

ILLUSTRATIVE PROGRAMS**1. Exchange the values of two variables**

```

x = 5
y = 10
print('Before swapping:') print (x)
print (y) temp = x x = y
y = temp
print('After swapping:') print (x)
print (y)

```

Output:

```

Before swapping: 5
10
After swapping: 10
5

```

2. Circulate the values of n variables

```

def rotate(l,order):
    for i in range(0,order):
        j=len(l)-1 while j>0:
            temp=l[j] l[j]=l[j-1] l[j-1]=temp j=j-1
        print (i,'rotation',l)
    return
l=[1,2,3,4,5]
rotate(l,3)

```

Output

```

0 rotation [5, 1, 2, 3, 4]

```

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

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

3. Distance between two points

```
import math

def distance(x1,y1,x2,y2):
    dx=x2-x1 dy=y2-y1
    print("The value of dx is", dx)
    print("The value of dy is", dy) d= (dx**2 + dy**2) dist=math.sqrt(d)
    return dist

x1 = float(input("Enter the first Number: "))
x2 = float(input("Enter the Second Number: "))
y1 = float(input("Enter the third number: "))
y2 = float(input("Enter the forth number: ")) z=distance(x1,x2,y1,y2)
print("The distance between two points are", z)
```

Output:

Enter the first Number: 2

Enter the Second Number: 4

Enter the third number: 6

Enter the forth number: 12

The value of dx is 4.0

The value of dy is 8.0

The distance between two points are 8.94427190999916