

Aim:

Design a C program which finds the **second maximum number** among the given one dimensional array of elements.

Sample Input and Output: Enter how many values you want to read : 6
 Enter the value of a[0] : 45
 Enter the value of a[1] : 24
 Enter the value of a[2] : 23
 Enter the value of a[3] : 65
 Enter the value of a[4] : 78
 Enter the value of a[5] : 42
 The second largest element of the array = 65

Note: Do use the **printf()** function with a **newline** character (\n) at the end.

Source Code:

second_large.c

```
#include<stdio.h>
void main()
{
    int a[20],n,i,max1=0,max2=0;
    printf("Enter how many values you want to read : ");
    scanf("%d",&n);
    for(i=0;i<n;i++)
    {
        printf("Enter the value of a[%d] : ",i);
        scanf("%d",&a[i]);
    }
    for(i=0;i<n;i++)
    {
        if(max1<a[i])
        {
            max2=max1;
            max1=a[i];
        }
        else if (a[i]>max2&&a[i]<max1)
        {
            max2=a[i];
        }
    }
    printf("The second largest element of the array = %d\n",max2);
}
```

Execution Results - All test cases have succeeded!

| Test Case - 1 |
|--|
| User Output |
| Enter how many values you want to read : 4 |
| Enter the value of a[0] : 32 |

| |
|--|
| Enter the value of a[1] : 25 |
| Enter the value of a[2] : 69 |
| Enter the value of a[3] : 47 |
| The second largest element of the array = 47 |