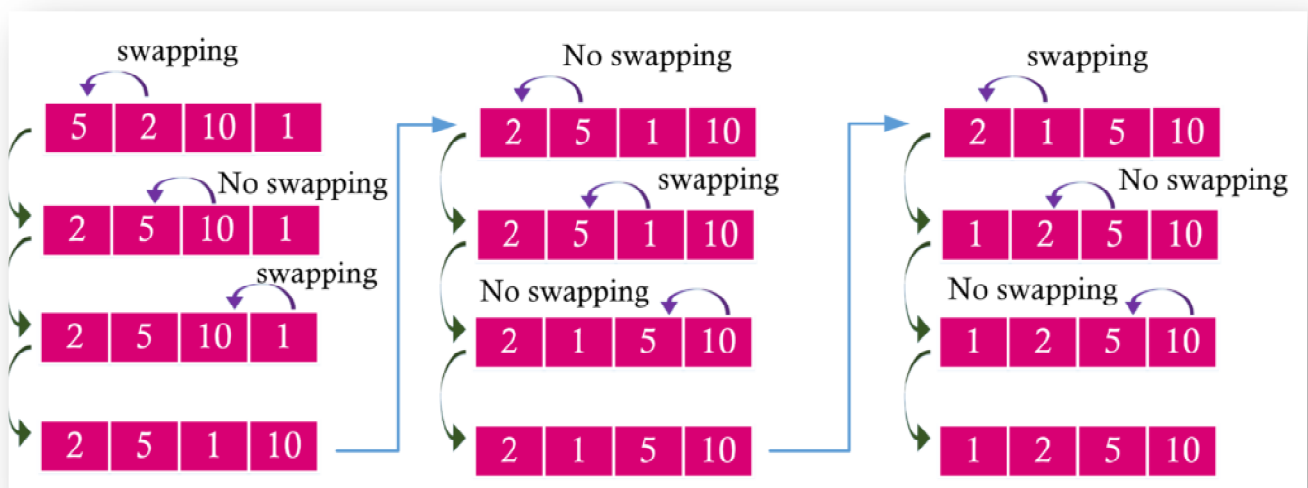


Bubble sort

- This is one of the most simple algorithm.
- The logic for this sort is that if the numbers are to be arranged in an ascending order then the largest number will be pushed at the end of the list.
- This process will be continued till all the numbers are placed in the proper order.
- Every number will be scanned with the succeeding number and they are swapped if the top number is larger than the succeeding number.
- If the list is scanned once, it is called as a pass.
- Even if the list is passed once only the largest number is pushed at the end the rest of the numbers are still not placed.
- For this, we may have to repeat this step many times to get the list sorted properly.

Sorting Technique of Bubble Sort



Example 1: Sort all the element of an array using Bubble Sort technique.

```
#include<stdio.h>
#include<conio.h>
void main()
{
int i,j,temp,a[5];
clrscr();
printf("Enter the array of a");
for(j=0;j<5;j++)
scanf("%d",&a[j]);
for(i=0;i<4;i++)
{
for(j=0;j<5-i;j++)
{
if (a[j]>a[j+1])
```

Input

| | | | | | |
|---------------|---|---|---|----|---|
| i [index no.] | 0 | 1 | 2 | 3 | 4 |
| x [element] | 5 | 7 | 2 | 12 | 6 |

Output

| | | | | | |
|---------------|---|---|---|---|----|
| i [index no.] | 0 | 1 | 2 | 3 | 4 |
| x [element] | 2 | 5 | 6 | 7 | 12 |

```
{
    temp=a[j];
    a[j]=a[j+1];
    a[j+1]=temp;
}
}
}
for(j=0;j<5;j++)
printf("\n%d",a[j]);
getch();
}
```

Try Yourself:

1. Sort all the element of an array using Bubble Sort technique in descending order.