

#exchange of two values using naive approach

```
a=int(input("First value:"))
```

```
b=int(input("Second value:"))
```

```
c=a
```

```
a=b
```

```
b=c
```

```
print("the exchanged values are" ,a,b)
```

#output is first value:5 second values:3 and the exchanged values are 3 5

#exchange of two values using comma operator

```
x=int(input("First value:"))
```

```
y=int(input("Second value:"))
```

```
x,y=y,x
```

```
print("the exchanged values are" ,x,y)
```

#output is first value:5 second value:10 and exchanged values are 10 5

#exchange of two values using arithmetic operator

```
a=int(input('First value:'))
```

```
b=int(input('Second value:'))
```

```
a=a+b
```

```
b=a-b
```

```
a=a-b
```

```
print('The exchanged values are' ,a,b)
```

output is first value:5 second value:10 and exchanged values are 10 5

#exchange of two values using XOR

```
a=int(input('First value:'))
```

```
b=int(input('Second value:'))
```

```
a=a^b
```

```
b=a^b
```

```
print('The exchanged values are',a,b)
```

```
output is first value:5 second value:10 and exchanged values are 0 5
```

```
#circulating two values using built-in functions
```

```
a=input('enter values :').split(',')
```

```
print('The original list is',a,'\n','circulating the list')
```

```
for i in range(len(a)):
```

```
    a.append(a[0])
```

```
    a.pop(0)
```

```
    print(a)
```

```
    #output is
```

```
enter values :1,2,3
```

```
The original list is['1','2','3']
```

```
circulating the list
```

```
['2','3','1']
```

```
['3','1','2']
```

```
['1','2','3']
```

```
#circulating list of values using slicing operator
```

```
a=input('Enter values:').split(',')
```

```
print('The original list is',a,'\n','circulating the list')
```

```
for i in range(len(a)):
```

```
    cir=a[1:]+[a[0]]
```

```
print(cir)
```

#output is

Enter values:5,6

The original list is['5','6']

Circulating the list

['6','5']

['5','6']

#calculate the distance between two points

```
import math
```

```
x1=int(input('Enter x1:'))
```

```
x2=int(input('Enter x2:'))
```

```
y1=int(input('Enter y1:'))
```

```
y2=int(input('Enter y2:'))
```

```
d=math.sqrt((x2-x1)**2+(y2-y1)**2)
```

```
print('The distance between two points is',d)
```

#output is

Enter x1:4

Enter x2:5

Enter y1:8

Enter y2:9

The distance between two points is 1.4142135

```
a=int(input('First value:'))
```

```
b=int(input('Second value:'))
```

`a=a^b`

`b=a^b`

`print('The exchanged values are',a,b)`
