

**Aim:**

Write a program to find the **sum** of n elements by allocating memory by using **calloc()** function.

At the time of execution, the program should print the message on the console as:

Enter n value :

For example, if the user gives the **input** as:

Enter n value : 4

Next, the program should print the message on the console as:

Enter 4 values :

For example, if the user gives the **input** as:

Enter 4 values : 3 5 4 7

then the program should **print** the result as:

The sum of given array elements : 19

**Note:** Write the functions **allocateMemory()**, **read()** and **sum()** in **UsingCalloc.c**.

**Source Code:****SumOfArray2.c**

```
#include <stdio.h>
#include <stdlib.h>
#include "UsingCalloc.c"
void main() {
    int *p, n, i;
    printf("Enter n value : ");
    scanf("%d", &n);
    p = allocateMemory(n);
    printf("Enter %d values : ", n);
    read(p, n);
    printf("The sum of given array elements : %d\n", sum(p, n));
}
```

**UsingCalloc.c**

```
int*allocateMemory(int n);
void read(int*,int);
int sum(int*,int);
int*allocateMemory(int n)
{
    int*p;
    p=(int*)calloc(n,sizeof(int));
    return p;
}
```

```
}  
void read(int*p,int n)  
{  
    int i;  
    for(i=0;i<n;++i)  
    {  
        scanf("%d",p);  
        p++;  
    }  
}  
int sum(int*p,int n)  
{  
    int i,sum=0;  
    for(i=0;i<n;++i)  
        sum=sum+p[i];  
    return sum;  
}
```

Execution Results - All test cases have succeeded!

Test Case - 1
User Output
Enter n value : 5
Enter 5 values : 2 5 33 11 26
The sum of given array elements : 77