1.Exchange of two numbers

Using Naïve Approach

Input :

X = 10

Y = 50

temp = X

X = Y

Y = temp

Print(“Value of X:”,X)

Print(“Value of Y:”,Y)

Output :

Value of X: 50

Value of Y: 10

Using comma operator

Input :

X = 10

Y = 50

X,Y = Y,X

Print(“Value of X:”,X)

Print(“Value of Y:”,Y)

Output :

Value of X: 50

Value of Y: 10

Using XOR operator

Input :

X = 10

Y = 50

X = X^Y

Y = X^Y

X = X^Y

Print(“Value of X:”,X)

Print(“Value of Y:”,Y)

Output :

Value of X: 50

Value of Y: 10

Using Arithmetic operator

Input :

X = 10

Y = 50

X = X+Y  
Y = X-Y

X = X-Y

Print(“Value of X:”,X)

Print(“Value of Y:”,Y)

Output :

Value of X: 50

Value of Y: 10

2.Circulating the list of elements( built in functions & slice operator)

Input :

no\_of\_terms = int(input("Enter number of values : "))

list1 = []

for val in range(0,no\_of\_terms,1):

ele = int(input("Enter integer : "))

list1.append(ele)

print("Circulating the elements of list ", list1)

for val in range(0,no\_of\_terms,1):

ele = list1.pop(0)

list1.append(ele)

print(list1)

print(list1[0])

Output :

Enter number of values : 5

Enter integer : -2

Enter integer : -1

Enter integer : 0

Enter integer : 1

Enter integer : 2

Circulating the elements of list [-2, -1, 0, 1, 2]

[-1, 0, 1, 2, -2]

[0, 1, 2, -2, -1]

[1, 2, -2, -1, 0]

[2, -2, -1, 0, 1]

[-2, -1, 0, 1, 2]

-2

3.Calculate the distances between two points

Input :

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

# Calculating distance

return (((x2 - x1)\*\*2 +(y2 - y1)\*\*2)\*\*0.5)

# Drivers Code

print( distance(3, 4, 4, 3))

Output :

1.4142135623730951

PRACTICE PROBS

QUADRATIC EQN

Program

# Solve the quadratic equation ax\*\*2 + bx + c = 0

# import complex math module

import cmath

a = 1

b = 5

c = 6

# calculate the discriminant

d = (b\*\*2) - (4\*a\*c)

# find two solutions

sol1 = (-b-cmath.sqrt(d))/(2\*a)

sol2 = (-b+cmath.sqrt(d))/(2\*a)

print('The solution are {0} and {1}'.format(sol1,sol2))

OUTPUT

Enter a: 1

Enter b: 5

Enter c: 6

The solutions are (-3+0j) and (-2+0j)