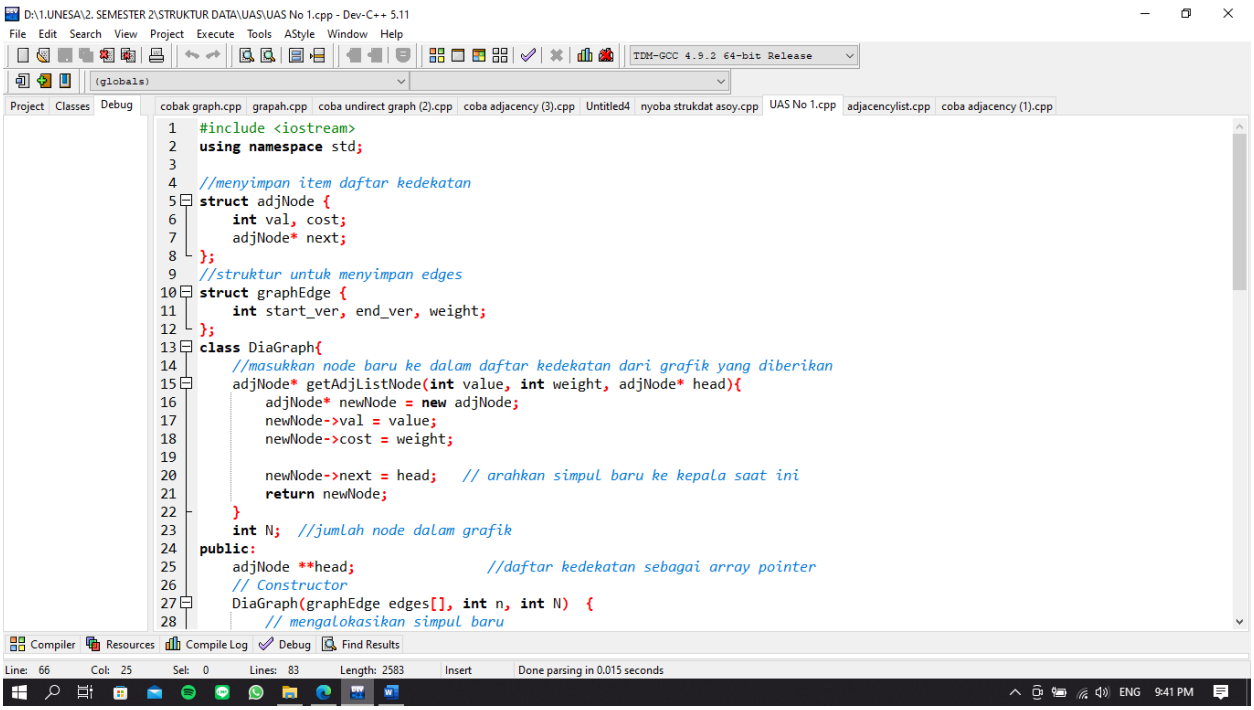
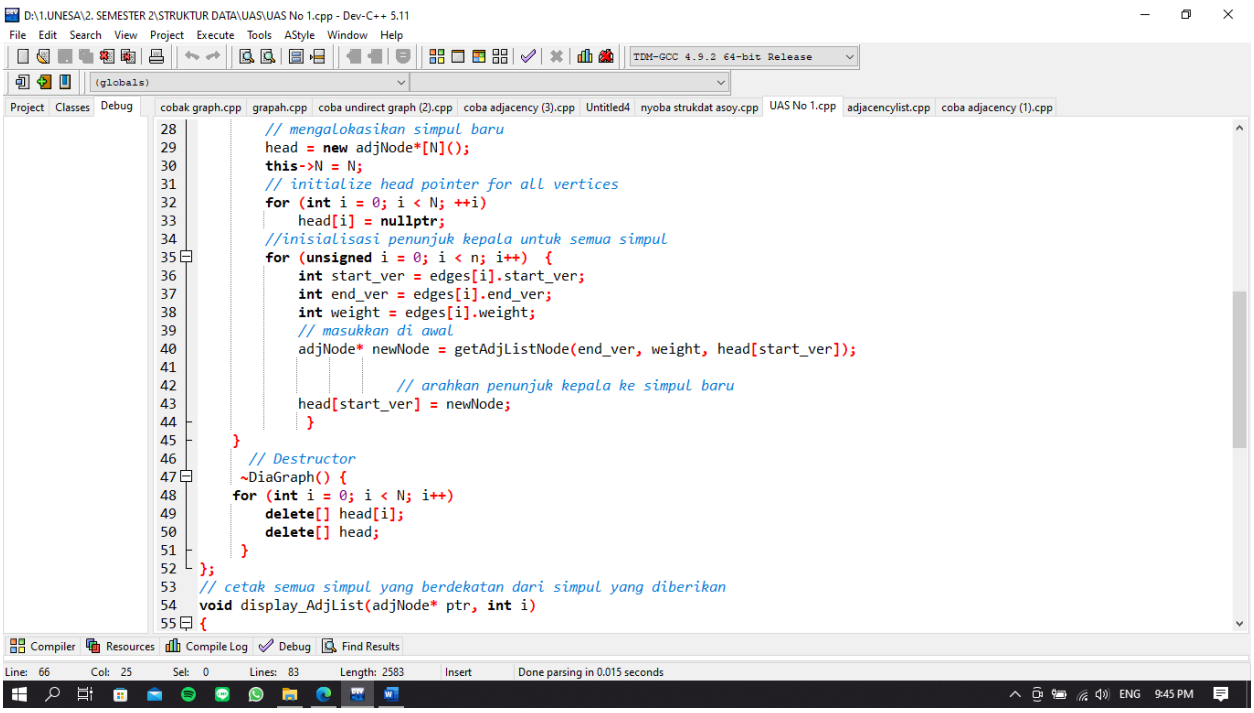
Laporan UAS Graph

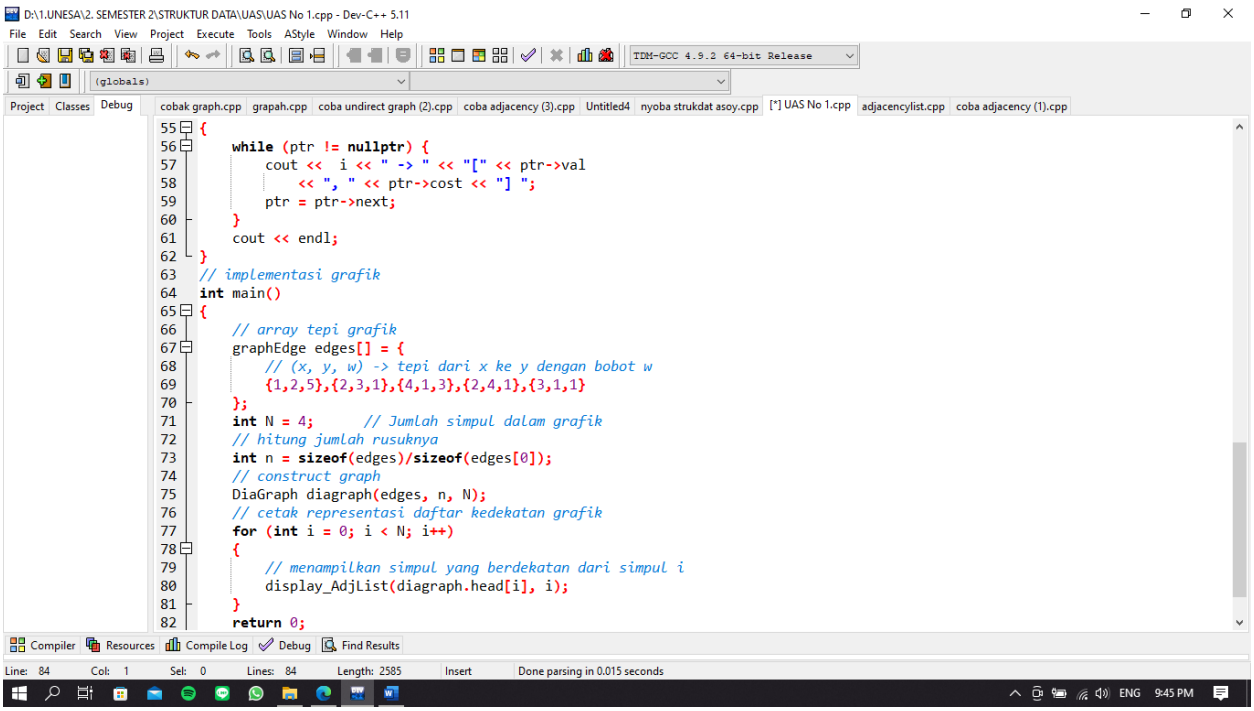
Fahreza Dzaky Rahmatullah | A | 21091397061



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

//menyimpan item daftar kedekatan
struct adjNode {
    int val, cost;
    adjNode* next;
};
//struktur untuk menyimpan edges
struct graphEdge {
    int start_ver, end_ver, weight;
};
class DiaGraph{
    //masukkan node baru ke dalam daftar kedekatan dari grafik yang diberikan
    adjNode* getAdjListNode(int value, int weight, adjNode* head){
        adjNode* newNode = new adjNode;
        newNode->val = value;
        newNode->cost = weight;

        newNode->next = head;   // arahkan simpul baru ke kepala saat ini
        return newNode;
    }
    int N;  //jumlah node dalam grafik
public:
    adjNode **head;               //daftar kedekatan sebagai array pointer
    // Constructor
    DiaGraph(graphEdge edges[], int n, int N)  {
        // mengalokasikan simpul baru
```



```cpp
        // mengalokasikan simpul baru
        head = new adjNode*[N]();
        this->N = N;
        // initialize head pointer for all vertices
        for (int i = 0; i < N; ++i)
            head[i] = nullptr;
        //inisialisasi penunjuk kepala untuk semua simpul
        for (unsigned i = 0; i < n; i++)  {
            int start_ver = edges[i].start_ver;
            int end_ver = edges[i].end_ver;
            int weight = edges[i].weight;
            // masukkan di awal
            adjNode* newNode = getAdjListNode(end_ver, weight, head[start_ver]);

                        // arahkan penunjuk kepala ke simpul baru
            head[start_ver] = newNode;
             }
    }
     // Destructor
    ~DiaGraph() {
    for (int i = 0; i < N; i++)
        delete[] head[i];
        delete[] head;
     }
};
// cetak semua simpul yang berdekatan dari simpul yang diberikan
void display_AdjList(adjNode* ptr, int i)
{
```


D:\1.UNESA\2. SEMESTER 2\STRUKTUR DATA\UAS\UAS No 1.cpp - 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
cobak graph.cpp grapah.cpp coba undirect graph (2).cpp coba adjacency (3).cpp Untitled4 nyoba strukdat asoy.cpp [*] UAS No 1.cpp adjacencylist.cpp coba adjacency (1).cpp
55 {
56 while (ptr != nullptr) {
57 cout << i << " -> " << "[" << ptr->val
58 << ", " << ptr->cost << "] ";
59 ptr = ptr->next;
60 }
61 cout << endl;
62 }
63 // implementasi grafik
64 int main()
65 {
66 // array tepi grafik
67 graphEdge edges[] = {
68 // (x, y, w) -> tepi dari x ke y dengan bobot w
69 {1,2,5},{2,3,1},{4,1,3},{2,4,1},{3,1,1}
70 };
71 int N = 4; // Jumlah simpul dalam grafik
72 // hitung jumlah rusuknya
73 int n = sizeof(edges)/sizeof(edges[0]);
74 // construct graph
75 DiaGraph diagraph(edges, n, N);
76 // cetak representasi daftar kedekatan grafik
77 for (int i = 0; i < N; i++)
78 {
79 // menampilkan simpul yang berdekatan dari simpul i
80 display_AdjList(diagraph.head[i], i);
81 }
82 return 0;
Compiler Resources Compile Log Debug Find Results
Line: 84 Col: 1 Sel: 0 Lines: 84 Length: 2585 Insert Done parsing in 0.015 seconds
ENG 9:45 PM