

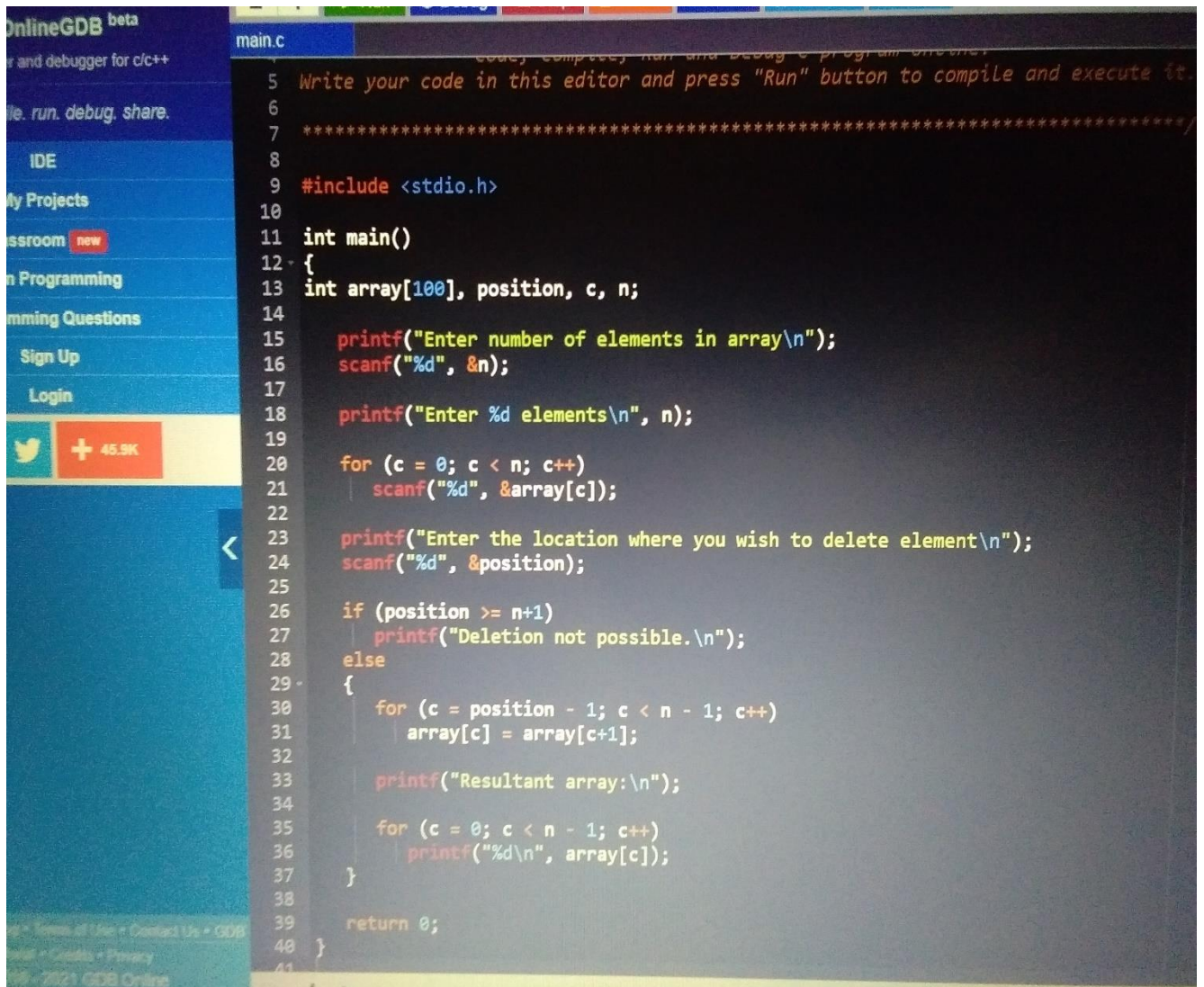
Data Structures and Algorithms

Assignment Day 2

25th December 2020

Question 1:

Write the program for deleting an element from the beginning and from any position.



```
main.c
5 Write your code in this editor and press "Run" button to compile and execute it.
6
7 *****/
8
9 #include <stdio.h>
10
11 int main()
12 {
13     int array[100], position, c, n;
14
15     printf("Enter number of elements in array\n");
16     scanf("%d", &n);
17
18     printf("Enter %d elements\n", n);
19
20     for (c = 0; c < n; c++)
21         scanf("%d", &array[c]);
22
23     printf("Enter the location where you wish to delete element\n");
24     scanf("%d", &position);
25
26     if (position >= n+1)
27         printf("Deletion not possible.\n");
28     else
29     {
30         for (c = position - 1; c < n - 1; c++)
31             array[c] = array[c+1];
32
33         printf("Resultant array:\n");
34
35         for (c = 0; c < n - 1; c++)
36             printf("%d\n", array[c]);
37     }
38
39     return 0;
40 }
```

Output:

```
Enter number of elements in array
4
Enter 4 elements
8
7
6
5
Enter the location where you wish to delete element
3
Resultant array:
8
7
5
...Program finished with exit code 0
Press ENTER to exit console.
```

Question 2 :

Write the program for printing the array after rotating it k times towards left, where k would be taken as user input.

```
#include <stdio.h>

int main()
{
    int arr[] = {3, 4, 5, 6, 7};
    int length = sizeof(arr)/sizeof(arr[0]);
    int n = 2;

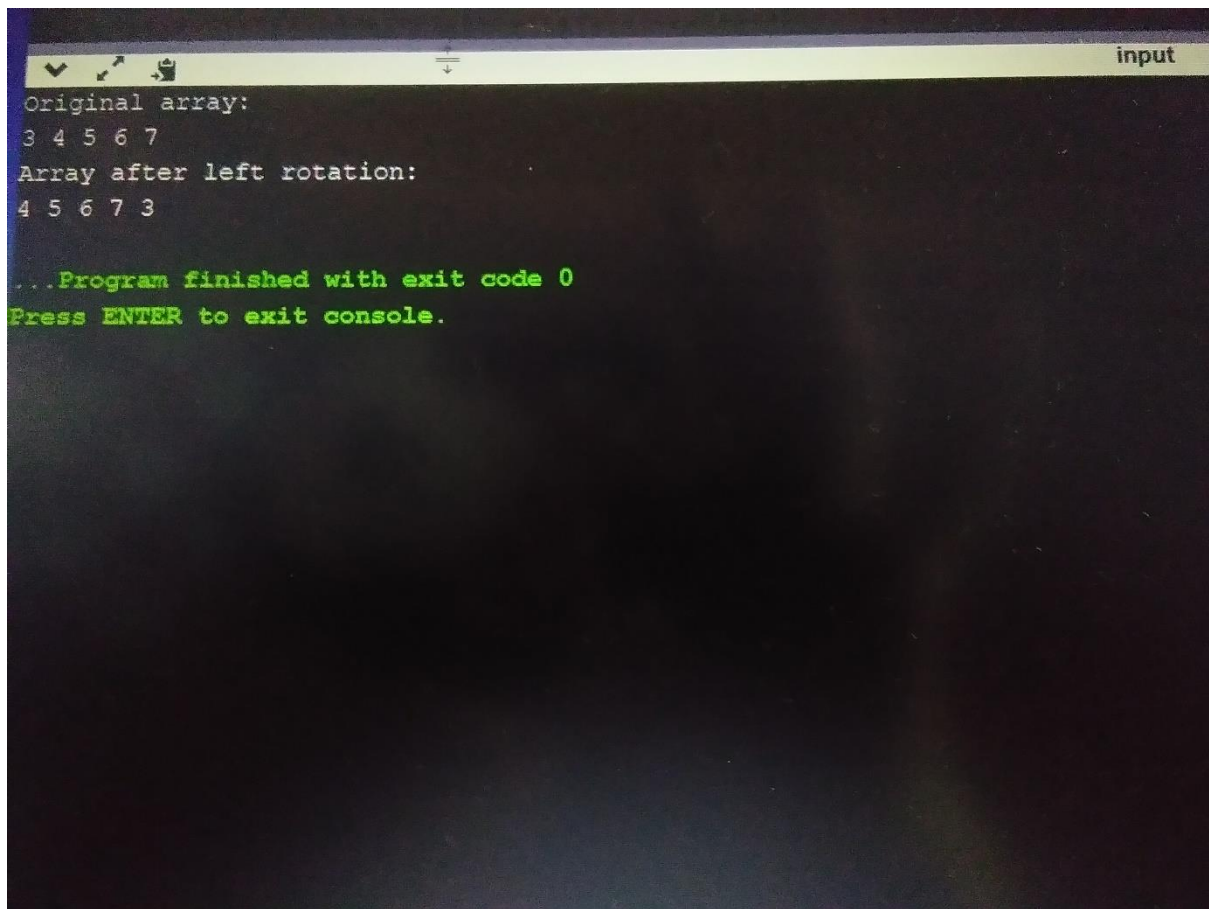
    printf("Original array: \n");
    for (int i = 0; i < length; i++)
    {
        printf("%d ", arr[i]);
    }

    for(int i = 0; i < n; i++)
    {
        int j, first;
        first = arr[0];
        for(j = 0; j < length-1; j++){
            arr[j] = arr[j+1];
        }
        arr[j] = first;
    }

    printf("\n");
    printf("Array after left rotation: \n");
    for(int i = 0; i < length; i++){
        printf("%d ", arr[i]);
    }

    return 0;
}
```

Output :

A screenshot of a console window with a dark background. The title bar at the top is light yellow and contains the word "input" on the right. The console displays the following text in white: "Original array:", "3 4 5 6 7", "Array after left rotation:", and "4 5 6 7 3". Below this, in green text, it says "...Program finished with exit code 0" and "Press ENTER to exit console.".

```
Original array:
3 4 5 6 7
Array after left rotation:
4 5 6 7 3

...Program finished with exit code 0
Press ENTER to exit console.
```