high-level,interpreted,interactive and object oriented scripting language

Features

general purpose

interpreted

modular(Batteries include)

Object oriented

Indentation(No cruly braces)

Extendible and scalable

Python2 and Python3

Python2 has more complex modules2

output and input are different

Python2 doesnt take "".

Python3 takes input and python2 takes raw input

print("text") // printing

x = input() //works as scanf

**Datatypes**:

Five standard data types:

Numbers

int

float

long

complex

Bool

true

false

String

List

Tuple

Dictionary

**Shell vs IDLE**

Shell is like cmd prompt which runs line by line

IDLE is an editor .It is to be saved and then runs

**List**

Items are separated by comma and enclosed between square brackets

Values can be accessed using the slice operator[] and [:]

+ is the list concatenation operator

\* is the repetition operator

**List vs array**

List can take any type of data whereas array takes only same type of data

**Strongly typed vs Weakly typed**

Variables are to be declared in ST example : java

Variables aren’t to be declared in WT example: python

**Tuple**

Like a list but the difference is list is in square brackets[] and tuple is kept in parenthesis()

Lists can be updated whereas tuple cannot be updated

If there is single element in tuple tuple = (1,) comma is given after the single element

**Dictionary**

Are kind of hash table type

Are usually numbers or string but can be of any python data type

{} to declare dictionary

[] to define elements

Dictinary is like an associative array in php with key and element/value

Syntax : abc = {‘name’:’john’,’address’:’tahachal’,’phone’:’9841133480’}

keys() = prints the keys

values() = prints the values

**Variables in print**

sep is the separator value given to the commas in the print function

end prints what you want to print at the end of the line

**docs.python.org**

codes

Python 3.5.2 (v3.5.2:4def2a2901a5, Jun 25 2016, 22:01:18) [MSC v.1900 32 bit (Intel)] on win32

Type "copyright", "credits" or "license()" for more information.

>>> 10//2

5

>>> 10%2

0

>>> 10\*\*2

100

>>> word = "nepal"

>>> word.upper()

'NEPAL'

>>> w = "NEPAL"

>>> w.lower()

'nepal'

>>> w.capitalization()

Traceback (most recent call last):

File "<pyshell#7>", line 1, in <module>

w.capitalization()

AttributeError: 'str' object has no attribute 'capitalization'

>>> w.capitalize()

'Nepal'

>>> word = ["Shrijan","Nikhil","Madan"]

>>> word.sort()

>>> print (word)

['Madan', 'Nikhil', 'Shrijan'

>>> name = input("Enter your name: ")

Enter your name: Prithika

>>> print (name)

Prithika

>>> a = "10"

>>> b = "10"

>>> print (a+b)

1010

>>> print (int(a+b))

1010

>>> print(int(a)+int(b))

20

**//Printing methods**

name = “Prithika”

age = 19

print("Your name is {} and age is {}".format(name,age))

Your name is Prithika and age is 19

print("YOur name is %s and age is %s"%(name,age))

YOur name is Prithika and age is 19

>>> print("Your name is",name,"and age is ",age)

Your name is Prithika and age is 19

**//if**

a=10

>>> if(a==10):

print ("True")

True

**//if else**

n = int(input("Enter any number: "))

Enter any number: 16

>>> if(n%2==0):

print("The number is even")else:

else:

print("The number is odd")

The number is even

**# single line comment**

**“”” “””multiple line comment**

words = [“wordone”,”wordtwo”]

word = random.choice(words)