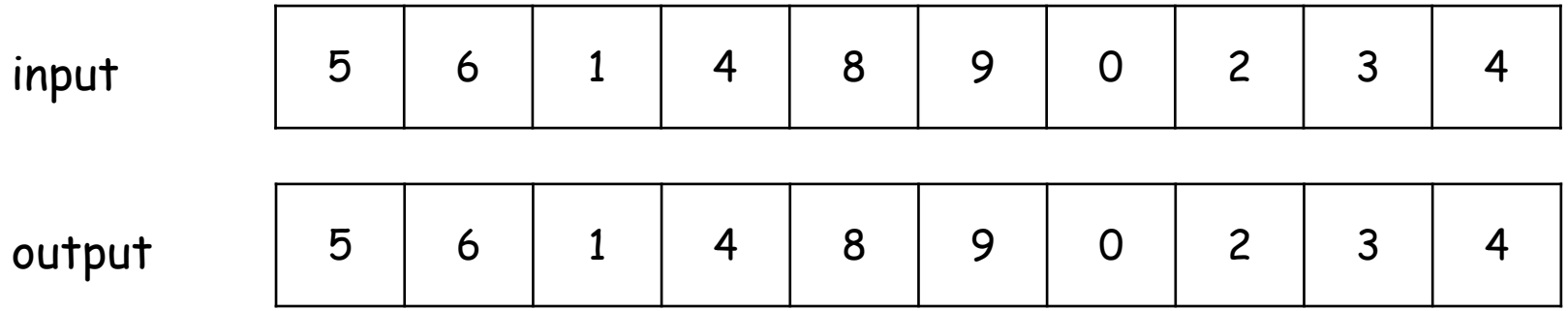
Array contd.

copy an array



reverse an array

input	5	6	1	4	8	9	0	2	3	4

output	4	3	2	0	9	8	4	1	6	5

shift an array (right)

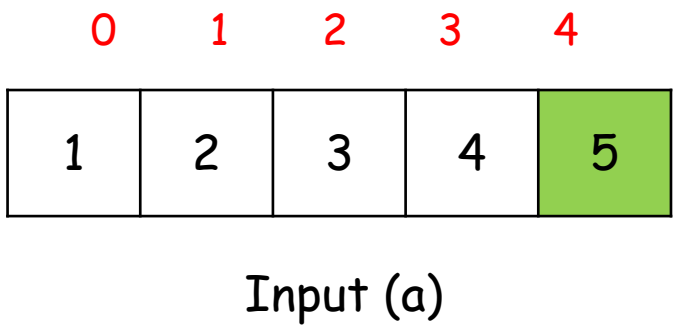
input

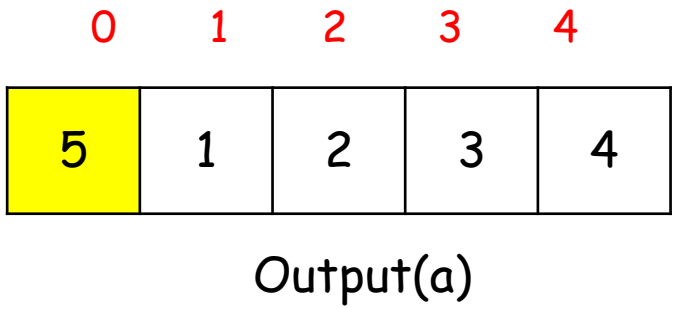
1	2	3	4	5

output

5	1	2	3	4

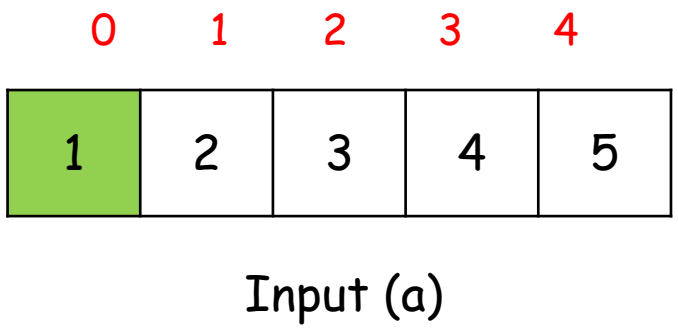
shift an array (right): using same input array



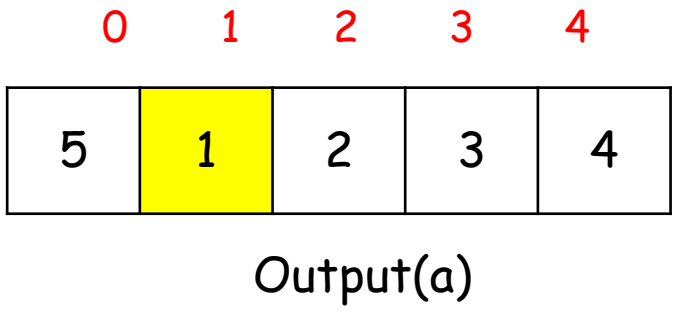


a[0] = a[4]

shift an array (right)



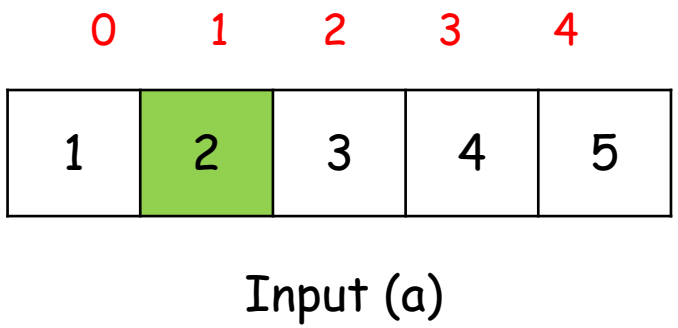
Input (a)



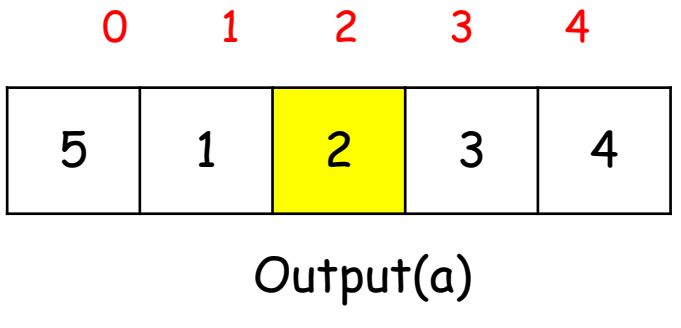
Output(a)

a[0] = a[4]
a[1] = a[0]

shift an array (right)



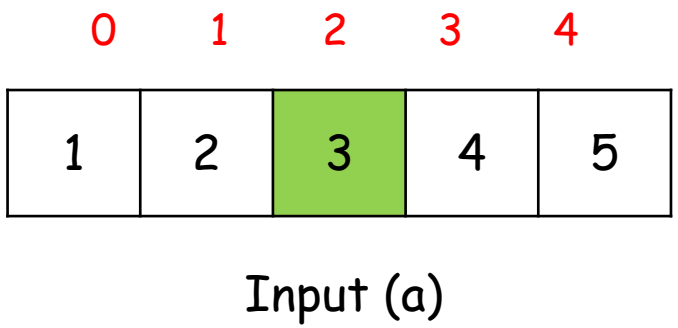
Input (a)



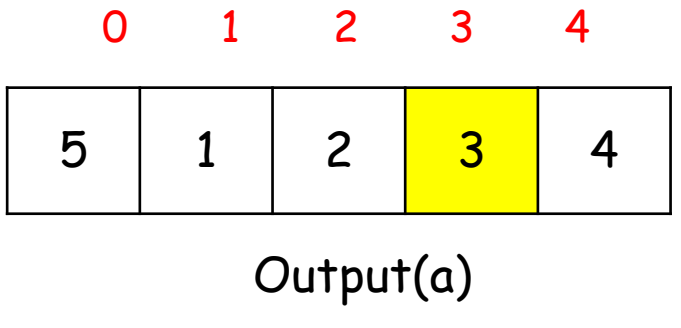
Output(a)

a[0] = a[4]
a[1] = a[0]
a[2] = a[1]

shift an array (right)



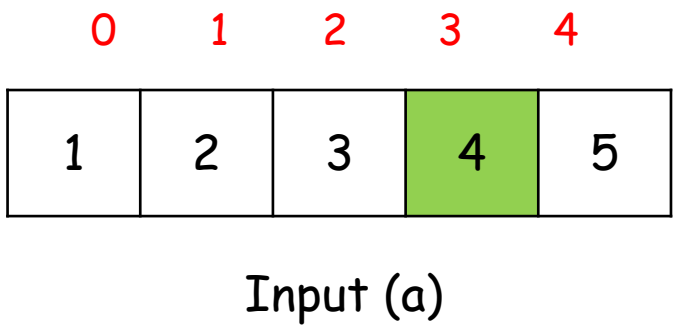
Input (a)



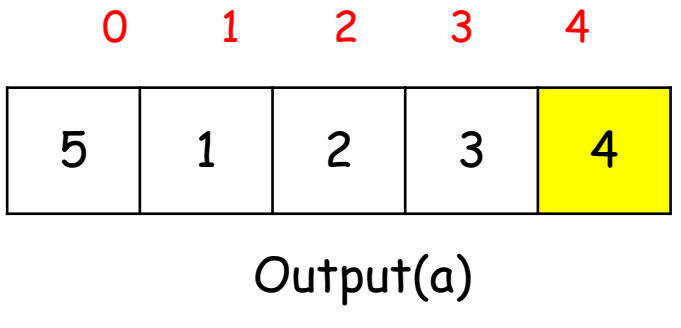
Output(a)

a[0] = a[4]
a[1] = a[0]
a[2] = a[1]
a[3] = a[2]

shift an array (right)



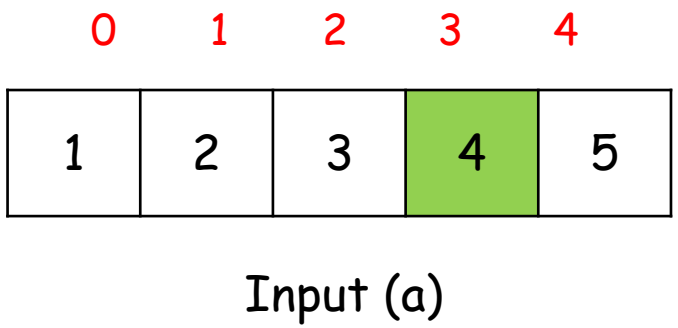
Input (a)

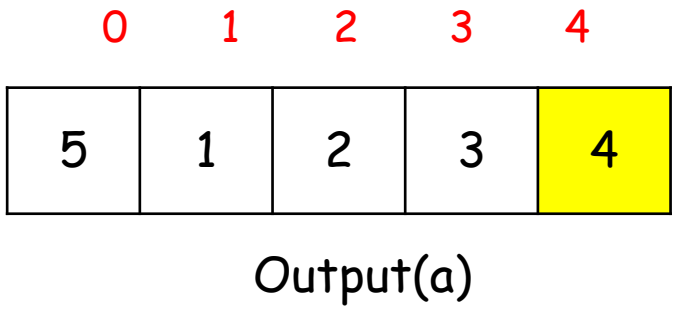


Output(a)

a[0] = a[4]
a[1] = a[0]
a[2] = a[1]
a[3] = a[2]
a[4] = a[3]

shift an array (right)

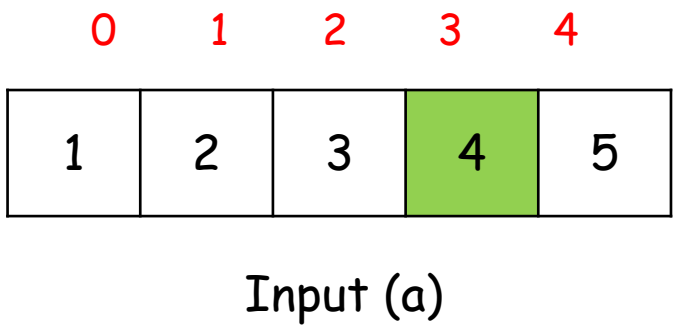


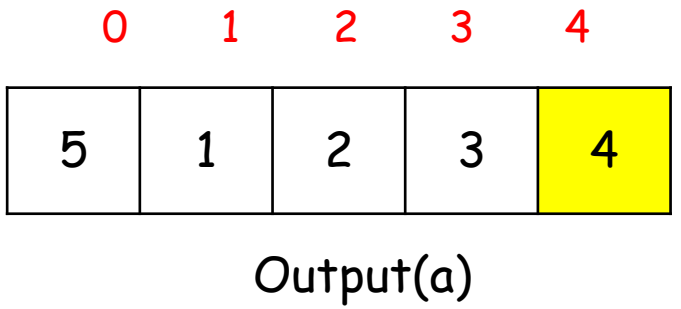


a[0] = a[4]
a[1] = a[0]
a[2] = a[1]
a[3] = a[2]
a[4] = a[3]

Find a pattern

shift an array (right): using the same input array



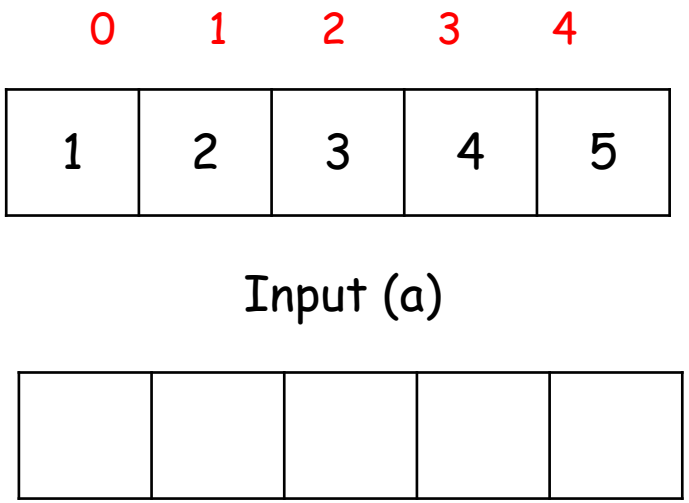


a[0] = a[4]
a[1] = a[0]
a[2] = a[1]
a[3] = a[2]
a[4] = a[3]

a[i] = a[i-1]

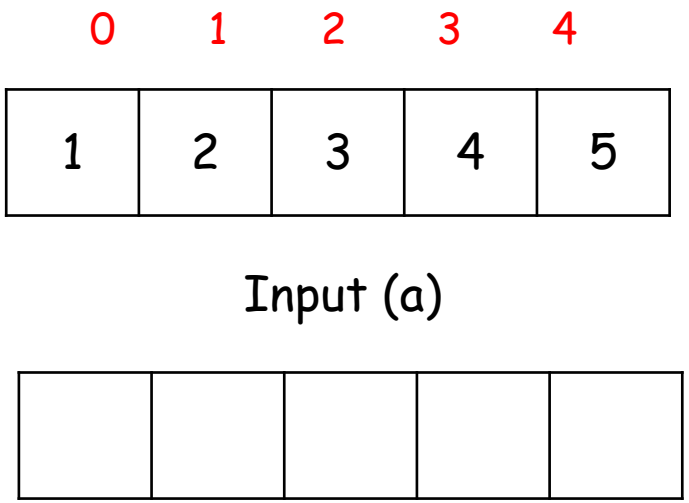
shift an array (right): using the same input array

```
for(i = 0; i < N; i++)
{
        a[i] = a[i-1];
}
```



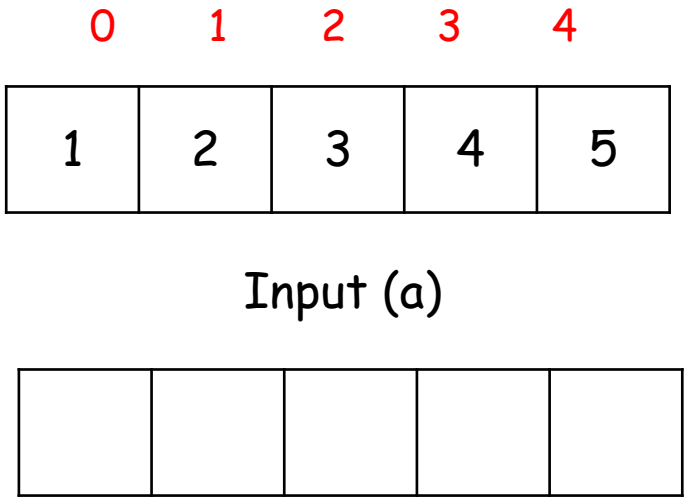
shift an array (right): using the same input array

```
for(i = N-1; i >= 0; i--)
{
        a[i] = a[i-1];
}
```



shift an array (right): using the same input array

```
temp = a[N-1];
for(i=N-1; i>0; i--)
{
    a[i] = a[i-1];
}
a[0] = temp;
```



Merge two arrays

input

a

5	6	1	4	8

b

3	10	-1

c

output

5	6	1	4	8	3	10	-1

Merge two arrays

a

5	6	1	4	8

b

3	10	-1

c

monotone increasing array

Elements of the array will gradually increase

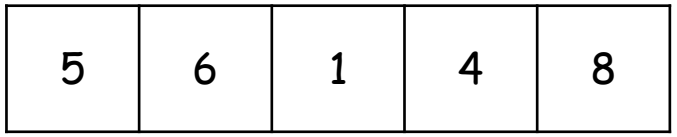
5	6	1	4	8

5	6	7	8	9

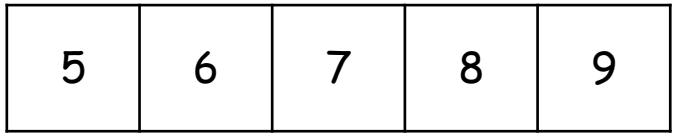
5	6	7	7	8

monotone increasing array

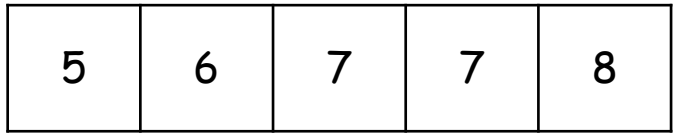
Elements of the array will gradually increase



no

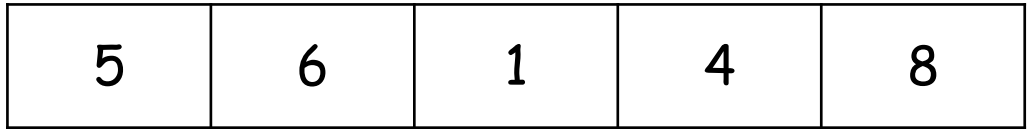


yes



yes

monotone increasing array



Upper triangular matrix

5	6	1
0	2	3
0	0	3

5	6	0
0	2	3
0	0	3

5	6	1
0	2	3
1	0	3

Upper triangular matrix

5	6	1
0	2	3
0	0	3

yes

5	6	0
0	2	3
0	0	3

no

5	6	1
0	2	3
1	0	3

no

Upper triangular matrix

	0	1	2
0	5	6	1
1	0	2	3
2	0	0	3

a[0][0]
a[0][1]
a[0][2]
a[1][1]
a[1][2]
a[2][2]

a[1][0]
a[2][0]
a[2][1]

Upper triangular matrix

	0	1	2
0	5	6	1
1	0	2	3
2	0	0	3

a[0][0]
a[0][1]
a[0][2]
a[1][1]
a[1][2]
a[2][2]

a[1][0]
a[2][0]
a[2][1]

What's the pattern here -The relation between indexes - i and j ?