**EXPT. NO: 11**

**AIM:**

Program to demonstrate the use of malloc(), calloc(), realloc() and free() functions.

**Solution:**

**Program**

// C Program to demonstrate the use of malloc() function

#include <stdio.h>

#include <stdlib.h>

int main() {

    // This pointer will hold the base address of the block created

    int\* ptr;

    int n, i;

    // Get the number of elements for the array

    n = 5;

    printf("Enter number of elements: %d\n", n);

    // Dynamically allocate memory using malloc()

    ptr = (int\*)malloc(n \* sizeof(int));

    // Check if the memory has been successfully allocated by malloc or not

    if (ptr == NULL) {

        printf("Memory not allocated.\n");

        exit(0);

    }

    else {

        // Memory has been successfully allocated

        printf("Memory successfully allocated using malloc.\n");

        // Get the elements of the array

        for (i = 0; i < n; i++) {

            ptr[i] = i + 1;

        }

        // Print the elements of the array

        printf("The elements of the array are: ");

        for (i = 0; i < n; ++i) {

            printf("%d, ", ptr[i]);

        }

         free(ptr);

        printf("Malloc Memory successfully freed.\n");

    }

    return 0;

}