

```

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][u]==0) ed[u+100].push_back(u);
82
83              cap[u][v] += w;
84              cap[v][u+100] += w;
85              cap[u+100][u] += 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  }
```