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

Student's Name :Nazmul Hasan

Student's ID :2023100000130

Submitted To :Mr. Muhammed Yeaseen Morshed Abid

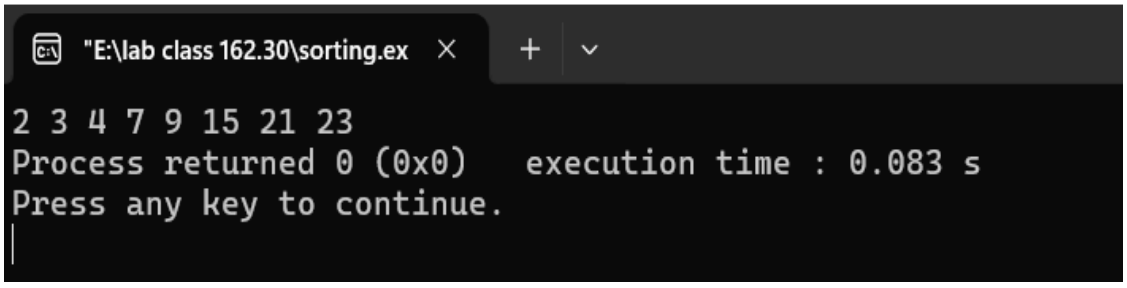
[lecturer, Department of CSE]

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:



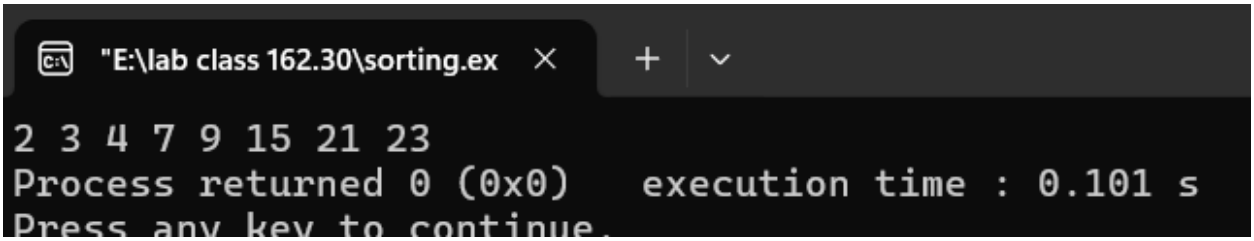
Code 2:

```
#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:



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: