S.No: 45	Exp. Name: ***Write a C program to find Sum of array elements by allocating memory using calloc() function***	Date:2023-01-19

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

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