

```

1 // Max Flow(FordFulkerson):
2 #include<bits/stdc++.h>
3 using namespace std;
4 #define MAXN 205
5 int n,vis[MAXN],par[MAXN],cap[MAXN][MAXN],flow[MAXN][MAXN];
6 vector<int>ed[MAXN];
7
8 bool BFS(int source,int sink) {
9     for(int i=0; i<MAXN; i++) vis[i]=0;
10    for(int i=0; i<MAXN; i++) par[i]=i;
11
12    queue<int>qq; qq.push(source); vis[source] = 1;
13
14    while(!qq.empty()){
15        int u = qq.front(); qq.pop();
16
17        for(int i=0; i<ed[u].size(); i++){
18            int v = ed[u][i];
19
20            if(vis[v]==0 && cap[u][v]-flow[u][v]>0){
21                vis[v] = 1; par[v] = u;
22                if(v==sink) return true;
23                qq.push(v);
24            }
25        }
26    }
27
28    return false;
29}
30
31 int EdmondKarp(int source,int sink) {
32     int MAXFLOW = 0;
33
34     while(BFS(source,sink)) {
35         int FLOW = 1000000007;
36         int now = sink;
37
38         while(now != source){
39             int prev = par[now];
40             FLOW = min(FLOW,cap[prev][now]-flow[prev][now]);
41             now = prev;
42         }
43
44         MAXFLOW += FLOW;
45
46         now = sink;
47         while(now != source){
48             int prev = par[now];
49             flow[prev][now] += FLOW;
50             flow[now][prev] -= FLOW;
51             now = prev;
52         }
53     }
54
55     return MAXFLOW;
56 }
57
58 int FordFulkerson(int source,int sink){
59     int MAXFLOW = EdmondKarp(source,sink);
60
61     return MAXFLOW;
62 }
```

```
63 int main(){
64     int tt; scanf("%d",&tt);
65     for(int ks=1; ks<=tt; ks++) {
66         scanf("%d",&n);
67
68         int source,sink,m;
69         scanf("%d%d%d",&source,&sink,&m);
70
71         memset(cap,0,sizeof(cap));
72         memset(flow,0,sizeof(flow));
73
74         for(int i=1; i<=m; i++) {
75             int u,v,w;
76             scanf("%d%d%d",&u,&v,&w);
77             if(u>v)swap(u,v);
78
79             if(cap[u][v]==0)ed[u].push_back(v);
80             if(cap[v][u+100]==0) ed[v].push_back(u+100);
81             if(cap[u+100][v]==0) ed[u+100].push_back(v);
82
83             cap[u][v] += w;
84             cap[v][u+100] += w;
85             cap[u+100][v] += w;
86         }
87
88         int MAXFLOW = FordFulkerson(source,sink);
89
90         printf("Case %d: %d\n",ks,MAXFLOW);
91
92         for(int i=0; i<MAXN; i++)ed[i].clear();
93     }
94
95     return 0;
96 }
```