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
```