



## BUBBLE SORT

/\*\*\*\*\*\*

**Write a C Program to implement Bubble Sort (take input directly)**

\*\*\*\*\*/

**Program:**

```
#include <stdio.h>
void BubbleSort(int a[],int n);
void main()
{
    int n=5;
    int a[5]={44,33,55,22,11};
    int i;
    printf("array before sorting\n");
    for(i=0;i<n;i++){
        printf("%d\t",a[i]);
    }
    printf("\n");
    printf("array after sorting\n");
    BubbleSort(a,n);
}

void BubbleSort(int a[],int n)
{
    int i,j,temp;
    for(i=0;i<n;i++)
    {
        for(j=0;j<n;j++)
        {
            if(a[j]>a[j+1])
            {
                temp=a[j];
                a[j]=a[j+1];
                a[j+1]=temp;
            }
        }
    }
}
```





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

**Output:**

array before sorting

44 33 55 22 11

array after sorting

11 22 33 44 55

**Take input from user:**

/\*\*\*\*\*\*

Write a C Program to implement Bubble Sort (Take input from user:)

\*\*\*\*\*/

```
#include <stdio.h>
```

```
void BubbleSort(int a[],int n);
```

```
void main()
```

```
{
```

```
    int a[20];
```

```
    int i,n;
```

```
    printf("How many numbers you want to sort\n");
```

```
    scanf("%d",&n);
```

```
    printf("Enter array elements\n");
```

```
    for(i=0;i<n;i++)
```





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```
{
scanf("%d",&a[i]);
}
printf("array before sorting\n");
for(i=0;i<n;i++){
printf("%d\t",a[i]);
}
printf("\n");
printf("array after sorting\n");
BubbleSort(a,n);

}

void BubbleSort(int a[],int n)
{
int i,j,temp;
for(i=0;i<n;i++)
{
for(j=0;j<n-i-1;j++)
{
if(a[j]>a[j+1])
{
temp=a[j];
a[j]=a[j+1];
a[j+1]=temp;
}
}
}
for(j=0;j<n;j++)
{
printf("%d\t",a[j]);
}
```



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```
}  
}
```

Output:

array before sorting

3    2    1

array after sorting

1    2    3

Original Value is

44    33    55    22    11

44>33 condition is true then swap the value

33    44    55    22    11

44>55 condition is false then no swap

33    44    55    22    11

55>22 condition is true then swap the value

33    44    22    55    11

55>11 condition is true then swap the value

33    44    22    11    55

Pass 1    33    44    22    11    55

Pass2    33    22    11    44    55

Pass 3    22    11    33    44    55

Pass4    11    22    33    44    55

Pass5    11    22    33    44    55





```
/******  
*
```

Write a C Program to implement Bubble Sort –Display all the pass

```
*****
```

```
*/  
#include<stdio.h>
```

```
void main()
```

```
{
```

```
    int a[5]={44,33,55,22,11};
```

```
    int i,j,c,n=5,k;
```

```
    printf("\n Orignal Value ");
```

```
    for(i=0;i<n;i++)
```

```
        printf("\t%d",a[i]);
```

```
for(i=0;i<n;i++)
```

```
{
```

```
    for(j=0;j<n-i-1;j++)
```

```
{
```

```
    if(a[j]>a[j+1])
```

```
{
```

```
        c=a[j];
```

```
        a[j]=a[j+1];
```

```
        a[j+1]=c;
```

```
    }
```

```
}
```

```
    printf("\n\n Pass %d\t",i+1);
```

```
    for(k=0;k<n;k++)
```





```
        printf("\t%d",a[k]);  
    }  
    printf("\n\n Final Sort ");  
    for(i=0;i<5;i++)  
        printf("\t%d",a[i]);  
    }
```

Output:

Original Value 44 33 55 22 11

Pass 1 33 44 22 11 55

Pass 2 33 22 11 44 55

Pass 3 22 11 33 44 55

Pass 4 11 22 33 44 55

Pass 5 11 22 33 44 55

Final Sort 11 22 33 44 55

