Method 1

```
p=int(input('enter the first value'))
q=int(input('enter the second value'))
print("the value before swapping are ",p,q)
temp=p
p=q
q=temp
print("the value after swapping are",p,q)
```

o/p

```
enter the first value42
enter the second value58
the value before swapping are  42 58
the value after swapping are 58 42
```

method 2

```
s=59
t=16
print("the values before swapping :",s,t)
s,t=s,t
print("the values after swapping :",s,t)
```

o/p

```
the values before swapping : 59 16
the values after swapping : 59 16
```

method 3

```
x=45
y=25
print("the value after swapping ",x,y)
x=x+y
y=x-y
x=x-y
print("the values after swapping are",x,y)
```

o/p

```
the value after swapping  45 25
the values after swapping are 25 45
```

method 4

```
j=58
k=46
print("the value before swapping ",j,k)
j=j^k
k=j^k
j=j^k
print("the values after swapping are ",j,k)
```

o/p

```
the value before swapping  58 46
the values after swapping are  46 58
```

EXPERIMENT 2

```
s=int(input("Enter  a the values 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 after ",i+1, "rotation",list)
```

o/p

```
Enter  a the values in the list:8
enter the value:5
enter the value:9
enter the value:2
enter the value:1
enter the value:7
enter the value:0
enter the value:3
enter the value:2
circulating the list
the circulated list after  1 rotation [9, 2, 1, 7, 0, 3, 2, 5]
```

the circulated list after 2 rotation [2, 1, 7, 0, 3, 2, 5, 9]

the circulated list after 3 rotation [1, 7, 0, 3, 2, 5, 9, 2]

the circulated list after 4 rotation [7, 0, 3, 2, 5, 9, 2, 1]

the circulated list after 5 rotation [0, 3, 2, 5, 9, 2, 1, 7]

the circulated list after 6 rotation [3, 2, 5, 9, 2, 1, 7, 0]

the circulated list after 7 rotation [2, 5, 9, 2, 1, 7, 0, 3]

the circulated list after 8 rotation [5, 9, 2, 1, 7, 0, 3, 2]

EXPERIMENT 2 METHOD 2

```
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)
```

o/p

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]

>>>
```

EXPERIMENT 3 METHOD 3

```
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)
```

o/p

```
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

>>>
```

EXPERIMENT 4

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

i=1

h=1

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

```
    h=h*i
    i=i+1
    print("the factorial of a number ",n,"is",h)
```

o/p

```
enter the value of n :7
the factorial of a number  7 is 1
the factorial of a number  7 is 2
the factorial of a number  7 is 6
the factorial of a number  7 is 24
the factorial of a number  7 is 120
the factorial of a number  7 is 720
the factorial of a number  7 is 5040
>>>
```

EXPERIMENT 5

```
e=int(input("enter the number to be checked :"))
if(e%2==0):
    print("the given number is EVEN")
else:
    print("the given number in ODD")
```

o/p

```
enter the number to be checked :768
the given number is EVEN
>>>
```

EXPERIMENT 6

```
g=int(input("enter the value of a :"))
i=2
for i in range (2,g):
    if g%2==0:
      print ("the given numer is NOT PRIME ")
      break
    else:
       print("the given number is PRIME")
```

o/p

```
enter the value of a :5678enter the number to be checked :768
the given number is EVEN
>>>
```

EXPERIMENT 7

```
year=int(input("enter the year :"))
if(year%4==0):
    if(year%100==0):
        if (year%400==0):
            print("the given year is leap year")
        else:
            print("thr given year is not a leap year")
```

o/p

```
enter the year :20000
the given year is leap year
```

>>>