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Graph Representation

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#include <iostream>

using namespace std;

int main()

{

    int n; // no\_of\_nodes

    cout << "Enter the no. of nodes: ";

    cin >> n;

    int value[n];

    for (int i = 0; i < n; i++)

    {

        cin >> value[i];

    }

    cout << "Enter the distances (0 if self loop exist , -1 if not directly reachable)" << endl;

    // ADJACENCY MATRIX FORM------------------->

    // for GRAPH IS DIRECTED in

    int directed[n][n];

    for (int i = 0; i < n; i++)

    {

        for (int j = 0; j < n; j++)

        {

            cout << "Distance between the " << value[i] << " and " << value[j] << ": ";

            cin >> directed[i][j];

        }

    }

    for (int i = 0; i < n; i++)

    {

        for (int j = 0; j < n; j++)

        {

            if (directed[i][j] != 0 || directed[i][j] != -1)

            {

                cout << value[i] << " -> " << value[j] << ": " << directed[i][j] << " ";

            }

            cout << endl;

        }

    }

    // for NON\_DIRECTED graph

    int non\_directed[n][n];

    for (int i = 0; i < n; i++)

    {

        for (int j = i; j < n; j++)

        {

            cout << "Distance between the " << value[i] << " and " << value[j] << ": ";

            cin >> non\_directed[i][j];

        }

    }

    for (int i = 0; i < n; i++)

    {

        for (int j = i; j < n; j++)

        {

            cout << value[i] << " <-> " << value[j] << ": " << non\_directed[i][j] << " ";

        }

        cout << endl;

    }

    return 0;

}

// ADJANCENCY\_LIST\_METHOD ----------------------------->

#include <iostream>

#include <vector>

#include <utility>

using namespace std;

int main()

{

    int n; //no\_of\_elements

    cout << "Enter the no. of element: ";

    cin >> n;

    int value[n];

    for (int i = 0; i < n; i++)

    {

        cin >> value[i];

    }

    vector<pair<int, int>> arr[n]; //

    for (int i = 0; i < n; i++)

    {

        for (int j = 0; j < n; j++)

        {

            cout << "want pair " << value[i] << " and " << value[j] << " y/n? ";

            char select;

            cin >> select;

            if (select == 'y')

            {

                int weight;

                cout << "Enter the weight: ";

                cin >> weight;

                arr[i].push\_back(make\_pair(value[j], weight));

            }

        }

    }

    for (int i = 0; i < n; i++)

    {

        cout << value[i] << " ";

        for (int j=0 ; j< arr[i].size(); j++)

        {

            cout << "-> " << arr[i][j].first << " weight: " << arr[i][j].second << " ";

        }

        cout << endl;

    }

    return 0;

}