LAPORAN UAS STRUKTUR DATA

ALVIN NOOR HIDAYAH
(21091397016)

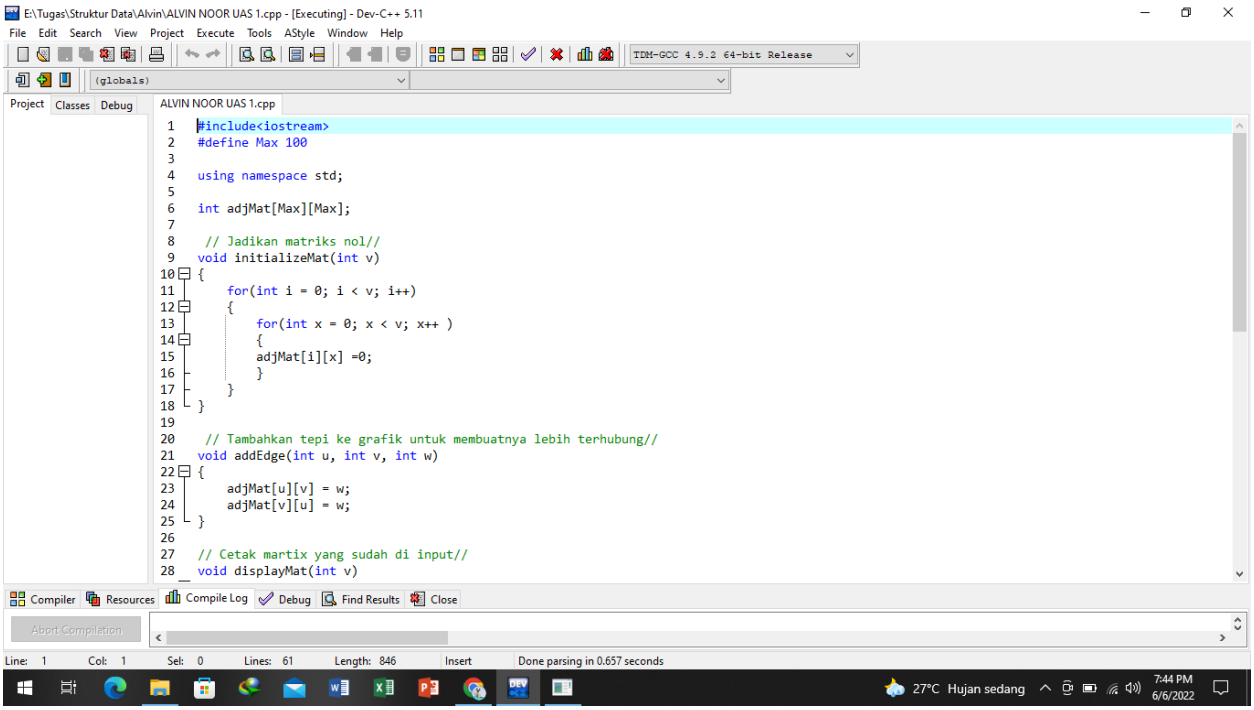
D4 MANEJEMAN INFORMATIKA
TAHUN PELAJARAN 2021/2022

CONTOH KODINGAN NO.1

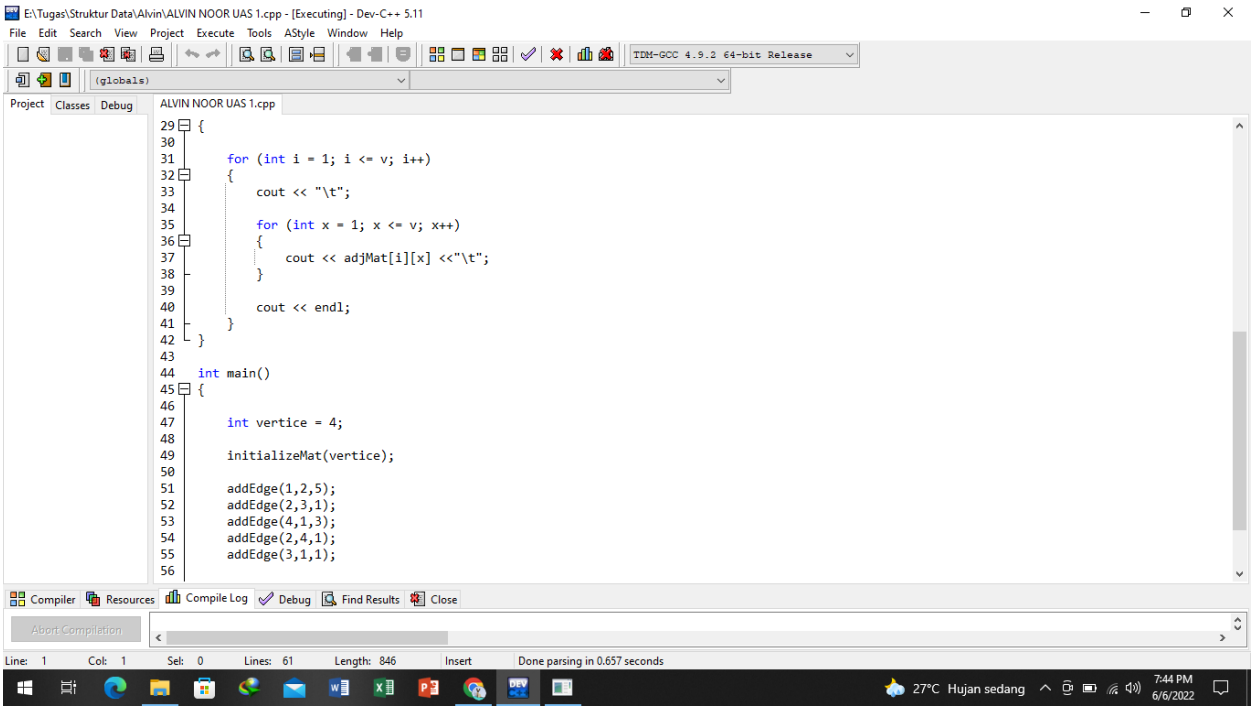
```
#include<iostream>
#define Max 100

using namespace std;

int adjMat[Max][Max];

 // Jadikan matriks nol//
void initializeMat(int v)
{
	for(int i = 0; i < v; i++)
	{
	   for(int x = 0; x < v; x++ )
	   {
	   adjMat[i][x] =0;
		}
	}
}

 // Tambahkan tepi ke grafik untuk membuatnya lebih terhubung//
void addEdge(int u, int v, int w)
{
	adjMat[u][v] = w;
	adjMat[v][u] = w;
}

// Cetak martix yang sudah di input//
void displayMat(int v)
{

	for (int i = 1; i <= v; i++)
	{
		cout << "\t";

		for (int x = 1; x <= v; x++)
		{
			cout << adjMat[i][x] <<"\t";
		}

		cout << endl;
	}
}
```

```
int main()
{

	int vertice = 4;

	initializeMat(vertice);

	addEdge(1,2,5);
	addEdge(2,3,1);
	addEdge(4,1,3);
	addEdge(2,4,1);
	addEdge(3,1,1);

	displayMat(vertice);

	return 0;
}
```

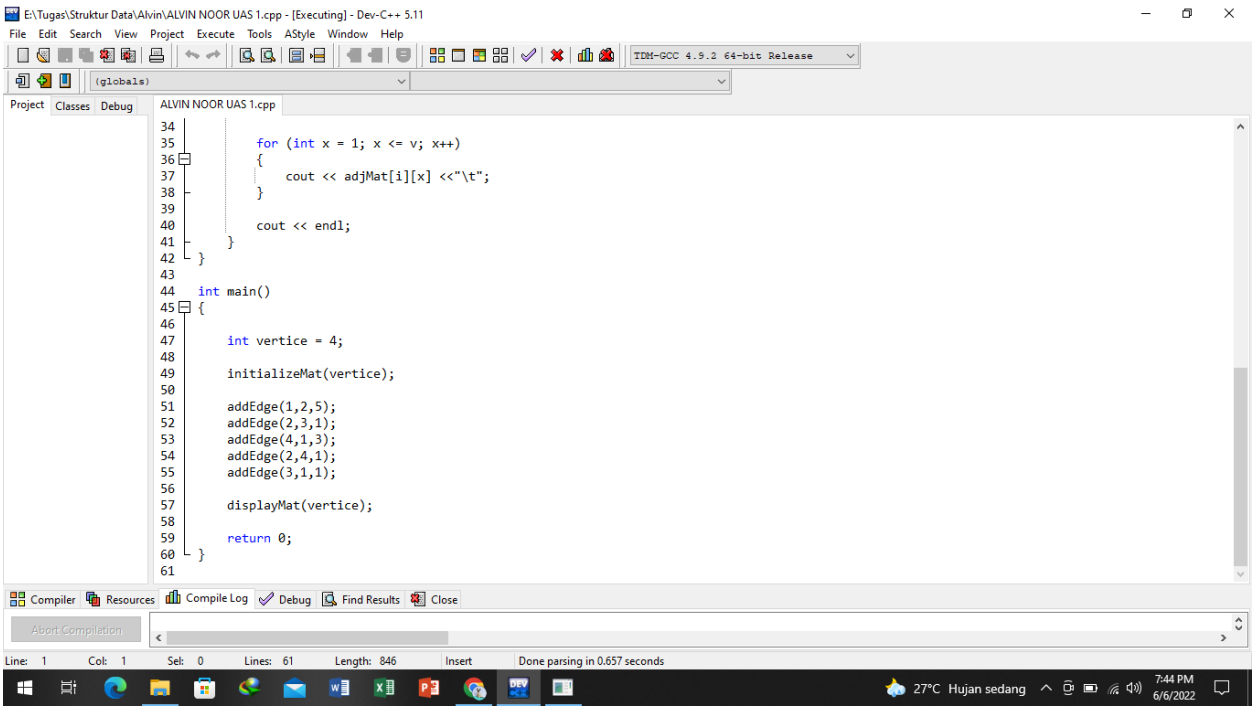
A. KODINGAN NOMER 1



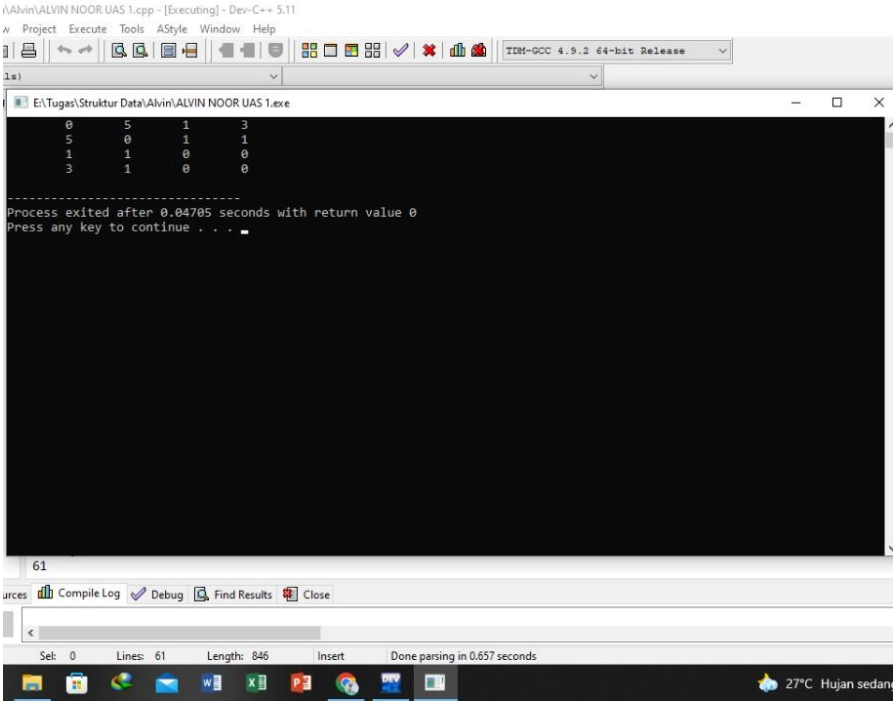
```
#include<iostream>
#define Max 100

using namespace std;

int adjMat[Max][Max];

 // Jadikan matriks nol//
void initializeMat(int v)
{
    for(int i = 0; i < v; i++)
    {
        for(int x = 0; x < v; x++ )
        {
        adjMat[i][x] =0;
        }
    }
}

 // Tambahkan tepi ke grafik untuk membuatnya lebih terhubung//
void addEdge(int u, int v, int w)
{
    adjMat[u][v] = w;
    adjMat[v][u] = w;
}

// Cetak martix yang sudah di input//
void displayMat(int v)
```



```
{

    for (int i = 1; i <= v; i++)
    {
        cout << "\t";

        for (int x = 1; x <= v; x++)
        {
            cout << adjMat[i][x] <<"\t";
        }

        cout << endl;
    }
}

int main()
{

    int vertice = 4;

    initializeMat(vertice);

    addEdge(1,2,5);
    addEdge(2,3,1);
    addEdge(4,1,3);
    addEdge(2,4,1);
    addEdge(3,1,1);
```


E:\Tugas\Struktur Data\Alvin\ALVIN NOOR UAS 1.cpp - [Executing] - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
TDM-GCC 4.9.2 64-bit Release
Project Classes Debug
ALVIN NOOR UAS 1.cpp
for (int x = 1; x <= v; x++)
{
cout << adjMat[i][x] <<"\t";
}
cout << endl;
}
}
int main()
{
int vertice = 4;
initializeMat(vertice);
addEdge(1,2,5);
addEdge(2,3,1);
addEdge(4,1,3);
addEdge(2,4,1);
addEdge(3,1,1);
displayMat(vertice);
return 0;
}
Compiler Resources Compile Log Debug Find Results Close
Abort Compilation
Line: 1 Col: 1 Sel: 0 Lines: 61 Length: 846 Insert Done parsing in 0.657 seconds
27°C Hujan sedang
7:44 PM
6/6/2022

A. OUTPUT


E:\Tugas\Struktur Data\Alvin\ALVIN NOOR UAS 1.exe
0 5 1 3
5 0 1 1
1 1 0 0
3 1 0 0
Process exited after 0.04705 seconds with return value 0
Press any key to continue . . .
61
Compile Log Debug Find Results Close
Sel: 0 Lines: 61 Length: 846 Insert Done parsing in 0.657 seconds
27°C Hujan sedang

CONTOH KODINGAN NO.2

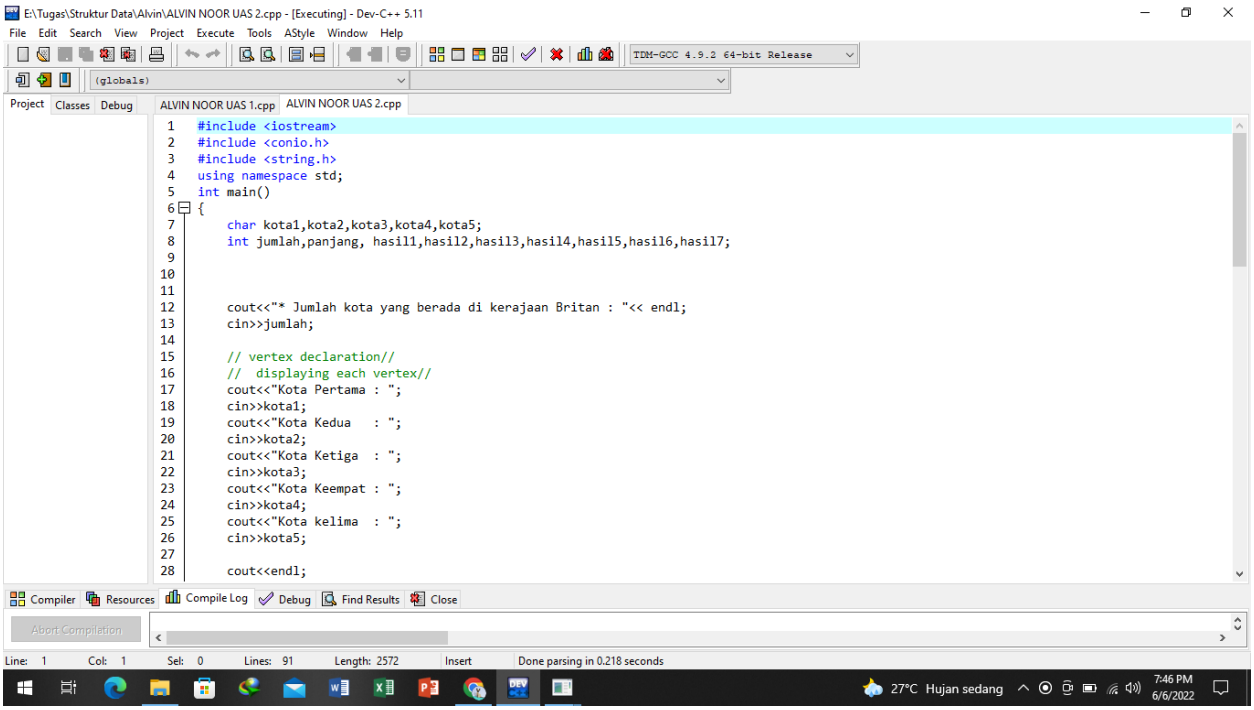
```
#include <iostream>
#include <conio.h>
#include <string.h>
using namespace std;
int main()
{
   char kota1,kota2,kota3,kota4,kota5;
   int jumlah,panjang, hasil1,hasil2,hasil3,hasil4,hasil5,hasil6,hasil7;



   cout<<"* Jumlah kota yang berada di kerajaan Britan : "<< endl;
   cin>>jumlah;

   // vertex declaration//
   //  displaying each vertex//
   cout<<"Kota Pertama : ";
   cin>>kota1;
   cout<<"Kota Kedua   : ";
   cin>>kota2;
   cout<<"Kota Ketiga  : ";
   cin>>kota3;
   cout<<"Kota Keempat : ";
   cin>>kota4;
         cout<<"Kota kelima  : ";
         cin>>kota5;
```

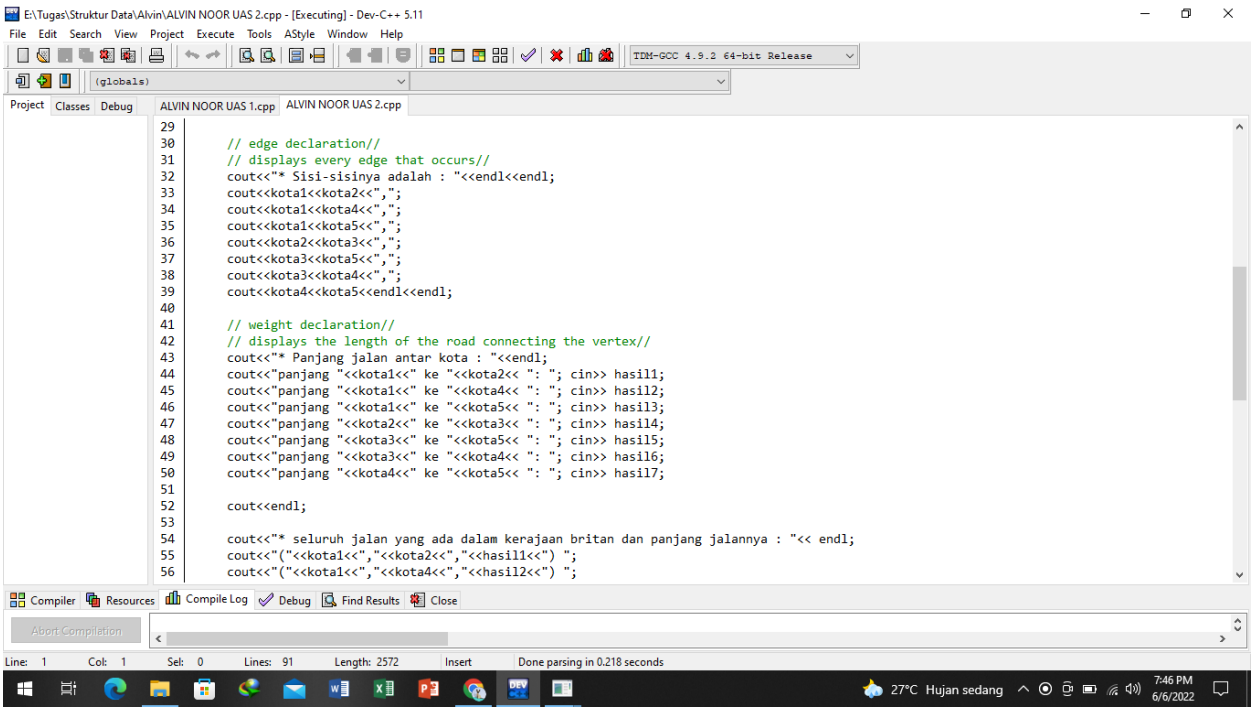
```
        cout<<endl;

        // edge declaration//
        // displays every edge that occurs//
        cout<<"* Sisi-sisinya adalah : "<<endl<<endl;
cout<<kota1<<kota2<<",";
cout<<kota1<<kota4<<",";
cout<<kota1<<kota5<<",";
cout<<kota2<<kota3<<",";
cout<<kota3<<kota5<<",";
cout<<kota3<<kota4<<",";
cout<<kota4<<kota5<<endl<<endl;

        // weight declaration//
        // displays the length of the road connecting the vertex//
        cout<<"* Panjang jalan antar kota : "<<endl;
        cout<<"panjang "<<kota1<<" ke "<<kota2<< ": "; cin>> hasil1;
        cout<<"panjang "<<kota1<<" ke "<<kota4<< ": "; cin>> hasil2;
        cout<<"panjang "<<kota1<<" ke "<<kota5<< ": "; cin>> hasil3;
        cout<<"panjang "<<kota2<<" ke "<<kota3<< ": "; cin>> hasil4;
        cout<<"panjang "<<kota3<<" ke "<<kota5<< ": "; cin>> hasil5;
        cout<<"panjang "<<kota3<<" ke "<<kota4<< ": "; cin>> hasil6;
        cout<<"panjang "<<kota4<<" ke "<<kota5<< ": "; cin>> hasil7;

        cout<<endl;

        cout<<"* seluruh jalan yang ada dalam kerajaan britan dan panjang jalannya : "<< endl;
        cout<<"("<<kota1<<","<<kota2<<","<<hasil1<<") ";
```

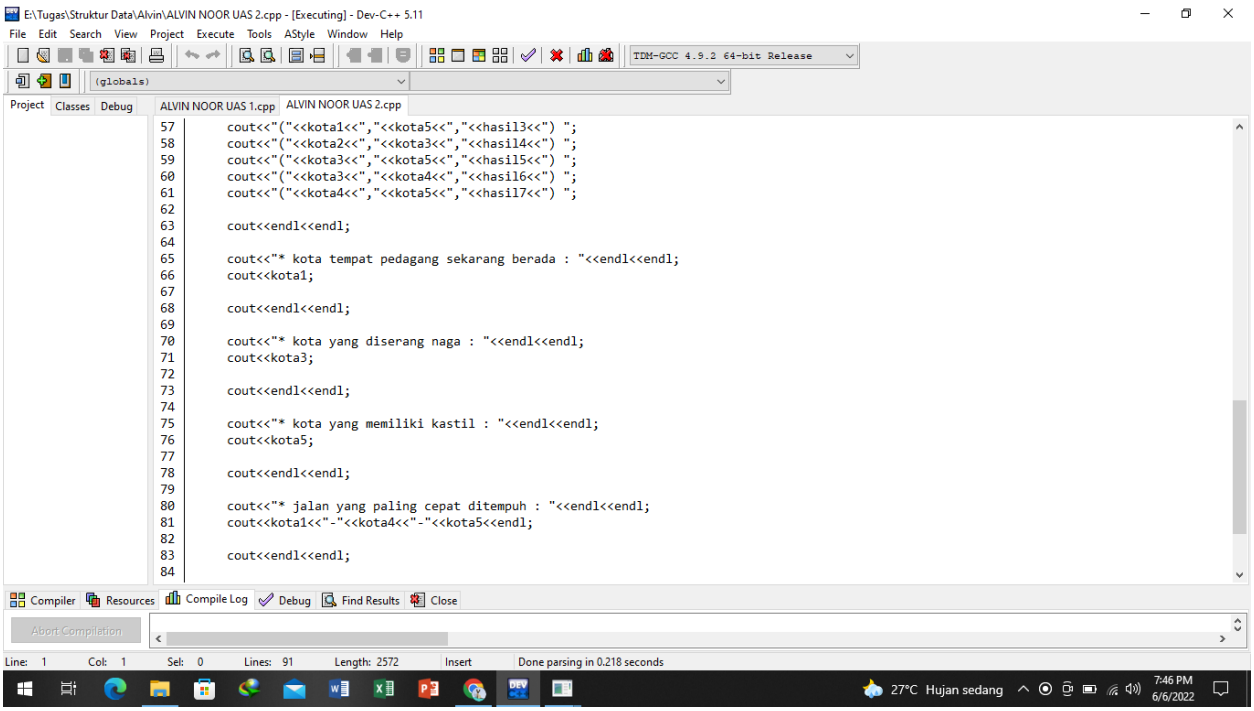
```
cout<<"("<<kota1<<","<<kota4<<","<<hasil2<<") ";
cout<<"("<<kota1<<","<<kota5<<","<<hasil3<<") ";
cout<<"("<<kota2<<","<<kota3<<","<<hasil4<<") ";
cout<<"("<<kota3<<","<<kota5<<","<<hasil5<<") ";
cout<<"("<<kota3<<","<<kota4<<","<<hasil6<<") ";
cout<<"("<<kota4<<","<<kota5<<","<<hasil7<<") ";

cout<<endl<<endl;

cout<<"* kota tempat pedagang sekarang berada : "<<endl<<endl;
cout<<kota1;

cout<<endl<<endl;

cout<<"* kota yang diserang naga : "<<endl<<endl;
cout<<kota3;

cout<<endl<<endl;

cout<<"* kota yang memiliki kastil : "<<endl<<endl;
cout<<kota5;

cout<<endl<<endl;

cout<<"* jalan yang paling cepat ditempuh : "<<endl<<endl;
cout<<kota1<<"-"<<kota4<<"-"<<kota5<<endl;

cout<<endl<<endl;
```

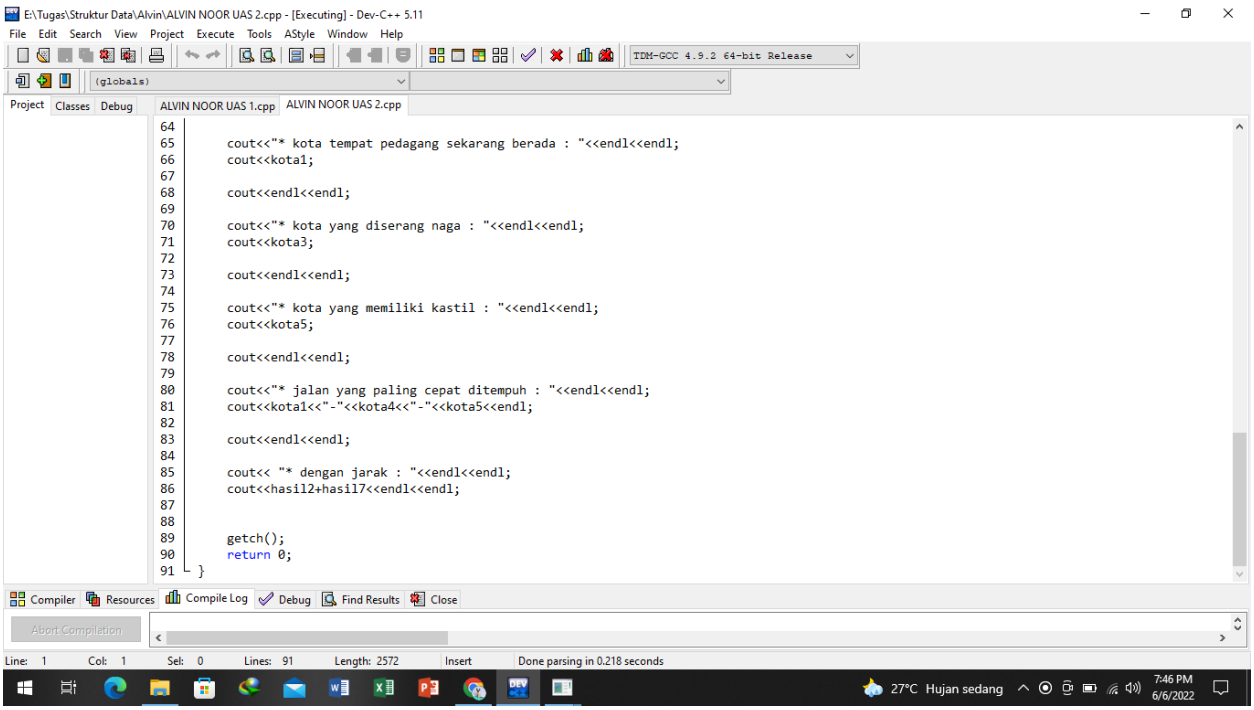
```
        cout<< "* dengan jarak : "<<endl<<endl;
        cout<<hasil2+hasil7<<endl<<endl;



        getch();
        return 0;
}
```

B. KODINGAN NOMER 2

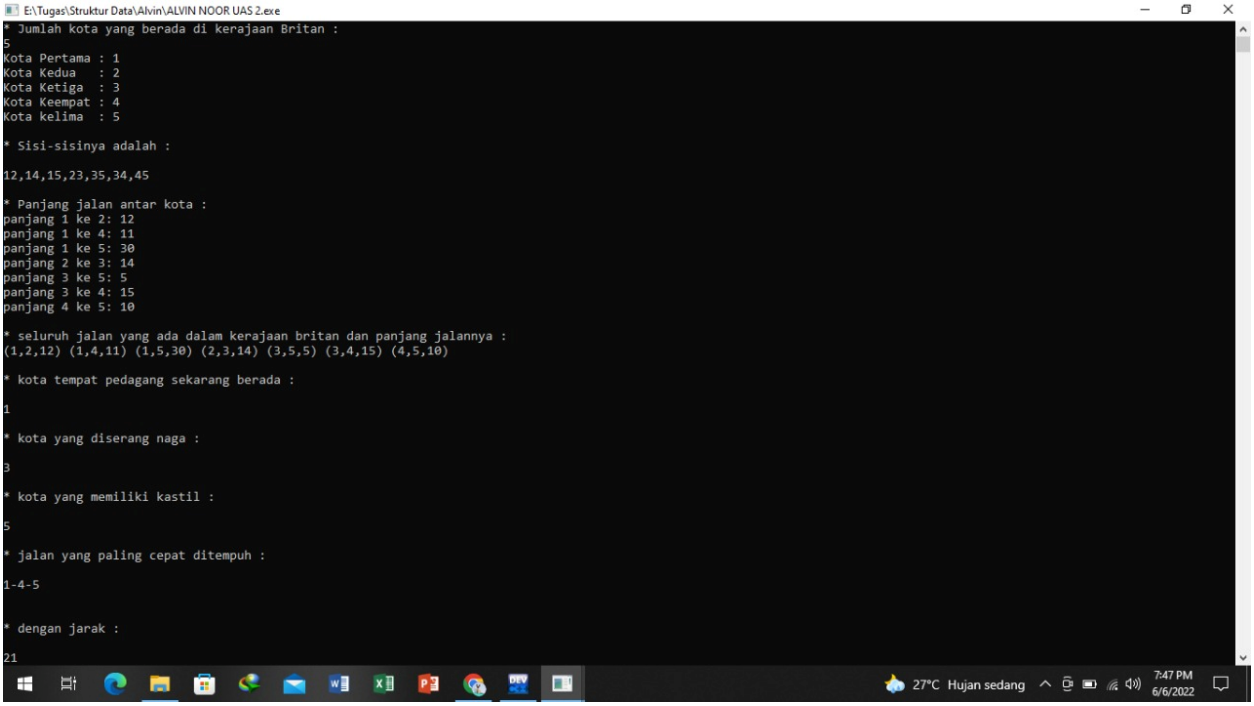





E:\Tugas\Struktur Data\Alvin\ALVIN NOOR UAS 2.cpp - [Executing] - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
TDM-GCC 4.9.2 64-bit Release
(globals)
Project Classes Debug
ALVIN NOOR UAS 1.cpp
ALVIN NOOR UAS 2.cpp
57 cout<<"("<<kota1<<","<<kota5<<","<<hasil3<<") ";
58 cout<<"("<<kota2<<","<<kota3<<","<<hasil4<<") ";
59 cout<<"("<<kota3<<","<<kota5<<","<<hasil5<<") ";
60 cout<<"("<<kota3<<","<<kota4<<","<<hasil6<<") ";
61 cout<<"("<<kota4<<","<<kota5<<","<<hasil7<<") ";
62
63 cout<<endl<<endl;
64
65 cout<<"* kota tempat pedagang sekarang berada : "<<endl<<endl;
66 cout<<kota1;
67
68 cout<<endl<<endl;
69
70 cout<<"* kota yang diserang naga : "<<endl<<endl;
71 cout<<kota3;
72
73 cout<<endl<<endl;
74
75 cout<<"* kota yang memiliki kastil : "<<endl<<endl;
76 cout<<kota5;
77
78 cout<<endl<<endl;
79
80 cout<<"* jalan yang paling cepat ditempuh : "<<endl<<endl;
81 cout<<kota1<<"-"<<kota4<<"-"<<kota5<<endl;
82
83 cout<<endl<<endl;
84
Compiler Resources Compile Log Debug Find Results Close
Abort Compilation
Line: 1 Col: 1 Sel: 0 Lines: 91 Length: 2572 Insert Done parsing in 0.218 seconds
27°C Hujan sedang
7:46 PM
6/6/2022


E:\Tugas\Struktur Data\Alvin\ALVIN NOOR UAS 2.cpp - [Executing] - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
TDM-GCC 4.9.2 64-bit Release
(globals)
Project Classes Debug
ALVIN NOOR UAS 1.cpp
ALVIN NOOR UAS 2.cpp
64
65 cout<<"* kota tempat pedagang sekarang berada : "<<endl<<endl;
66 cout<<kota1;
67
68 cout<<endl<<endl;
69
70 cout<<"* kota yang diserang naga : "<<endl<<endl;
71 cout<<kota3;
72
73 cout<<endl<<endl;
74
75 cout<<"* kota yang memiliki kastil : "<<endl<<endl;
76 cout<<kota5;
77
78 cout<<endl<<endl;
79
80 cout<<"* jalan yang paling cepat ditempuh : "<<endl<<endl;
81 cout<<kota1<<"-"<<kota4<<"-"<<kota5<<endl;
82
83 cout<<endl<<endl;
84
85 cout<< "* dengan jarak : "<<endl<<endl;
86 cout<<hasil2+hasil7<<endl<<endl;
87
88
89 getch();
90 return 0;
91 }
Compiler Resources Compile Log Debug Find Results Close
Abort Compilation
Line: 1 Col: 1 Sel: 0 Lines: 91 Length: 2572 Insert Done parsing in 0.218 seconds
27°C Hujan sedang
7:46 PM
6/6/2022

C. OUTPUT


E:\Tugas\Struktur Data\Alvin\ALVIN NOOR UAS 2.exe
* Jumlah kota yang berada di kerajaan Britan :
5
Kota Pertama : 1
Kota Kedua : 2
Kota Ketiga : 3
Kota Keempat : 4
Kota kelima : 5
* Sisi-sisinya adalah :
12,14,15,23,35,34,45
* Panjang jalan antar kota :
panjang 1 ke 2: 12
panjang 1 ke 4: 11
panjang 1 ke 5: 30
panjang 2 ke 3: 14
panjang 3 ke 5: 5
panjang 3 ke 4: 15
panjang 4 ke 5: 10
* seluruh jalan yang ada dalam kerajaan britan dan panjang jalannya :
(1,2,12) (1,4,11) (1,5,30) (2,3,14) (3,5,5) (3,4,15) (4,5,10)
* kota tempat pedagang sekarang berada :
1
* kota yang diserang naga :
3
* kota yang memiliki kastil :
5
* jalan yang paling cepat ditempuh :
1-4-5
* dengan jarak :
21
27°C Hujan sedang
7:47 PM
6/6/2022