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:48

enter the second number:52

The value before swapping are 48 52

The value after swapping 52 48

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

s=59

t=16

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

s,t=t,s

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

output:

The value before swapping: 59 16

The value after swapping: 16 59

Program: using arithmetic operator

```
x=45
y=25
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: 45 25

the value after swapping are: 25 45

program: using xor operator

```
j=58
k=40
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: 58 40

the value after swapping are: 40 58

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:4

enter the value:1

enter the value:2

enter the value:3

enter the value:4

circulating the list

The circulated list 1 [2, 3, 4, 1]

The circulated list 2 [3, 4, 1, 2]

The circulated list 3 [4, 1, 2, 3]

The circulated list 4 [1, 2, 3, 4]

Program: using slicing operator

```python
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:

```python
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=100

b=10

c=a+b

print(c)

Output:

110

Program(subtract):

a=100

b=10

c=a-b

print(c)

OUTPUT:

90

Program(multiply):

a=36

b=6

c=a*b

print(c)

 output:

216

Program(divide):

a=36

b=6

c=a/b

print(c)

output:

6.0

To get remainder in divisor operator :

a=36

b=6

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:3

Enter fixed amount:100

the total amount is: 300

convert Fahrenheit into Celsius:

program:

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

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

print("temperature in celsius:",celsius)

output:

enter temperature in fahrenheit34

temperature in celsius: 50.888888888888886

Program:

Apply 5% discount on total cost of n book:

book=int(input("enter the number of books"))

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:'))

cost=B1+B2+B3+B4+B5

print("the cost of book;",cost)

discount=5/100

amount=cost-discount

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

output:

enter the number of books5

enter the number of book1:10

enter the number of book2:20

enter the number of book3:30

enter the number of book4:40

enter the number of book5:50

the cost of book; 150

total cost after discount: 149.95

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:5678

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:2004

THE GIVEN YEAR IS LEAP YEAR

Program; To calculate simple interest

```python
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:10

enter the value of r:2

THE SIMPLE INTEREST OF AMOUNT IS; 4000.0