Extras
Program 1

```c
//1. C Program to insert a number at a given location in an array.
#include <stdio.h>
int main(){
    int n;
    printf("enter n : ");
    scanf("%d",&n);
    int arr1[n];
    for(int i=0;i<n;i++){
        printf("Enter ele %d : ",i+1);
        scanf("%d",&arr1[i]);
    }
    int num,pos;
    printf("Enter num : ");
    scanf("%d",&num);
    printf("Enter pos : "); //enter 0 based index
    scanf("%d",&pos);
    if(pos<=n){
        for(int i=n;i>=pos;i--){
            arr1[i+1]=arr1[i];
        }
        arr1[pos]=num;
        for(int i=0;i<=n;i++){
            printf("\n%d",arr1[i]);
        }
    }
    else
        printf("Invalid pos.");
    printf("\n");
}
```

PROBLEMS   OUTPUT   DEBUG CONSOLE   **TERMINAL**

```
Enter ele 1 : 12
Enter ele 2 : 14
Enter ele 3 : 13
Enter ele 4 : 10
Enter ele 5 : 11
Enter ele 6 : 17
Enter num : 99
Enter pos : 2

12
14
99
13
10
11
17
```

Program 2

```c
//2.C Program to insert a number in an array that is already sorted in ascending order.
#include<stdio.h>
int main(){
    int n;
    printf("enter n : ");
    scanf("%d",&n);
    int arr1[n];
    for(int i=0;i<n;i++){          //accept array
        printf("Enter ele %d : ",i+1);
        scanf("%d",&arr1[i]);
    }
    //sort array
    int tmp;
    for(int i=0; i<n; i++){
        for(int j=i+1; j<n; j++){
            if(arr1[j] <arr1[i]){
                tmp = arr1[i];
                arr1[i] = arr1[j];
                arr1[j] = tmp;
            }
        }
    }
    int num;
    printf("Enter num : ");
    scanf("%d",&num);
    //find the pos of the num
    int pos=n;
    for(int i=0;i<n;i++){
        if(arr1[i]<num)
            pos = i;
    }
    //create a space for the num
    for(int i=n;i>=pos;i--){
        arr1[i+1]=arr1[i];
    }
    arr1[pos+1]=num;
    for(int i=0;i<=n;i++){
        printf("\n%d",arr1[i]);
    }
    printf("\n");
}
```

```
enter n : 5
Enter ele 1 : 10
Enter ele 2 : 9
Enter ele 3 : 7
Enter ele 4 : 6
Enter ele 5 : 4
Enter num : 8

4
6
7
8
9
10
```

Program 3

```c
1   //3. C Program to delete a number at a given location in an array.
2   #include<stdio.h>
3   int main(){
4       int n;
5       printf("enter n : ");
6       scanf("%d",&n);
7       int arr1[n];
8       for(int i=0;i<n;i++){          //accept array
9           printf("Enter ele %d : ",i+1);
10          scanf("%d",&arr1[i]);
11      }
12      int pos;                       //input position
13      printf("Enter pos : ");        //enter 0-based index
14      scanf("%d",&pos);
15      for(int i=pos;i<n;i++){
16          arr1[i]=arr1[i+1];
17      }
18      printf("Array after deletion : \n");
19      for(int i=0;i<n-1;i++){
20          printf("\n%d",arr1[i]);
21      }
22      printf("\n");
23  }
```

PROBLEMS   OUTPUT   DEBUG CONSOLE   TERMINAL

```
enter n : 5
Enter ele 1 : 1
Enter ele 2 : 2
Enter ele 3 : 3
Enter ele 4 : 4
Enter ele 5 : 5
Enter pos : 2
Array after deletion :

1
2
4
5
```