

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