EXPERIMENT: 2

Date: 27/12/2022

PYTHON PROGRAMMING USING SIMPLE STATEMENTS & EXPRESSIONS

(i)Exchange the Values of two Variables

Aim:

To swap, two values and to write program, algorithm and flowchart.

Program:

p=int(input("Enter the first value: "))

q=int(input("Enter the second value:"))

print("The values before swappint are", p, q)

temp = p

p = q

q= temp

print("The values after swapping are", p,q)

OUTPUT:  
 Enter the first value: 2

the second value:1

The values before swapping are 2 1

The values after swapping are 1 2

#Swapping numbers – METHOD 2[USING COMMA(,) OPERATOR]

s = 15

t = 20

print("The values before Swapping : ",s,t)

s, t = t, s

print("The values after Swapping : ",s,t)

OUTPUT:

The values before Swapping : 15 20

The values after Swapping : 20 15

#Swapping two numbers – METHOD 3

x= 45

y= 25

print("The values before swapping are",x,y)

x= x+y

y= x-y

x= x-y

print("The values after swapping are",x,y)

OUTPUT:

The values before swapping are 45 25

The values after swapping are 25 45

#Swapping two numbers – METHOD [USING XOR OPERATOR]

j = 58

k = 46

print("The Values before Swapping are",j,k)

j = j ^ k

k = j ^ k

j = j ^ k

print("The Values after Swapping are",j,k)

OUTPUT:

The Values before Swapping are 58 46

The Values after Swapping are 46 58

(ii) CIRCULATE THE nVARIABLES

s=int(input("Enter a the Values in the List :"))

list=[]

for i in range(0,s):

element=int(input("Enter the Value :"))

list.append(element)

print("Circulating the list")

for i in range(0,s):

element\_deleted=list.pop(0)

list.append(element\_deleted)

print(" The Circulated list after",i+1,"rotation",list)

OUTPUT:

Enter a the Values in the List :8

Enter the Value :5

Enter the Value :9

Enter the Value :2

Enter the Value :1

Enter the Value :7

Ciurclating the list

The Circulated list after 1 rotation [9, 2, 1, 7, 5]

The Circulated list after 2 rotation [2, 1, 7, 5, 9]

The Circulated list after 3 rotation [1, 7, 5, 9, 2]

The Circulated list after 4 rotation [7, 5, 9, 2, 1]

The Circulated list after 5 rotation[ 5, 9, 2, 1, 7]

# CIRCULATE THE VALUES OF n VARIABLES (METHOD-2)

def circulate(c,n):

for i in range (1,n+1):

d=c[i:]+c[:i]

print("Circulate","=",d)

return

c=[178,289,324,448,570,698,188,842,956,106]

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

circulate (c,n)

OUTPUT:

Enter n :6

Circulate = [289, 324, 448, 570, 698, 188, 842, 956, 106, 178]

Circulate = [324, 448, 570, 698, 188, 842, 956, 106, 178, 289]

Circulate = [448, 570, 698, 188, 842, 956, 106, 178, 289, 324]

Circulate = [570, 698, 188, 842, 956, 106, 178, 289, 324, 448]

Circulate = [698, 188, 842, 956, 106, 178, 289, 324, 448, 570]

Circulate = [188, 842, 956, 106, 178, 289, 324, 448, 570, 698]

(iii) Distance between two Points

x1=int(input("Enter the Value of x1 :"))

x2=int(input("Enter the Value of x2 :"))

y1=int(input("Enter the Value of y1 :"))

y2=int(input("Enter the Value of y2 :"))

D1=(x2-x1)\*\*2

D2=(y2-y1)\*\*2

result=(D1+D2)\*\*0.5

print("Distance between",(x1,x2),"and",(y1,y2),"is : ",result)

OUTPUT:

Enter the Value of x1 :2

Enter the Value of x2 :6

Enter the Value of y1 :4

Enter the Value of y2 :7

Distance between (2, 6) and (4, 7) is : 5.0

(iv)Area of triangle using Heron’s formula

a=5

b=6

c=7

s=(a+b+c)/2

area=(s\*(s-a)\*(s-b)\*(s-c))\*\*0.5

print(“The area of the triangle is”,area)

Output:

The area of the triangle is 14.696938456699069

(v)Area of circle

r=int(input(“Enter radius of the circle:”))

Area=3.14\*r\*r

print(“The area of the circle is”,Area)

Output:

Enter radius of the circle:8

The area of the circle is 200.96