Sesson-2

1. Define a function calls addNumber(x, y) that takes in two number and returns the sum of the two numbers?

def addNumber(x, y):

return (x+y)

1. Define a function calls subtractNumber(x, y) that takes in two numbers and returns the difference of the two numbers.

def subtractNumber(x, y):

return(x-y)

1. Write a function getBiggerNumber(x, y) that takes in two numbers as arguments and returns the bigger number.

def getBiggerNumber(x,y):

if x>y:

return x

else:

return y

1. Write a function to convert temperature from Celsius to Fahrenheit scale.  
   **oC to oF Conversion:** Multipy by 9, then divide by 5, then add 32.

def Cel2Fah(temp):

F=1.8(float(temp))+32

return "%.2f"%F

1. Write a function to compute the BMI of a person.  
       BMI = weight(kg)  /  ( height(m)\*height(m) )

def BMI(weight, height):

bmi=float(weight)/(height\*height)

return bmi

1. Write a function percent(value, total) that takes in two numbers as arguments, and returns the percentage value as an integer.

def percent (x,y):

z=(x/y)\*100

return z

1. The Pythagoras' Theorem for a right-angle triangle can be written as a2+b2 = c2, where a and b are sides of the right angle and c is the hypotenuse. Write a function to compute the hypotenuse given sides a and b of the triangle.

import math

def hypotenuse(a, b):

c=(a\*a)+(b\*b)

math.sqrt(c)

return c

1. Write a function getSumOfLastDigits() that takes in a list of positive numbers and returns the sum of all the last digits in the list.

def getSumOfLastDigits(numList):

sum=0

for x in numlist:

new=x[0:-1][0]

sum+=new

return sum

1. Write a function that uses a default value.

def introduce(name, age=0):

msg = "My name is %s. " % name

if age == 0:

msg += "I am 20 years old"

else:

msg += "My age is secret"

return msg

1. Write a function isEquilateral(x, y, z) that accepts the 3 sides of a triangle as arguments. The program should return True if it is an equilateral triangle.

def isEquilateral(x, y, z):

if x==y==z &x>0:

return true

else:

return false

1. For a quadratic equation in the form of ax2+bx+c, the discriminant, D is b2-4ac. Write a function to compute the discriminant, D.

import math

def quadratic(a, b, c):

d=math.sqrt((b\*b)-4\*a\*c)

return d

1. Define a function calls addFirstAndLast(x) that takes in a list of numbers and returns the sum of the first and last numbers.

def addFirstAndLast(x):

if len(x)==0:

sums=0

if len(x)==1:

sums=x[0]

else:

new1=x[0]

new2=x[-1]

new3=new1+new2

return new3

1. *lambda* can be considered to be an anonymous and/or inline function. It takes the form of "*lambda args : expression*."

even = lambda x,x%2==0

1. The first string statement after a function definition is the docstring. It can be accessed by the \_\_doc\_\_ keyword.

def getScore(data):

'A function that computes and returns the final score.'

return score

1. In Python, it is possible to pass a function as a argument to another function. Write a function useFunction(func, num) that takes in a function and a number as arguments. The useFunction should produce the output shown in the examples given below.

Tried but could not succeed

1. Write a function calDistance(x1, y1, x2, y2) to calculate the distance between two points represented by Point 1 (x1, y1) and Point 2 (x2, y2). The formula for calculating distance is given below:

import math

def calDistance (x1,y1,x2,y2):

X=math.pow((x2-x1),2)

Y=math.pow((y2-y1),2)

d=math.pow((X+Y),0.5)

return d