EXPT. NO.2(a) SWAP TWO NUMBERS

AIM:

To write a program to swap two numbers

METHOD:1

CODE:

#By using a temporary variable ‘c’ (temp)

a=int(input("Enter value of a:"))

b=int(input("Enter value of b:"))

print("The value before swapping",a,b)

c=a

a=b

b=c

print("The value after swapping",a,b)

SAMPLE OUTPUT:

Enter value of a:20

Enter value of b:30

The value before swapping 20 30

The value after swapping 30 20

Method 2:

CODE:

#By using comma(,) operator

a=int(input("Enter value of a:"))

b=int(input("Enter value of b:"))

print("The value before swapping",a,b)

a,b=b,a

print("The value after swapping",a,b)

SAMPLE OUTPUT:

Enter value of a:12

Enter value of b:13

The value before swapping 12 13

The value after swapping 13 12

Method:3

CODE:

#By using arithmetic operators (+) and (-)

a=int(input("Enter value of a:"))

b=int(input("Enter value of b:"))

print("The value before swapping",a,b)

a=a+b

b=a-b

a=a-b

print("The value after swapping",a,b)

SAMPLE OUTPUT:

Enter value of a:2

Enter value of b:6

The value before swapping 2 6

The value after swapping 6 2

METHOD:4

CODE:

#By using arithmetic (\*) and (//) operators

a=int(input("Enter value of a:"))

b=int(input("Enter value of b:"))

print("The value before swapping",a,b)

a=a\*b

b=a//b

a=a//b

print("The value after swapping",a,b)

SAMPLE OUTPUT:

Enter value of a:4

Enter value of b:6

The value before swapping 4 6

The value after swapping 6 4

METHOD 5

CODE:

#By using XOR operator

a=int(input("Enter value of a:"))

b=int(input("Enter value of b:"))

print("The value before swapping",a,b)

a=a^b

b=a^b

a=a^b

print("The value after swapping",a,b)

SAMPLE OUTPUT:

Enter value of a:50

Enter value of b:100

The value before swapping 50 100

The value after swapping 100 50

RESULT:

The program to swap two numbers by using a temporary variable, comma operator, arithmetic operators and XOR operator is written and executed.

EXPT. NO. 2(b) CIRCULATING THE LIST

AIM:

To write a program to circulate the list of n numbers

**CODE:**

#By using built in functions

v=int(input("Enter number of values in list"))

L=[]

for i in range(0,v):

ele=int(input("Enter the value"))

L.append(ele)

print("Circulating the list")

for i in range(0,v):

dele=L.pop(0)

L.append(dele)

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

SAMPLE OUTPUT:

Enter number of values in list 4

Enter the value 1

Circulating the list

Enter the value 3

Circulating the list

Enter the value 5

Circulating the list

Enter the value 7

Circulating the list

The circulated list after 1 rotation [3,5,7,1]

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

The circulated list after 3 rotation[7,1,3,5]

The circulated list after 4 rotation[1,3,5,7]

METHOD:2

CODE:

#By using slicing operator

v=int(input("Enter number of values in list"))

L=[]

for i in range(0,v):

ele=int(input("Enter the value"))

L.append(ele)

print("Circulating the list")

n=int(input(“Enter number of rotations”))

for i in range(0,n):

L=L[1:]+L[:1]

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

SAMPLE OUTPUT:

Enter number of values in list 4

Enter the value 1

Circulating the list

Enter the value 3

Circulating the list

Enter the value 5

Circulating the list

Enter the value 7

Enter number of rotations 4

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

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

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

The Circulated list after 4 rotation[1,3,5,7]

RESULT:

The program to circulate the list of ‘n’ numbers is written and executed.

EXPT. NO. 2(C) DISTANCE BETWEEN TWO POINTS

AIM:

To write a program to calculate the distance between two points

CODE:

X1=int(input(“Value of x1:”))

X2=int(input(“Value of x2:”))

Y1=int(input(“Value of y1:”))

Y2=int(input(“Value of y2:”))

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

print(“distance:”,d)

SAMPLE OUTPUT:

Value of x1:5

Value of x2:7

Value of y1:2

Value of y2:4

distance 2.8284271247461903

RESULT:

The program to calculate the distance between two points is written and executed.

EXPT. NO.4 REAL AND IMAGINARY PART OF COMPLEX NUMBER

AIM:

To write a program to calculare the real and imaginary part of the complex number

CODE:

a =int(input(“Enter a number:”))

b=int(input(“Enter a number:”))

cn=complex(a,b)

print("complex number:",cn)

print("complex number-real part:",cn.real)

print("complex number-imaginary part:",cn.imag)

SAMPLE OUTPUT:

Enter a number:2

Enter a number:3

complex number: (2+3j)

complex number-real part:2.0

complex number-imaginary part:3.0

RESULT:

The program to find the real and imaginary part of the complex number is written and executed.