

PROBLEM#01

The screenshot displays a C++ IDE with a source code editor on the left and a console window on the right. The source code implements a bubble sort algorithm. The console window shows the program's execution, including prompts for array size and elements, the original array, and the sorted array.

```
#include <stdio.h>
int main()
{
    int i,j,size,x=0;

    printf("ENTER LENGTH\nsize: ");
    scanf("%d", &size);
    int array[size + 2];
    for (i = 0; i < size; i++) {
        printf("ENTER the %d ELEMENT OF AN ARRAY : ", i);
        scanf("%d", &array[i]);
    }

    printf("Element of an original array are: ");
    for (i = 0; i < size; i++) {
        printf("%d", array[i]);
        if (i < size - 1) {
            printf(", ");
        }
    }
    printf("\n");

    for (i = 0; i < size - 1; i++)
    {
        for (j = 0; j < size - i - 1; j++)
        {
            if (array[j] > array[j + 1])
            {
                x = array[j];
                array[j] = array[j + 1];
                array[j + 1] = x;
            }
        }
        printf("Element of array after sorting are: ");
        for (i = 0; i < size; i++) {
            printf("%d", array[i]);
            if (i < size - 1) {
                printf(", ");
            }
        }
        printf("\n");
    }
}
```

Output:

```
ENTER LENGTH
Size: 5
ENTER the 0 ELEMENT OF AN ARRAY : 1
ENTER the 1 ELEMENT OF AN ARRAY : 6
ENTER the 2 ELEMENT OF AN ARRAY : 5
ENTER the 3 ELEMENT OF AN ARRAY : 4
ENTER the 4 ELEMENT OF AN ARRAY : 2
Element of an original array are: 1, 6, 5, 4, 2}
Element of array after sorting are: 1, 2, 4, 5, 6}

-----
Process exited after 7.12 seconds with return value 0
Press any key to continue . . .
```

Compiler Output:

```
- Output Filename: C:\Users\Rashid Iqbal\Desktop\DSU\PF LAB\LAB09\Problem01.exe
- Output Size: 129,2705078125 KiB
- Compilation Time: 0.30s
```

Line: 42 Col: 2 Sel: 0 Lines: 42 Length: 753 Insert Done parsing in 0.032 seconds

Windows taskbar at the bottom shows the time as 10:35 PM on 1/16/2023, with a temperature of 17°C.

PROBLEM#02

C:\Users\Rashid Iqbal\Desktop\DSU\PF LAB\LAB09\Problem02.c - [Executing] - Dev-C++ 5.11

File Edit Search View Project Execute Tools AStyle Window Help

(globals)

Problem01.c Problem02.c

```
1 #include <stdio.h>
2 int main() {
3     int i,j,size,E,x=0;
4     printf("ENTER SIZE\nSize: ");
5     scanf("%d", &size);
6     int array[size * 2];
7     for (i = 0; i < size; i++) {
8         printf("ENTER the %d ELEMENT OF AN ARRAY : ", i);
9         scanf("%d", &array[i]);
10    }
11    printf("\tElement of array are: ");
12    for (i = 0; i < size; i++) {
13        printf("%d", array[i]);
14        if (i < size - 1) {
15            printf(", ");
16        }
17    }
18    printf("\n");
19    printf("ENTER THE ELEMENT TO SEARCH IN AN ARRAY: ");
20    scanf("%d", &E);
21    for (i = 0; i < size; i++) {
22        if (array[i] == E) {
23            printf("Element %d found at %d location.", E, i);
24            break;
25        }
26    }
27    if (array[i] != E) {
28        printf("Element not found.");
29    }
30 }
```

ENTER SIZE
Size: 6
ENTER the 0 ELEMENT OF AN ARRAY : 2
ENTER the 1 ELEMENT OF AN ARRAY : 4
ENTER the 2 ELEMENT OF AN ARRAY : 6
ENTER the 3 ELEMENT OF AN ARRAY : 4
ENTER the 4 ELEMENT OF AN ARRAY : 9
ENTER the 5 ELEMENT OF AN ARRAY : 4
Element of array are: 2, 4, 6, 4, 9, 4
ENTER THE ELEMENT TO SEARCH IN AN ARRAY: 6
Element 6 found at 2 location.

Process exited after 18.36 seconds with return value 6
Press any key to continue . . .

C:\Users\Rashid Iqbal\Desktop\DSU\PF LAB\LAB09\Problem02.exe

ENTER SIZE
Size: 6
ENTER the 0 ELEMENT OF AN ARRAY : 3
ENTER the 1 ELEMENT OF AN ARRAY : 2
ENTER the 2 ELEMENT OF AN ARRAY : 4
ENTER the 3 ELEMENT OF AN ARRAY : 5
ENTER the 4 ELEMENT OF AN ARRAY : 7
ENTER the 5 ELEMENT OF AN ARRAY : 5
Element of array are: 3, 2, 4, 5, 7, 5
ENTER THE ELEMENT TO SEARCH IN AN ARRAY: 9
Element not found.

Process exited after 23.51 seconds with return value 18
Press any key to continue . . .

Compiler Resources Compile Log Debug Find Results Close

About Compilation

Shorten compiler paths

Output Filename: C:\Users\Rashid Iqbal\Desktop\DSU\PF LAB\LAB09\Problem02.exe
Output Size: 129.7734375 KiB
Compilation Time: 0.49s

Line: 19 Col: 2 Sel: 0 Lines: 34 Length: 644 Insert Done parsing in 0.031 seconds

Type here to search

17°C 10:55 PM 1/16/2023