



**SOUTHEAST UNIVERSITY**  
*Meeting the Challenges of Time*

## **Department Of CSE**

### **Cse Assignment**

**Assignment No:03**

**Date of submission:**

**Course name : CSE LAB**

**Course code : 241**

**Section : 9**

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**[lecturer, Department of CSE]**

**Initial : YMA**

### **Code 1:**

```
#include<stdio.h>

#include<stdlib.h>

int main(){

    int array[] = {7, 3, 4, 2, 9, 21, 15, 23};

    int temp;

    int n = sizeof(array) / sizeof(array[0]);

    //bubble sort

    for(int i = 0; i < n-1; i++){

        for(int j = n-1; j > i; j--){

            if(array[j] < array[j-1]){

                temp = array[j];

                array[j] = array[j-1];

                array[j-1] = temp;

            }

        }

    }

    for(int i = 0; i < n; i++){

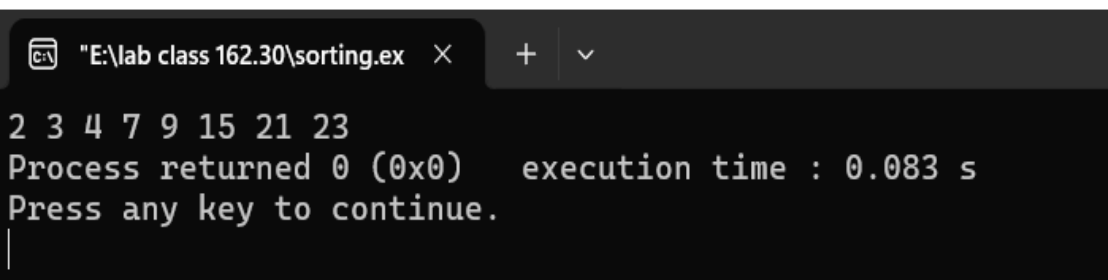
        printf("%d ", array[i]);

    }

    return 0;

}
```

### **Terminal:**



```
"E:\lab class 162.30\sorting.ex" × + v
2 3 4 7 9 15 21 23
Process returned 0 (0x0)   execution time : 0.083 s
Press any key to continue.
|
```

## **Code 2:**

```
#include<stdio.h>

#include<stdlib.h>

int main(){

    int array[] = {7, 3, 4, 2, 9, 21, 15, 23};

    int temp;

    int n = sizeof(array) / sizeof(array[0]);

    //insertion sort

    for(int i = n-1; i >= 0; i--){

        temp = array[i];

        int j = i + 1;

        while(j < n && array[j] < temp){

            array[j - 1] = array[j];

            j++;

        }

        array[j - 1] = temp;

    }

    for(int i = 0; i < n; i++){

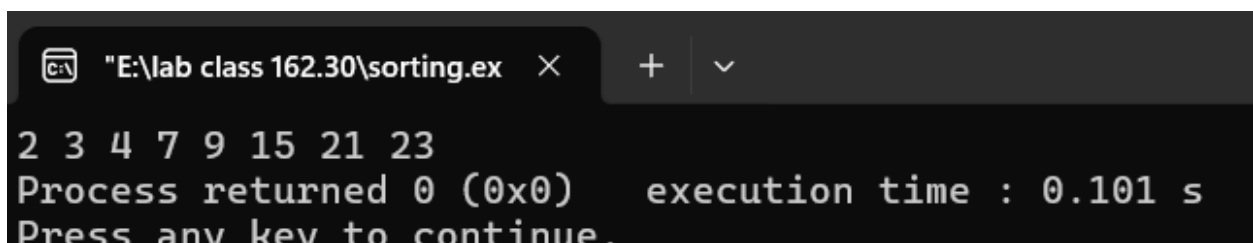
        printf("%d ", array[i]);

    }

    return 0;

}
```

## **Terminal:**

A screenshot of a terminal window with a dark background. The title bar at the top shows a file icon, the path "E:\lab class 162.30\sorting.ex", and a close button. Below the title bar, the output of the program is displayed in a light-colored monospace font. The first line shows the sorted array: "2 3 4 7 9 15 21 23". The second line shows the process return code and execution time: "Process returned 0 (0x0) execution time : 0.101 s". The third line shows the prompt: "Press any key to continue.".

```
"E:\lab class 162.30\sorting.ex" × + ∨

2 3 4 7 9 15 21 23
Process returned 0 (0x0)    execution time : 0.101 s
Press any key to continue.
```

### **Code 3:**

```
#include<stdio.h>

#include<stdlib.h>

int main(){

    int array[] = {7, 3, 4, 2, 9, 21, 15, 23};

    int temp;

    int n = sizeof(array) / sizeof(array[0]);

    //insertion sort
    for(int i = n-1; i >= 0; i--){

        temp = array[i];

        int j = i + 1;

        while(j < n && array[j] < temp){

            array[j - 1] = array[j];

            j++;

        }

        array[j - 1] = temp;

    }

    for(int i = 0; i < n; i++){

        printf("%d ", array[i]);

    }

    int newarray[n + 1], key = 8;

    for(int i = 0; i < n; i++){

        newarray[i] = array[i];

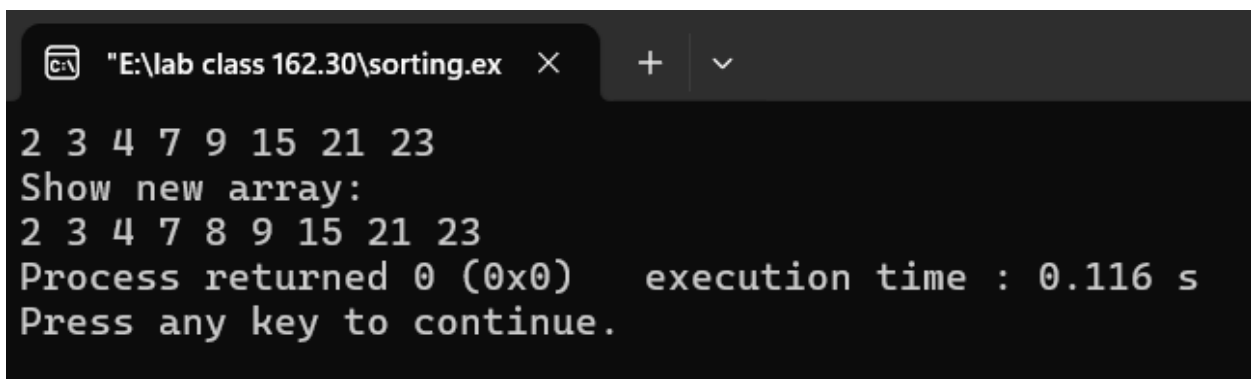
    }
```

```

for(int i = 0; i < n; i++)
{
    if(newarray[i] > key)
    {
        for(int j = n; j > i; j--)
        {
            newarray[j] = newarray[j-1];
        }
        newarray[i] = key;
        break;
    }
}
printf("\nShow new array:\n");
for(int i = 0; i < n+1; i++)
{
    printf("%d ", newarray[i]);
}
return 0;
}

```

### Terminal:



```

"E:\lab class 162.30\sorting.ex"
2 3 4 7 9 15 21 23
Show new array:
2 3 4 7 8 9 15 21 23
Process returned 0 (0x0)    execution time : 0.116 s
Press any key to continue.

```