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


int main() {
    const int size = 30;
    int a[size][size] = {
        {0, 3, 0, 0, 0, 0, 6, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
        0, 0, 0, 0, 0, 0, 0, 0},
        {3, 0, 4, 0, 0, 0, 0, 2, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
        0, 0, 0, 0, 0, 0, 0, 0},
        {0, 4, 0, 3, 0, 0, 0, 0, 3, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
        0, 0, 0, 0, 0, 0, 0, 0},
        {0, 0, 3, 0, 1, 0, 0, 0, 0, 4, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
        0, 0, 0, 0, 0, 0, 0, 0},
        {0, 0, 0, 1, 0, 4, 0, 0, 0, 0, 5, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
        0, 0, 0, 0, 0, 0, 0, 0},
        {0, 0, 0, 0, 4, 0, 0, 0, 0, 0, 0, 8, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
        0, 0, 0, 0, 0, 0, 0, 0},
        {6, 0, 0, 0, 0, 0, 0, 4, 0, 0, 0, 0, 7, 0, 0, 0, 0, 0, 0, 0, 0, 0,
        0, 0, 0, 0, 0, 0, 0, 0},
        {0, 2, 0, 0, 0, 0, 4, 0, 1, 0, 0, 0, 0, 7, 0, 0, 0, 0, 0, 0, 0, 0,
        0, 0, 0, 0, 0, 0, 0, 0},
        {0, 0, 3, 0, 0, 0, 0, 1, 0, 1, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 0,
        0, 0, 0, 0, 0, 0, 0, 0},
        {0, 0, 0, 4, 0, 0, 0, 0, 1, 0, 2, 0, 0, 0, 0, 7, 0, 0, 0, 0, 0, 0,
        0, 0, 0, 0, 0, 0, 0, 0},
        {0, 0, 0, 0, 5, 0, 0, 0, 0, 2, 0, 7, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0,
        0, 0, 0, 0, 0, 0, 0, 0},
        {0, 0, 0, 0, 0, 8, 0, 0, 0, 0, 7, 0, 0, 0, 0, 0, 0, 3, 0, 0, 0, 0,
        0, 0, 0, 0, 0, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 7, 0, 0, 0, 0, 0, 0, 4, 0, 0, 0, 0, 1, 0, 0, 0,
        0, 0, 0, 0, 0, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 7, 0, 0, 0, 0, 4, 0, 5, 0, 0, 0, 0, 4, 0, 0,
        2, 0, 0, 0, 0, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 5, 0, 2, 0, 0, 0, 0, 7, 0,
        0, 8, 0, 0, 0, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 7, 0, 0, 0, 0, 2, 0, 7, 0, 0, 0, 0, 8,
        0, 0, 5, 0, 0, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 7, 0, 7, 0, 0, 0, 0,
        0, 0, 0, 3, 0, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 3, 0, 0, 0, 0, 7, 0, 0, 0, 0, 0,
        0, 0, 0, 0, 3, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1, 0, 0, 0, 0, 0, 0, 8, 0, 0,
        1, 0, 0, 0, 0, 1, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 4, 0, 0, 0, 0, 8, 0, 3, 0,
        0, 5, 0, 0, 0, 0, 2, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 7, 0, 0, 0, 0, 3, 0, 1,
        5, 0, 0, 0, 0, 0, 0, 7},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 8, 0, 0, 0, 0, 1, 0,
        0, 0, 0, 1, 0, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 2, 0, 0, 0, 0, 1,
        0, 0, 1, 0, 3, 0, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 8, 0, 0, 0, 0,
        0, 0, 0, 3, 0, 3, 0, 0},
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 5, 0, 0, 0,
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 3, 0, 0,
        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 3, 0,
```

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                        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 1,
0, 0, 0, 0, 3, 0, 3, 0},
                        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
2, 0, 0, 0, 0, 3, 0, 6},
                        {0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,
0, 7, 0, 0, 0, 0, 6, 0}
        };
        bool vis[size];
        int way[size];

        for (int i = 0; i < size; i++)
        {
                way[i] = 1000;
                vis[i] = 1;
        }

        way[0] = 0;
        int minin, min, tmp;

        do {
                minin = 1000;
                min = 1000;
                for (int i = 0; i < size; i++)
                {
                        if (vis[i] && way[i] < min)
                        {
                                min = way[i];
                                minin = i;
                        }
                }
                if (minin != 1000)
                {
                        for (int i = 0; i < size; i++)
                        {
                                if (a[minin][i] > 0)
                                {
                                        tmp = min + a[minin][i];
                                        if (tmp < way[i])
                                        {
                                                way[i] = tmp;
                                        }
                                }
                        }

                        vis[minin] = 0;
                }
        } while (minin < 1000);

        cout << "The shortest way fom v0 to v*: " << way[29] << endl;

        int e = 29;

    int massw[30] = { e };
    massw[0] = e + 1;
    int on = 1;
    int wl = way[29];
    while (e != 0)
    {
        for (int i = 0; i < size; i++)
        {
                if (a[e][i] != 0)
                {
                        int temp = wl - a[e][i];
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```cpp
                    if (temp == way[i])
                    {
                            wl = temp;
                            e = i;
                            massw[on] = i + 1;
                            on++;
                    }
                }
            }
        }
        for (int i = on-1; i >= 0; i--)
        {
            cout << massw[i] << "\t";
        }

        return 0;
}
```