**Exchange of two values:**

**Program:** using native approach(by introducing third variable temp)

p=int(input('enter the first number:'))

q=int(input('enter the second number:'))

print("The value before swapping are",p,q)

temp=p

p=q

q=temp

print("The value after swapping",p,q)

**output:**

enter the first number:25

enter the second number:55

The value before swapping are 25 55

The value after swapping 55 25

**Program:** using comma **(,)** operator

s=25

t=55

print("The value before swapping:",s,t)

s,t=t,s

print("The value after swapping:",s,t)

**output:**

The value before swapping: 25 55

The value after swapping: 55 25

**Program**: using arithmetic operator

x=25

y=55

print("the value before swapping are:",x,y)

x=x+y

y=x-y

x=x-y

print("the value after swapping are:",x,y)

**output:**

the value before swapping are: 25 55

the value after swapping are: 55 25

**program**: using xor operator

j=25

k=55

print("the value before swapping are:",j,k)

j=j^k

k=j^k

j=j^k

print("the value after swapping are:",j,k)

**output:**

the value before swapping are: 25 55

the value after swapping are: 55 25

**circulating the list of value:**

**program:** using in built function

s=int(input("enter a value 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",i+1,list)

**output:**

enter a value in the list:6

enter the value:5

enter the value:9

enter the value:2

enter the value:1

enter the value:7

enter the value:0

circulating the list

The circulated list 1 [9,2,1,7,0,5 ]

The circulated list 2 [2,1,7,0,5,9]

The circulated list 3 [1,7,0,5,9,2]

The circulated list 4 [7,0,5,9,2,1]

The circulated list 5 [0,5,9,2,1,7]

The circulated list 6[5,9,2,1,7,0]

**Program:** using slicing operator

def circulate(c,n):

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

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

print("circulate","=",d)

return

c=[1,2,3,4]

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

circulate(c,n)

**output:**

enter n:5

circulate = [2, 3, 4, 1]

circulate = [3, 4, 1, 2]

circulate = [4, 1, 2, 3]

circulate = [1, 2, 3, 4]

circulate = [1, 2, 3, 4]

**calculate the distance between two points:**

**program:**

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

**Basic python programming:**

**Program(addition):**

a=15

b=5

c=a+b

print(c)

**Output:**

20

**Program(subtract):**

a=15

b=5

c=a-b

print(c)

**OUTPUT:**

10

**Program(multiply):**

a=15

b=5

c=a\*b

print(c)

**output:**

75

**Program(divide):**

a=15

b=5

c=a/b

print(c)

**output:**

3.0

**To get remainder in divisor operator :**

a=15

b=5

c=a%b

print(c)

**output:**

0

**Calculate the amount of apple:**

**Program:**

wt=int(input("Enter the weight of apple:"))

cost=int(input("Enter fixed amount:"))

total=wt\*cost

print("the total amount is:",total)

**output:**

Enter the weight of apple:120

Enter fixed amount:5

the total amount is: 600

**convert Fahrenheit into Celsius:**

**program:**

fahrenheit=int(input("enter temperature in fahrenheit"))

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

print(c)

**output:**

enter temperature in fahrenheit 96

35.55555555555556

**Program:**

**Apply 5% discount on total cost of n book:**

B1=int(input('enter the number of book1:'))

B2=int(input('enter the number of book2:'))

B3=int(input('enter the number of book3:'))

B4=int(input('enter the number of book4:'))

B5=int(input('enter the number of book5:'))

sum=B1+B2+B3+B4+B5

print(sum)

discount=sum\*(5/100)

total=sum-discount

print('total cost after discount:',total)

**output:**

enter the number of book1:25

enter the number of book2:25

enter the number of book3:25

enter the number of book4:25

enter the number of book5:25

the cost of book; 125

total cost after discount: 118.75

**program: To find the given number is prime or not**

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

i=2

for i in range(2,a):

if a%i==0:

p=True

if True:

print("the given number is not prime")

else:

print("the given number is prime")

**output:**

enter the value:9

the given number is not prime

**program:** To find the given year is leap or onot

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

if(year%4==0):

print("THE GIVEN YEAR IS LEAP YEAR")

else:

print("The given year is not leap yeat")

**output:**

enter the year:2000

THE GIVEN YEAR IS LEAP YEAR

**Program;** To calculate simple interest

p=int(input("enter the value of p:"))

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

r=int(input("enter the value of r:"))

A=(p\*n\*r)/100

print("THE SIMPLE INTEREST OF AMOUNT IS;",A)

**output:**

enter the value of p:20000

enter the value of n:12

enter the value of r:2

THE SIMPLE INTEREST OF AMOUNT IS; 4800.0