

H	GoT Crazyness	Time limit: 1 sec
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Problem:

All the houses of Westeros have prepared themselves for the war. Some houses have alliance with other houses and some have alliance with none. Alliance between two houses is not both way. That means if house Tarley have their alliance with house Tyrell, then Tyrells can't have alliance with Tarleys. It doesn't make any sense! But since Bran is messing with the past nowadays, all have gone mad.

Given names of n houses, and m alliances between them we need to know how many camps can be formed. A camp consists of one or more houses. Only condition is the houses need to have cyclic alliance among them. E.g. if house Stark have their alliance with house Arryn, Arryns have their alliance with Tully and Tully with Stark, and then these three houses can form a camp.

After getting the camps, we need to find if there exists such a camp which has more member houses than rest of the camps combined. If such case occurs then that large camp will make the other camps join their forces and fight the White Walkers. Otherwise no one will listen to anyone and fight will continue. And they will be doomed.

Input:

First line of the input is the test case number T ($1 \leq T \leq 14$). Next T set of lines each have two integers n ($1 \leq n \leq 1000$) and m ($1 \leq m \leq n*(n-1)/2$) followed by m lines which contain 2 strings u, v ($1 \leq |u|, |v| \leq 10$). It means house u has alliance with house v . String u, v consists only of lowercase english letter.

Output:

If no camp has more members than rest of the houses, output "Doomed.". Otherwise output "Fight the white walkers."

Input	Output
3	Doomed.
6 6	Doomed.
Stark Tully	Fight the white walkers.
Arryn Stark	
Tully Arryn	
Bolton Lannister	
Lannister Tyrell	
Tyrell Bolton	
6 3	
Stark Tully	
Arryn Stark	
Tully Arryn	
5 3	
Stark Tully	
Arryn Stark	
Tully Arryn	