C library function - calloc()

Description

The C library function **void *calloc(size_t nitems, size_t size)** allocates the requested memory and returns a pointer to it. The difference in **malloc** and **calloc** is that malloc does not set the memory to zero where as calloc sets allocated memory to zero.

Declaration

Following is the declaration for calloc() function.

```
void *calloc(size_t nitems, size_t size)
```

Parameters

- □ **nitems** − This is the number of elements to be allocated.
- □ **size** − This is the size of elements.

Return Value

This function returns a pointer to the allocated memory, or NULL if the request fails.

Example

The following example shows the usage of calloc() function.

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

int main () {
   int i, n;
   int *a;

   printf("Number of elements to be entered:");
   scanf("%d",&n);

   a = (int*)calloc(n, sizeof(int));
   printf("Enter %d numbers:\n",n);
   for( i=0 ; i < n ; i++ ) {
      scanf("%d",&a[i]);
   }

   printf("The numbers entered are: ");
```

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

    return(0);
}
```

Let us compile and run the above program that will produce the following result −

```
Number of elements to be entered:3
Enter 3 numbers:
22
55
14
The numbers entered are: 22 55 14
```