```cpp
#include <iostream>
using namespace std;
struct node {  int dist[20];
               int from[20];
} route[10];
int main()
{
    int dm[20][20], no;
    cout << "Enter no.of nodes" << endl;
    cin >> no;
    cout << "Enter dist.matrix" << endl;
    for( int i=0; i<no; i++)
    { for(int j=0; j<no; j++)
        {  cin >> dm[i][j];
           dm[i][j]=0;
           route[i].dist[j]= dm[i][j];
           route[i].from[j]= j;
        }
    }
    int flag=0;
    for ( int i=0; i<no; i++)
        for ( int j=0; j<no; j++)
            for( int k=0; k<no; k++)
            { if ( route[i].dist[j] > (route[i].dist[k] + route[k].dist[j]))
                { route[i].dist[j] = route[i].dist[k] + route[k].dist[j];
                  route[i].from[j] =k;
                }
            }

    for ( int i=0; i<no; i++)
    { for (int j=0; j<no; j++)
        {  cout << j+1 << route[i].from[j]+1, route[i].dist[j];
        }
    }
    return 0;
}
```