

## 1.EXCHANGE THE VALUES OF TWO VARIABLES

### METHOD-1

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

### OUTPUT

```
enter the first value:48
enter the second value:52
the values before swapping are 48 52
the values after swapping are 52 48
```

### METHOD-2

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

### OUTPUT

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

#### METHOD-3

X=45

Y=25

print("the values before swapping are",X,Y)

X=X+Y

Y=X-Y

X=X-Y

print("the values after swapping are",X,Y)

#### OUTPUT

the values before swapping are 45 25

the values after swapping are 25 45

#### METHOD-4

j=58

k=46

print("the values before swapping are",j,k)

j=j^k

k=j^k

j=j^k

print("the values after swapping are",j,k)

#### OUTPUT

the values before swapping are 58 46

the values after swapping are 46 58

## 2.CIRCULATE THE n VARIABLES

#### METHOD-1

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)
```

#### OUTPUT

```
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]
```

## 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)
```

## OUTPUT

```
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]
```

## 3.DISTANCE BETWEEN TWO POINTS

```
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

## PRACTICE PROBLEMS

### 1.CONVERT FAHRENHEIT TO CELSIUS

```
fahrenheit=float(input("please enter the temperature in fahrenheit"))
```

```
celsius=(fahrenheit-32)*5/9
```

```
celsius=round(celsius,2)
```

```
print(fahrenheit,"fahrenheit is=",celsius,"celsius")
```

## OUTPUT

please enter the temperature in fahrenheit98.6

98.6 fahrenheit is= 37.0 celsius

### 2.LEAP YEAR OR NOT

```
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("the given year is not a leap year")
```

## OUTPUT

enter the year:20000

the given year is leap year