the string contains more than one line, like a paragraph, then enclose it in triple single quote, or triple double quotes

Comments

- To add single line comment we use #

- to add multiline comments we may use (“”” “””) or (‘’’ ‘’’)

Operators in python

Arithmetic operators

+, -, \*, /(float division), //(integer division), %(mod),\*\*

There is no ++ and – operator in python

Ternary operator in python

a if a>b else b

Relational operators

>, <, >=, <=, !=

Logical operators

and, or, not

Bitwise operators

&, | , not, >>, << , ~

Walrus operator

:=

In python to accept data from user the function is input, it always accepts data in string format, hence to convert it into number, we use int() or float()

#to find maximum of 3 numbers

| a=int(input("enter number")) #always accepts and store data in the form of strings  b=int(input("enetr number2"))  c=int(input("enter number 3")) | a=int(input("enter number")) #always accepts and store data in the form of strings  b=int(input("enetr number2"))  c=int(input("enter number 3")) |
| --- | --- |

| if a>b and a>c:  print("a is the maixmum value",a)  else:  if b>a and b>c:  print("b is the maixmum value",b) else:  print("c is the maximum value",c) | if a>b and a>c:  print("a is the maixmum value",a)  elif b>a and b>c:  print("b is the maixmum value",b)  else:  print("c is the maximum value",c) |
| --- | --- |

Various ways of print statement

a=12

b=23

c=34

print("A:",a,"B:",b,"C:",c)

print("A:"+str(a)+"B:"+str(b)+"C:"+str(c))

print(f"A: {a} B: {b} C: {c}")

print("A: {2} B: {1} C: {0}".format(a,b,c))

print("A: %d B: %d C: %d" % (a,b,c))

print(a,b,c,sep=":",end=" ")

print("welcome")

print("Hello")