EXP.NO:2

27.12.2022

A)1. EXCHANGE OF TWO VALUES USING THIRD VARIABLE

METHOD 1

PROGRAM:

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

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

c=a

a=b

b=c

print("The exchanged values are","a=",a,"b=",b)

OUTPUT:

Enter the first value:2

Enter the second value:3

The exchanged values are a= 3 b= 2

>>>

METHOD 2

EXCHANGE OF TWO VALUES USING COMMA OPERATOR

PROGRAM:

x=int(input("First value:"))

y=int(input("Second value:"))

x,y=y,x #using comma operator

print("The exchanged values are","a=",x, "and","b=",y)

OUTPUT:

First value:2

Second value:3

The exchanged values are a= 3 and b= 2

>>>

METHOD 3

EXCHANGE OF TWO VALUES USING ARITHMETIC OPERATOR

PROGRAM:

a=int(input("First value :"))

b=int(input("Second value:"))

a=a+b

b=a-b

a=a-b

print("The exchanged values are","a=",a,"and","b=",b)

OUTPUT:

First value :10

Second value:15

The exchanged values are a= 15 and b= 10

>>>

METHOD 4

EXCHANGE OF TWO VALUES USING XOR OPERATOR

PROGRAM:

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

>>>

2.A) METHOD 1

CIRCULATING THE LIST OF VALUES USING IN-BUILT FUNCTION

PROGRAM:

a=input("Enter values:").split(',')

print("The original list is ",a,'\n',"Circulating the list")

for i in range(len(a)):

a.append(a[0])

a.pop(0) #using built-in

print(a)

OUTPUT

Enter values:1,2,3,4,5

The original list is ['1', '2', '3', '4', '5']

Circulating the list

['2', '3', '4', '5', '1']

['3', '4', '5', '1', '2']

['4', '5', '1', '2', '3']

['5', '1', '2', '3', '4']

['1', '2', '3', '4', '5']

METHOD 2:

CIRCULATING THE LIST OF VALUES USING SLICE OPERATOR

PROGRAM:

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]

3. DISTANCE BETWEEN TWO POINTS

PROGRAM:

import math

x1=int(input("Enter x1:"))

x2=int(input("Enter x2:"))

y1=int(input("Enter y1:"))

y2=int(input("Enter y2:"))

d=math.sqrt((x2-x1)\*\*2+(y2-y1)\*\*2)

print("The distance between two points is ",d)

OUTPUT:

Enter x1:3

Enter x2:7

Enter y1:2

Enter y2:8

The distance between two points is 7.211102550927978

>>>

PRACTICE PROBLEMS.

1. LEAP YEAR

PROGRAM:

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

if(n%4==0):

print("This is leap year")

else:

print("Not a leap year")

OUTPUT:

Enter the year:2000

This is leap year

>>>

1. CELSIUS TO FAHRENHEIT:

PROGRAM:

celsius=float(input("Enter temperature in celsius:"))

fahrenheit=(celsius\*9/5)+32

print(celsius,"Celsius is=",fahrenheit,"fahrenheit")

OUTPUT:

Enter temperature in celsius:0

0.0 Celsius is= 32.0 fahrenheit