(2) Write a program to facilitate dynamic memory allocation [malloc, calloc, free, realloc]

```
#include <stdio.h>
#include <conio.h>
#include <stdlib.h>
int main()
{
    int *ptr;
    int n, i;

    n=5;
    printf("Enter 5 elements : %d \n");
    ptr = (int *) calloc(n, sizeof(int));
    if (ptr == NULL)
    {
        printf("Memory not allocated");
        exit(0);
    }
    else
    {
    printf("Memory succesfully allocated using
            calloc");

    for (i=0; i<n; ++i) {
        printf("%d", ptr[i]);
        ptr[i]=i+1;
    }
    printf("The elements of the array are: ");
    for(i=0; i<n; ++i)
    {
```

```
        printf("%d", ptr[i]);
    }

    n = 10;
    printf("Enter the size of the array : %d\n", n);
    ptr = (int *) realloc (ptr, n * sizeof(int));
    printf("Memory successfully re-allocated\n");
    for (i=0; i<n; ++i){
        ptr[i] = i+1;
    }

    printf("The elements of the array are: ");
    for (i=0; i<n; ++i) {
        printf("%d", ptr[i]);
    }

    free(ptr);
}

return 0;

}
```

→ Output

Enter number of elements : 5

Memory successfully allocated using calloc

The elements of the array 1, 2, 3, 4, 5

Enter the new size of array : 10

Memory successfully reallocated using realloc