# Python Syntax

print('Hi hello Good morning...We are learning Python')

print('Python is very easy')

Hi hello Good morning...We are learning Python

Python is very easy

# Python Indentation

# refer to the spaces at the beginning of code line

if 5 > 2:

   print("Five is greater than two")

Five is greater than two

#python variable

x =10

y = 100

z=(x+y)

print(z)

110

""" This is an python                         For single line comment we are using #

session and we are learning                   For multiline comments we are using """   """

python and we are Happy """

print("Hello World")

Hello World

#Data Types

#Numeric

a = 10 #int

b = 20.5 #float

c = 10+3j #complex

#print(a,b,c)

#print(float(a))

#print(int(b))

#print(complex(b))

print(str(c))

print(c)

print(type(c))

(10+3j)

(10+3j)

<class 'complex'>

#List

list=["Akash","Raja","Rani","Rama","Arun","Uday","Uday","Raja","Raja","Akash"]

#list.insert(0,"Ajay")

#list.remove("Arun")

#list.index("Raja")

#list.count("Uday")

#list.sort()

del list[3]

print(list)

['Akash', 'Raja', 'Rani', 'Arun', 'Uday', 'Uday', 'Raja', 'Raja', 'Akash']

#Tuple

tuple=('Virat','Rohit','Dhoni','Raina')

#t=tuple\*100

#print(t)

print(tuple[0:3])

('Virat', 'Rohit', 'Dhoni')

#Set

a={1,2,3,4,4,4}

b={3,4,5,6,1}

#print(a,b)

#print(a | b) #union operation

#print(a & b) #intersection opearation

#print (a - b) #Difference operation

#print (b - a)

print(a^b) #symmetric Difference Operation

{2, 5, 6}

#Dictionaries

pizza = {'name':['chicken','paneer','cheese'],

         'code':['123','456','789'],

         'shop':['dominos','pizzahut','laziz']}

#print(pizza)

#print(pizza.keys())

#print(pizza.values())

#pizza['location']=['Bangalore','Delhi','Mumbai']

#len(pizza)

del pizza ['code']

print(pizza)

{'name': ['chicken', 'paneer', 'cheese'], 'shop': ['dominos', 'pizzahut', 'laziz']}

#strings

str='Hello all Good Evening We are Learning Python'

#print(str)

#print(len(str))

#print(str.index('a'))

#print(str.count('a'))

#print(str.upper())

#print(str.lower())

print(str.replace('','\*'))

\*H\*e\*l\*l\*o\* \*a\*l\*l\* \*G\*o\*o\*d\* \*E\*v\*e\*n\*i\*n\*g\* \*W\*e\* \*a\*r\*e\* \*L\*e\*a\*r\*n\*i\*n\*g\* \*P\*y\*t\*h\*o\*n\*

#strings slicing

abc="Climate is cool Today"

#print(abc)

#print(abc[0:4])

#print(abc[0:])

#print(abc[:-1])

#print(abc[1:-4])

#print(abc[0:4:2])

#print(abc\*458)

print(len (abc))

21

#function in python

#user defined function

def greet():

  print('Hello')

  print('Good Morning')

greet()

Hello

Good Morning

def add(a,b):

  c=a+b

  return c

result=add(1122,8964)

print(result)

10086

def mul(x,y):

  c=x\*y

  return c

result=mul(7854,1010)

print(result)

def·mul(x,y):

··c=x\*y

··return·c

result=mul(7854,1010)

print(result)



def·mul(x,y):

··c=x\*y

··return·c

result=mul(7854,1010)

print(result)





7932540

#In-built Function

#abs Function

#integer

integer = -58

print('abs value of -58 is :',abs(integer))

#float

float = -78.2

print('abs value of -78.2 is : ',abs(float))

abs value of -58 is : 58

abs value of -78.2 is : 78.2

#All function

a =[1,7,5,4,8]

print(all(a))

s= [0,False]

print(all(s))

True

False

#Bin Function

number = 10

print('the binary equivalent of 10 is:',bin(number))

#Oct Function

number = 256

print('the binary equivalent of 10 is:',oct(number))

#Hex Function

number = 256

print('the binary equivalent of 10 is:',hex(number))

the binary equivalent of 10 is: 0b1010

the binary equivalent of 10 is: 0o400

the binary equivalent of 10 is: 0x100

#eval function

x=5

print(eval('x+10'))

15

#max function

number=[45,85,124,546,999,784]

print('maximum is :',max(number))

maximum is : 999

#min function

number=[45,85,124,546,999,784]

print('minimum is :',min(number))

minimum is : 45

#power function

print(pow(2,10))

print(pow(-2,5))

print(pow(2,-5))

1024

-32

0.03125

#sum function

number123=[7,8,9.2,6.3,7]

numberssum=sum(number123)

print(numberssum)

37.5

#map function

def addition (n):

   return n + n

numbers=(1,5,2,4)

results=map(addition,numbers)

print(results)

for result in results:

 print(result)

<map object at 0x7f5b34248e90>

#lambda function

x=lambda a:a+10

print(x(78))

88

#classes and object

class dxc:

  name='python'

  def \_\_init\_\_(self,course,tech):

    self.course=course

    self.tech=tech

object1 =dxc('python programming','cloud')

object1.name

object1.course

object1.tech

print(object1.name,object1.course,object1.tech)

python python programming cloud

#create a perent class

class persion:

  def \_\_init\_\_(self,fname,lname):

    self.fname=fname

    self.lname=lname

  def printname(self):

    print(self.fname,self.lname)

#child class

class student(persion)

#single level inheritance    #one perent class and one child class

class Animal(): #perent class

 def speak(self):

   print("Animal is speaking")

class Dog(Animal): #child class

 def bark(self):

   print("Dog is barking")

d=Dog()

d.bark() #object1

d.speak() #object2

Dog is barking

Animal is speaking

#multi level inheritance   #one perent and more than one child class

class Animal(): #perent class

 def speak(self):

   print("Animal is speaking")

class Dog(Animal): #child class 1

 def bark(self):

   print("Dog is barking")

class Dogchild(Dog):#child class2

 def eat(self):

   print("Dog is eating bread..")

d=Dogchild()

d.bark() #object 1

d.speak() #object 2

d.eat() #object 3

Dog is barking

Animal is speaking

Dog is eating bread..

#1. Write a Python program to get the Python version you are using

import sys

print("Python version")

print(sys.version)

print("Version info.")

print(sys.version\_info)

Python version

3.7.12 (default, Sep 10 2021, 00:21:48)

[GCC 7.5.0]

Version info.

sys.version\_info(major=3, minor=7, micro=12, releaselevel='final', serial=0)

#2.Write a Python program to display the current date and time.

from datetime import date

print("todaysdate",date.today())

import time

print(time.strftime("%H:%M:%S"))

todaysdate 2021-11-01

11:31:06

#Operators

#Arithmetic Operators

a = 10

b = 20

print(a+b) #addidtion

print(b-a) #sub

print(a\*b) #multiflication

print(b/a) #division

print(b%a) #floor division

30

10

200

2.0

0

#comparision operators

x = 5

y = 5

if x==y:

  print('x is equal to y')

if x<y:

  print('x is less than y')

if x>y:

  print('x is greater than y')

if x<=y:

  print('x is less than or equal to y')

if x>=y:

  print('x is greater than or equal to y')

x is equal to y

x is less than or equal to y

x is greater than or equal to y

#Logical operators

#AND operators

a = True

b = False

print(a and b)

False

#OR operators

a = True

b = False

print( a or b)

True

#not

a =False

print(not a)

True

#Identity operator

# is and is not

p = 5

s = 5

if p is s:

  print('similar')

if p is not s:

  print('not similar')

similar

#Membership Operators

# in and not in

#tuple

s =(45,89,2,78,53)

if 2 in s:

  print('Yes this number is available')

if 2 not in s:

  print('No this number is not available')

Yes this number is available

#List

s =[45,89,2,78,53]

if 2 in s:

  print('Yes this number is available')

if 2 not in s:

  print('No this number is not available')

Yes this number is available

#Assignment Operators

s = 5

s+= 2

print(s)

7

s =8

s\*=10

print(s)

80

a =125

a/=6

print(a)

20.833333333333332

x =1212

x%=7

print(x)

1

#Bitwise operators

#Bitwise AND

a =0

b =0

print(a & b)

#Bitwise OR

w = 1

x = 1

print(w | x)

#Bitwise XOR operator

w=0

y=1

print(w ^ y)

0

1

1