Python

-is high level language

-web programming, scripting, sceintific calculcation, artificial intelligence

-used by google, nasa, cia, disney

Interpreter language-Python is proceed at runtime by interpreter and no need to compile your program before executing

-3 to 5 times slower than java, but developing time is very fast

Glue language-write and manage program and code, which connects together different software components.

Disadvantages- memory mangement, lack of threading capabilities

REPL Read-eval-print-loop a shell for top level language

LET ENTER PROGRAMMING GUYS

>>>print (‘hello’)

>>>print (“hello”)  
>>># this is comment

>>>”””

This is multi line comments // this is called docstring

“””

>>> a=input(“enter the value:”) //enter the value:2

>>>print(a+”id dan value”)// 2 idu dan value

>>>2\*\*3 //exponential 2^3

>>>20//6 //quotient 3times of 6

>>>20%6 //remainder is 2

>>>”it is string”

>>>’it is also string’

>>> “it is priya\’s pen”

>>>”it is \n new line”

>>>”hello”+’world’`// give ‘helloworld’

>>>”1”+”2” //’3’ will display if we put 1+”2” it will be error but “1” \*2 give ‘11’

>>>int”2”+int”3” // type conversion wil give 6

>>1==1 //gives Boolean True, False

>>>if 1==1: //if statement

print(“hello”)

else: //elseif statement

if 2==1 and 3==1: //and operation

print(“poda”)

elif 1==3or 4==1: //or operation

print(“koyanko”) //elseif

else: //else statement

print(“ta ta bye bye”)

>>>i=0

while True: //while statement

i+=1

if i==2:

print(‘’skipping 2)

continue //continue

if i==5:

print(‘breaking’)

break //break

print(i)

print(‘finished’)

>>>words=[“hi”, “hello”, “good”]

for word in words: //for loop

print(word)

>>>for in range(5):

Print(“gello”) //print five times

LIST

>>>i=”hello”

print(i[4]) //will give o

>>>empty\_list=[]

print(empty\_list) //will give []

>>>num=[1,2,3] num1[4,5,6]

Print(num\*2) //[1,2,3,1,2,3]

Print(num+num1) //[1,2,3,4,5,6]

>>>words=[“hi”,”hello”]

Print (“hi” in words) //will give True

>>>num=[1,2,3]

Num.append(4)

Print(num) //will give [1,2,3,4]

>>>print (len(num)) //will give length of num is 3

>>>words=[“python”,”fun”]

index=1

words.insert(index,”is”) //insertion

print(words)

>>>words=[‘a’,’b’,’c’]

print(words.index(‘a’)) //index method will tell place of given value in list

>>>max(words) //maximum value

>>>min(words) //minimum value

>>>words.count(value) //counts how many times values repeat

>>>words.remove(value) //remove given value

>>>words.reverse() //reverse object in list

Range

>>>nums=list(range)(10))

Print(nums) //[0,1,2,3,4,5,6,7,8,9]

>>>nums=list(range(3,8))

Print(nums) //[3,4,5,6,7]

>>>nums=list(range(2,20,2))

Print(nums) //[2,4,6,8,10,12,14,16,18]

FUNCTIONS

Without parameter

def rajesh\_fun(): //define function

Print(“hello”) //function instructions

fun() //function calling

with parameter

def rajesh\_fun(a,b):

print(“hi ”+a+b)

rajesh(“hello”,”good”) //print output as hi hello good

with return value

def rajesh\_fun(a,b):

return(a+b)

rajesh\_fun(1,2)

passing function as arguments

def add(a,b):

return a+b

def func(func1,a,b):

return func1(func1(a,b),func1(a,b))

print(func(add,5,10))

MODULES

>>>import random

Print(random.randint(1,6))

>>>import math

Print(math.sqrt(36))

>>>from math import pi, sqrt //importing only selected terms

Print(pi)

>>from math import sqrt as square\_root //we can use userdefined math names

Many third party python modules are stored on ppython package index(pypi), these are install using these program called pip.

EXECEPTION HANDLING:

ZeroDivision Error: araise due to divisible by zero

ImportError: an import fails

IndexError: alist is indexed wit an old out of range number

NameEroor:unknown variable is used

SyntaxError:code can’t be parsed properly

TypeError: a function is called on a value of an in appropriate type

ValueError: a function is calle don a value of the correct type but eith an in appropriate value

>>>try:

num1=7 num2=0

print(num1/num2) print(“done”)

except ZeroDivisionError:

print(“an error occur”)

finally:

print(“this is finally done”) //whatever done it just print

>> try:

variable = 10

print(variable + "hello")

print(variable / 2)

except ZeroDivisionError:

print("Divided by zero")

except (ValueError, TypeError):

print("Error occurred")

>> try:

word = "spam"

print(word / 0)

except:

print("An error occurred") //userdefined error statements

raise staement kadupu……

>>> temp = -10

assert (temp >= 0), "Colder than absolute zero!"

FILE HANDLING:

>>>hello=open(“rajesh.txt”)

open(“rajesh.txt”,w) //write mode

file = open("newfile.txt", "w") or u can use with open("newfile.txt", "w") as f

file.write("This has been written to a file") f.write("This has been written to a file")

open(“rajesh.txt”,r) //read mode

print(file.read()) //to display contents in file

open(“rajesh.txt”,a) //append mode (add with the file)

open(“rajesh.txt”,wb) //write with binary mode

file.close()

filename.close() //finally close the file