

Max Flow:

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#define MAXN 205
int n,vis[MAXN],par[MAXN],cap[MAXN][MAXN],flow[MAXN][MAXN];
vector<int>ed[MAXN];
bool BFS(int source,int sink)
{
    for(int i=0; i<MAXN; i++) vis[i]=0;
    for(int i=0; i<MAXN; i++) par[i]=i;
    queue<int>qq; qq.push(source); vis[source] = 1;
    while(!qq.empty()){
        int u = qq.front(); qq.pop();
        for(int i=0; i<ed[u].size(); i++){
            int v = ed[u][i];
            if(vis[v]==0 && cap[u][v]-flow[u][v]>0){
                vis[v] = 1; par[v] = u;
                if(v==sink) return true;
                qq.push(v);
            }
        }
    }
    return false;
}

int EdmondKarp(int source,int sink)
{
    int MAXFLOW = 0;
    while(BFS(source,sink))
    {
        int FLOW = 1000000007;
        int now = sink;
        while(now != source){
            int prev = par[now];
            FLOW = min(FLOW,cap[prev][now]-flow[prev][now]);
            now = prev;
        }

        MAXFLOW += FLOW;

        now = sink;
        while(now != source){
            int prev = par[now];
            flow[prev][now] += FLOW;
            flow[now][prev] -= FLOW;
            now = prev;
        }
    }
    return MAXFLOW;
}
```

```

int FordFulkerson(int source,int sink)
{
    int MAXFLOW = EdmondKarp(source,sink);
    return MAXFLOW;
}

int main()
{
    int tt; scanf("%d",&tt);
    for(int ks=1; ks<=tt; ks++)
    {
        scanf("%d",&n);

        int source,sink,m;
        scanf("%d%d%d",&source,&sink,&m);

        memset(cap,0,sizeof(cap));
        memset(flow,0,sizeof(flow));

        for(int i=1; i<=m; i++)
        {
            int u,v,w;
            scanf("%d%d%d",&u,&v,&w);
            if(u>v) swap(u,v);
            if(cap[u][v]==0) ed[u].push_back(v);
            if(cap[v][u+100]==0) ed[v].push_back(u+100);
            if(cap[u+100][u]==0) ed[u+100].push_back(u);

            cap[u][v] += w;
            cap[v][u+100] += w;
            cap[u+100][u] += w;
        }

        int MAXFLOW = FordFulkerson(source,sink);

        printf("Case %d: %d\n",ks,MAXFLOW);

        for(int i=0; i<MAXN; i++) ed[i].clear();
    }

    return 0;
}

```