2020 年 8 月 16 日

1.P5318 【深基18.例3】查找文献

算法思路：

用邻接表去存图，然后从顶点1开始dfs和bfs

代码：

```
#include <iostream>
#include <cstring>
#include <queue>
using namespace std;

struct G{
    int val;
    G *next;
};

G graph[100010];
int visit[100010] = {0};

void dfs(int index){
    visit[index] = 1; //访问标记
    cout << index << " ";
    G *p = &graph[index];
    while( p->next != NULL){
        p = p->next;
        if( visit[p->val] == 0)
            dfs(p->val);
    }
}

void bfs(int index){
    queue<int> Q;
    Q.push(index);
    visit[index] = 1;
    G *p;

    while (!Q.empty()){
        int v = Q.front();
        cout << v << " ";
        Q.pop();
        p = graph[v].next;
        while(p!=NULL){
            if(visit[p->val] == 0){
```

```
                Q.push(p->val);
                visit[p->val] = 1;
            }
            p = p->next;
        }
    }

}

int main(){
    int n,m,x,y;
    cin >> n >> m;
    for(int i = 1; i <= n; i++){
        graph[i].val = i;
        graph[i].next = NULL;
    }
    for(int i = 1; i <= m; i++){
        cin >> x >> y;
        G *node = new G;
        node->val = y;
        node->next = NULL;
        G *p = &graph[x];
        G *q;
        //按顺序插入链表
        while( p->next != NULL && p->next->val < y)    p = p->next;
        q = p->next;
        p->next = node;
        node->next = q;
    }
    dfs(1);
    cout << endl;
    memset(visit,0,sizeof(visit));
    bfs(1);
}
```

Accepted截图：

备注

1. 注意到了要排序，没注意到有的文章可能看不了（菜~

2.P1339 [USACO09OCT]Heat Wave G

算法思路：

昨天的Floyd和今天的Dijkstra都是看着姐姐的代码和别人的博客学的呀~~
之前学过的连理论都忘了啦

代码：

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

int G[2510][2510],visit[2510] = {0},dis[2510];

int main(){
    int  n,m,s,t,u,v,w;
    cin >> n >> m >> s >> t;
    memset(G,63,sizeof(G));
    for(int i = 0; i < m; i++){
        cin >> u >> v >> w;
        G[u][v] = w;
        G[v][u] = w;
    }
    int index,minimum ;
    for(int i = 1; i <= n; i++){
        dis[i] = G[s][i];   //从s->i的距离
    }
    visit[s] = 1;   //s点进入集合
    for(int i = 1; i < n; i++){    //剩下的n-1个点找最小路径
        minimum  = 1e9; //∞ = 1e9,

        for(int j = 1; j <= n; j++){
            if(visit[j] == 0 && dis[j] < minimum ){
                index = j;
                minimum  = dis[j];
            }
        }//从dis数组中找最小的值，即从当前源点出发的最短路径

        visit[index] = 1;   //加入到集合中
        for(int j = 1; j <= n; j++){
            dis[j] = min(dis[j],dis[index]+G[index][j]);    //更新距离表
        }
    }
    cout << dis[t];
    return 0;
}
```

Accepted截图：

wongsiyoung

所属题目 P1339 [USACO09OCT]Heat Wave G

评测状态 Accepted

评测分数 100

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