EXP NO: 2-A SWAPPING TWO VALUES

DATE: 07/12/2022

AIM:

To find the swapping of values using python program.

ALGORITHM-1:

STEP 1 : Start

STEP 2 : Read the values of a and b

STEP 3 : Display the value of a and b

STEP 4 : Temp=0

STEP 5 : Temp=a

STEP 6 : a=b

STEP 7 : Display the value of a,b

STEP 8 : Stop.

SOURCE CODE -1:

a=int(input("enter the value :"))

b=int(input("enter the value:"))

print("the values of a,b:",a,b)

temp=0

temp=a

a=b

print("the values of a,b:",a,b)

OUTPUT-1:

enter the value :3

enter the value:4

the values of a,b: 3 4

the values of a,b: 4 3

ALGORITHM-2:

STEP 1 : Start

STEP 2 : Enter a,b

STEP 3 : Print a,b

STEP 4 : Print b,a

STEP 5 : Stop

SOURCE CODE-2:

a=int(input("enter the value:"))

b=int(input("enter the value:"))

print("the values of a,b:",a,b)

a,b=b,a

print("the values of a,b:",a,b)

OUTPUT-2:

enter the value:3

enter the value:4

the values of a,b: 3 4

the values of a,b: 4 3

ALGORITHM-3:

STEP 1 : Start

STEP 2 : Enter x,y

STEP 3 : Print x,y

STEP 4 : x=x+y

STEP 5 : y=x-y

STEP 6 : x=x-y

STEP 7 : Print x,y

STEP 8 : Stop.

SOURCE CODE-3:

x=int(input("enter the value:"))

y=int(input("enter the value:"))

print("the values of x,y:",x,y)

x=x+y

y=x-y

x=x-y

print("the values of x,y:",x,y)

OUTPUT-3:

enter the value:3

enter the value:4

the values of x,y: 3 4

the values of x,y: 4 3

ALORITHM-4:

STEP 1 : Start

STEP 2 : Get the values of a,b

STEP 3 : Display the value of a,b

STEP 4 : a=a^b

STEP 5 : b=a^b

STEP 6 : a=a^b

STEP 7 : Display the value of a,b

STEP 8 : Stop

SOURCE CODE-4:

a=int(input("enter the value:"))

b=int(input("enter the value:"))

print("the value of a,b",a,b)

a=a+b

b=a-b

a=a-b

print("the values of a,b:",a,b)

OUTPUT-4:

enter the value:3

enter the value:4

the value of a,b 3 4

the values of a,b: 4 3

RESULT:

Thus the python program is executed and the output is verified successfully.

EXP NO : 2-B CIRCULATING THE VALUES

DATE : 07/12/2022

AIM:

To circulate the values by using python.

ALGORITHM-1:

STEP 1 : Start

STEP 2 : Get a

STEP 3 : List=[]

STEP 4 : for i in range(0.a)

STEP4.1:Get element

STEP4.2:List.append(element)

STEP4.3:Display circulating the value

STEP 5 : for i in range(0,a)

SIEP5.1:Dele=List.append(dele)

STEP5.2:List.append(dele)

STEP5.3:Print the circulated list after,i+1,rotation,List

STEP 6 : Stop.

SOURCE CODE-1:

a=int(input("enter number of values in list:"))

l=[]

for i in range(0,a):

ele=int(input("enter the value:"))

l.append(ele)

print("circulating the list")

for i in range(0,a):

dele=l.pop(0)

l.append(dele)

print("the circulated list after",i+1,"rotation",l)

OUTPUT-1:

enter number of values in list:3

enter the value:6

enter the value:5

enter the value:4

circulating the list

the circulated list after 1 rotation [5, 4, 6]

the circulated list after 2 rotation [4, 6, 5]

the circulated list after 3 rotation [6, 5, 4]

ALGORITHM-2:

STEP 1 : Start

STEP 2 : Get the number of values in the list as v

STEP 3 : Intialize a list as l and i=1

STEP 4 : Check condition till i=v

STEP4.1:Get value of element in ele

STEP4.2:Append this ele in l and repeat process

STEP 5 : Get the value of number of rotations as n

STEP 6 : To circulate the values,check condition till i=n

STEP6.1:Slice the list,first slice the first element using l[:1] and then slice.The rest of part l[1:]

and store them in l l=l[1:]+l[:1]

STEP6.2:Display this l and repeat the process

STEP 7 : Stop.

SOURCE CODE-2:

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 the number of rotations:"))

for i in range(0,N):

l=l[1:]+l[:1]

print("the circulated list after:",i+1,"rotation",l)

OUTPUT-2:

enter number of values in list:3

enter the value:5

enter the value:6

enter the value:7

circulating the list

enter the number of rotations:3

the circulated list after: 1 rotation [6, 7, 5]

the circulated list after: 2 rotation [7, 5, 6]

the circulated list after: 3 rotation [5, 6, 7]

RESULT:

Thus the python program is executed and the output is verified successfully.

EXP NO : 2-C DISTANCE BETWEEN TWO POINTS

DATE : 07/12/2022

AIM:

To compute the distance between the two points using python

ALGORITHM:

STEP 1 : Start

STEP 2 : Enter the value of x1,x2,y1,y2

STEP 3 : Calculate the distance=((x2-x1)\*2+(y2-y1)\*2)\*1/2

STEP 4 : Display the distance

STEP 5 : Stop.

SOURCE CODE:

x1=float(input("enter x1:"))

y1=float(input("enter y1:"))

x2=float(input("enter x2:"))

y2=float(input("enter y2:"))

distance=((x2-x1)\*\*2+(y2-y1)\*\*2)\*\*1/2

print("distance is:",distance)

OUTPUT:

enter x1:2

enter y1:5

enter x2:4

enter y2:8

distance is: 5.0

RESULT:

Thus the python program is executed and the output is verified successfully.

EXP NO : 2-D COST OF APPLE

DATE : 07/12/2022

AIM:

To find the weight and cost of apple and its total cost using python program.

ALGORITHM:

STEP 1 : Start

STEP 2 : Enter the value of apple cost/kg (cost),weight

STEP 3 : Calculate the total cost of apple=c\*w

STEP 4 : Display the total cost of apple

STEP 5 : Stop.

SOURCE CODE:

c=float(input("enter the apple cost/kg:"))

w=float(input("enter the weight:"))

total=c\*w

print("total cost of apple is:",total)

OUTPUT:

enter the apple cost/kg:80

enter the weight:5

total is: 400

RESULT:

Thus the python program is executed and the output is verified successfully.

EXP NO : 2-E ARITHMETIC OPERATIONS

DATE : 07/12/2022

AIM:

To perform all the arithmetic operation in python and to write the program algorithm.

ALGORITHM:

STEP 1 : Start

STEP 2 : Read a,b

STEP 3 : Compute sum=a+b,difference=a-b,multiple=a\*b, division =a/b, modulus =a//b

STEP 4 : Display sum,difference,multiple,division, modulus.

SOURCE CODE:

a=float(input("enter a:"))

b=float(input("enter b:"))

sum=a+b

difference=a-b

multiple=a\*b

division=a/b

modulus=a//b

print("sum is:",sum)

print("difference is:",difference)

print("multiple is:",multiple)

print("division is:", division)

print("modulus is:", modulus)

OUTPUT:

enter a:100

enter b:10

sum is: 110

difference is: 90

multiple is: 1000

division is: 10.0

modulus is: 10

RESULT:

Thus the python program is executed and the output is verified successfully.

EXP NO : 2-F FARENHEIT TO CELSUIS

DATE : 07/12/2022

AIM:

To convert the farenheit into celsuis by using python program.

ALGORITHM:

STEP 1 : Start

STEP 2 : Enter the value of f

STEP 3 : Calculate c=5/9\*(f-32)

STEP 4 : Display celsuis

STEP 5 : Stop.

SOURCE CODE:

f=float(input("enter the value of:"))

c=5/9\*(f-32)

print("celsuis is:",c)

OUTPUT:

enter the value of:98

celsuis is: 36.66666666666667

RESULT:

Thus the python program is executed and output is verified succesfully.

EXP NO : 2-G APPLY 5% DISCOUNT ON TOTAL COST OF N BOOKS

DATE : 07/12/2022

AIM:

To find the total of books and to give 5% discount on total using python program.

ALGORITHM:

STEP 1 : Start

STEP 2 : Read the value of n

STEP 3 : l=[]

STEP 4 : for i in range(0,n)

STEP4.1:Get ele

STEP4.2:l.append(ele)

STEP 5 : Price=0

STEP 6 : Discount=0

STEP 7 : for i in range(0,len(l))

STEP7.1:Price=price+l[i]

STEP7.2:Dis=Discount+Price\*5/100

STEP7.3:Display dis

STEP7.4:Total\_price=Price-Dis

STEP 8 : Display Total\_price

STEP 9 : Stop.

SOURCE CODE:

n=int(input("enter the value of list:"))

l=[]

for i in range(0,n):

ele=int(input("enter the value:"))

l.append(ele)

price=0

discount=0

for i in range(0,len(l)):

price=price+l[i]

dis=discount+price\*5/100

print("discount is:",dis)

total\_price=price-dis

print("total\_price is:",total\_price)

OUTPUT:

enter the value of list:2

enter the value:50

enter the value:270

discount is: 2.5

discount is: 16.0

total\_price is: 304.0

RESULT:

Thus the python program is executed and the output is verified successfully.

EXP NO : 2-H PRIME NUMBER OR NOT

DATE : 07/12/2022

AIM:

To verify whether the given number is prime number or not.

ALGORITHM:

STEP 1: Start

STEP 2 : Get a

STEP 3 : Initialize i=2

STEP 4 : for i in range(2,a)

STEP4.1: check the condition if a%2==0 then goto step 4.2,else goto step 4.4

STEP4.2: Display the given number is not a prime number

STEP4.3:break

STEP4.4:Display the given number is a prime number

STEP 5 : Stop.

SOURCE CODE:

a=int(input("enter the number:"))

i=2

for i in range(2,a):

if a%2==0:

print("the given number is not a prime number")

break

else:

print("the given number is a prime number")

OUTPUT:

enter the number:98

the given number is not a prime number

RESULT:

Thus the python program is executed and the output is verified successfully.

EXP NO : 2-I LEAP YEAR OR NOT

DATE : 07/12/2022

AIM:

To verify given the year is leap year or not.

ALGORITHM:

STEP 1 : Start

STEP 2 : Get the value of year in a variable a

STEP 3 : Check the following condition

STEP3.1:Check a%4==0

STEP3.2:Check a%100==0

STEP3.3:Check a%400==0

STEP 4 : If all conditions in step 3 are true,then it is a leap year and goto step 5

STEP 5 : Display leap year

STEP 6 : If false,then it not a leap year and goto step 7

STEP 7 : Display not a leap year

STEP 8 : Stop.

SOURCE CODE:

year=int(input("enter the year:"))

if(year%4==0):

if(year%100==0):

print("the given year is leap year")

else:

print("the given is not a leap year")

OUTPUT:

enter the year:1900

the given year is leap year

RESULT:

Thus the python program is executed and the output is verified successfully.

EXP NO : 2-J SIMPLE INTEREST

DATE : 07/12/2022

AIM:

To calculate the simple interest rate.

ALGORITHM:

STEP 1 : Start

STEP 2 : Get the value of principal(p),interest(r),time(t)

STEP 3 : Compute simple\_interest=p\*r\*t

STEP 4 : Display simple\_interest

STEP 5 : Stop.

SOURCE CODE:

p=float(input("enter the value of principal:"))

r=float(input("enter the value of interest:"))

t=float(input('enter the value of time:'))

simple\_interest=p\*r\*t

print("simple interest is;",simple\_interest)

OUTPUT:

enter the value of p:5000

enter the value of r:0.05

enter the value of t:12

simple interest is: 3000.0

RESUILT:

Thus the python program is executed and the output is verified successfully.