

Week 3 Programming Assignment - Frog Jumping

```
#include<bits/stdc++.h>
```

```
using namespace std;
```

```
const int N=1e5;
```

```
vector<int> adj[N];
```

```
int m,n;
```

```
int vis[N];
```

```
int lvl[N];
```

```
void bfs(int u){
```

```
    queue<int>q;
```

```
    lvl[u]=0,vis[u]=1;
```

```
    q.push(u);
```

```
    while(!q.empty()){
```

```
        int u=q.front();
```

```
        q.pop();
```

```
        for(int i: adj[u]){
```

```
            if(not vis[i]){
```

```
                lvl[i]=1+lvl[u];
```

```
                vis[i]=1;
```

```
                q.push(i);
```

```
            }
```

```
        }
```

```
    }
```

```
}
```

```
int main(){
```

```
    ios::sync_with_stdio(false);
```

```
    cin.tie(NULL);
```

```
    cin>>m>>n;
```

```
    int count=0;
```

```
for(int i=1;i<=m*n;++i){  
    int a;  
    cin>>a;  
    if((i-1)%n==0)count++;  
    for(int j=i+1;j<=i+a and j<=count*n ;++j)  
        adj[i].push_back(j);  
}  
    for(int i=1;i<=m*n;++i){  
        int a;  
        cin>>a;  
        for(int j=i;j+n<=n*m and a;j+=n,a--)  
            adj[i].push_back(j+n);  
        }  
        bfs(1);  
        cout<<lvl[n*m]<<endl;  
        return 0;  
    }
```