

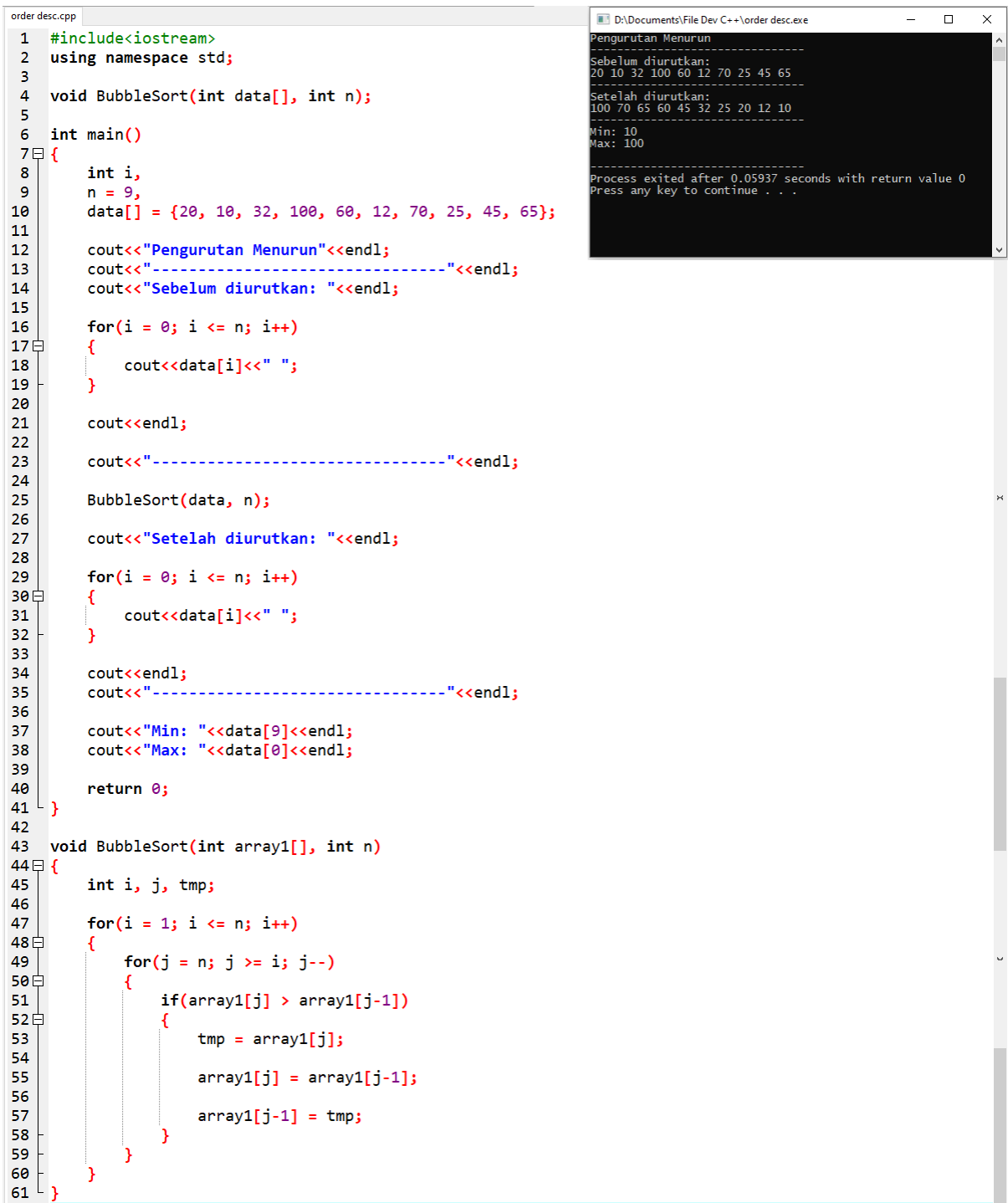
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Kelas : 02TPLP023

Tugas : Algoritma II – Pertemuan 12

1.



The image shows a C++ program in a code editor and its execution output in a terminal window.

Code Editor (order desc.cpp):

```
1 #include<iostream>
2 using namespace std;
3
4 void BubbleSort(int data[], int n);
5
6 int main()
7 {
8     int i,
9     n = 9,
10    data[] = {20, 10, 32, 100, 60, 12, 70, 25, 45, 65};
11
12    cout<<"Pengurutan Menurun"<<endl;
13    cout<<"-----"<<endl;
14    cout<<"Sebelum diurutkan: "<<endl;
15
16    for(i = 0; i <= n; i++)
17    {
18        cout<<data[i]<<" ";
19    }
20
21    cout<<endl;
22
23    cout<<"-----"<<endl;
24
25    BubbleSort(data, n);
26
27    cout<<"Setelah diurutkan: "<<endl;
28
29    for(i = 0; i <= n; i++)
30    {
31        cout<<data[i]<<" ";
32    }
33
34    cout<<endl;
35    cout<<"-----"<<endl;
36
37    cout<<"Min: "<<data[9]<<endl;
38    cout<<"Max: "<<data[0]<<endl;
39
40    return 0;
41 }
42
43 void BubbleSort(int array1[], int n)
44 {
45     int i, j, tmp;
46
47     for(i = 1; i <= n; i++)
48     {
49         for(j = n; j >= i; j--)
50         {
51             if(array1[j] > array1[j-1])
52             {
53                 tmp = array1[j];
54                 array1[j] = array1[j-1];
55                 array1[j-1] = tmp;
56             }
57         }
58     }
59 }
60
61 }
```

Terminal Window (D:\Documents\File Dev C++\order desc.exe):

```
Pengurutan Menurun
-----
Sebelum diurutkan:
20 10 32 100 60 12 70 25 45 65
-----
Setelah diurutkan:
100 70 65 60 45 32 25 20 12 10
-----
Min: 10
Max: 100
-----
Process exited after 0.05937 seconds with return value 0
Press any key to continue . . .
```

Source Code:

```
#include<iostream>
using namespace std;

void BubbleSort(int data[], int n);

int main()
{
    int i,
    n = 9,
    data[] = {20, 10, 32, 100, 60, 12, 70, 25, 45, 65};

    cout<<"Pengurutan Menurun"<<endl;
    cout<<"-----"<<endl;
    cout<<"Sebelum diurutkan: "<<endl;

    for(i = 0; i <= n; i++)
    {
        cout<<data[i]<<" ";
    }

    cout<<endl;

    cout<<"-----"<<endl;

    BubbleSort(data, n);

    cout<<"Setelah diurutkan: "<<endl;

    for(i = 0; i <= n; i++)
    {
        cout<<data[i]<<" ";
    }

    cout<<endl;
```

```

        cout<<"-----"<<endl;

        cout<<"Min: "<<data[9]<<endl;
        cout<<"Max: "<<data[0]<<endl;

        return 0;
    }

void BubbleSort(int array1[], int n)
{
    int i, j, tmp;

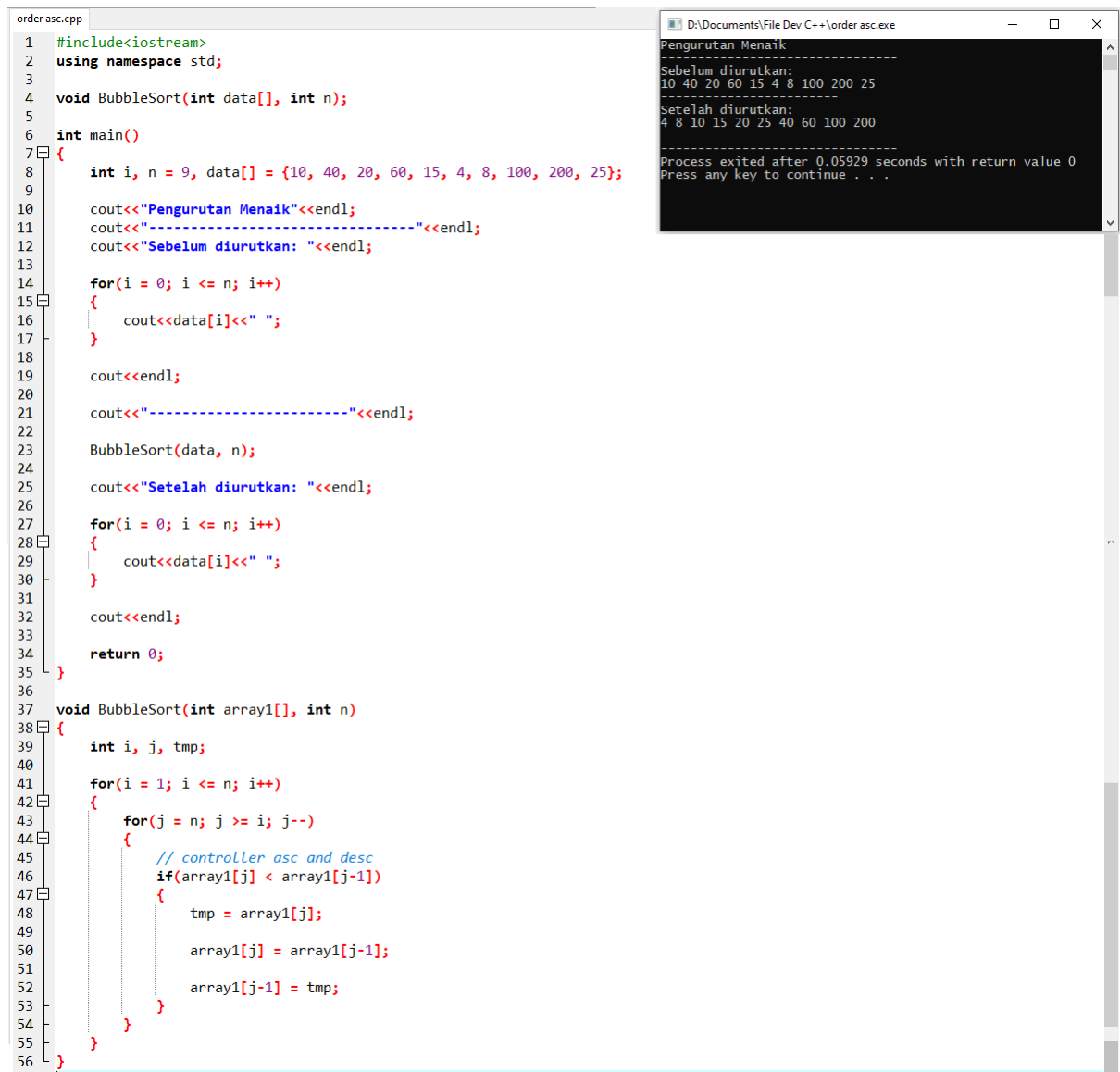
    for(i = 1; i <= n; i++)
    {
        for(j = n; j >= i; j--)
        {
            if(array1[j] > array1[j-1])
            {
                tmp = array1[j];

                array1[j] = array1[j-1];

                array1[j-1] = tmp;
            }
        }
    }
}

```

2.



```
1 #include<iostream>
2 using namespace std;
3
4 void BubbleSort(int data[], int n);
5
6 int main()
7 {
8     int i, n = 9, data[] = {10, 40, 20, 60, 15, 4, 8, 100, 200, 25};
9
10    cout<<"Pengurutan Menaik"<<endl;
11    cout<<"-----"<<endl;
12    cout<<"Sebelum diurutkan: "<<endl;
13
14    for(i = 0; i <= n; i++)
15    {
16        cout<<data[i]<<" ";
17    }
18
19    cout<<endl;
20
21    cout<<"-----"<<endl;
22
23    BubbleSort(data, n);
24
25    cout<<"Setelah diurutkan: "<<endl;
26
27    for(i = 0; i <= n; i++)
28    {
29        cout<<data[i]<<" ";
30    }
31
32    cout<<endl;
33
34    return 0;
35 }
36
37 void BubbleSort(int array1[], int n)
38 {
39     int i, j, tmp;
40
41     for(i = 1; i <= n; i++)
42     {
43         for(j = n; j >= i; j--)
44         {
45             // controller asc and desc
46             if(array1[j] < array1[j-1])
47             {
48                 tmp = array1[j];
49                 array1[j] = array1[j-1];
50                 array1[j-1] = tmp;
51             }
52         }
53     }
54 }
55
56 }
```

Pengurutan Menaik

Sebelum diurutkan:
10 40 20 60 15 4 8 100 200 25

Setelah diurutkan:
4 8 10 15 20 25 40 60 100 200

Process exited after 0.05929 seconds with return value 0
Press any key to continue . . .

Source Code:

```
#include<iostream>
using namespace std;
void BubbleSort(int data[], int n);

int main()
{
    int i, n = 9, data[] = {10, 40, 20, 60, 15, 4, 8, 100, 200, 25};

    cout<<"Pengurutan Menaik"<<endl;
    cout<<"-----"<<endl;
    cout<<"Sebelum diurutkan: "<<endl;

    for(i = 0; i <= n; i++)
    {
        cout<<data[i]<<" ";
    }

    cout<<endl;

    cout<<"-----"<<endl;

    BubbleSort(data, n);

    cout<<"Setelah diurutkan: "<<endl;

    for(i = 0; i <= n; i++)
    {
        cout<<data[i]<<" ";
    }

    cout<<endl;

    return 0;
}
```

```
void BubbleSort(int array1[], int n)
{
    int i, j, tmp;

    for(i = 1; i <= n; i++)
    {
        for(j = n; j >= i; j--)
        {
            // controller asc and desc
            if(array1[j] < array1[j-1])
            {
                tmp = array1[j];

                array1[j] = array1[j-1];

                array1[j-1] = tmp;
            }
        }
    }
}
```