Nasa, being the most talented programmer of his time, can't think things to be so simple. Recently all his neighbors have decided to connect themselves over a network (actually all of them want to share a broadband internet connection :-)). But he wants to minimize the total cost of cable required as he is a bit fastidious about the expenditure of the project. For some unknown reasons, he also wants a second way left. I mean, he wants to know the second best cost (if there is any which may be same as the best cost) for the project. I am sure, he is capable of solving the problem. But he is very busy with his private affairs(?) and he will remain so. So, it is your turn to prove yourself a good programmer. Take the challenge (if you are brave enough)...

Input

Input starts with an integer $t \leq 1000$ which denotes the number of test cases to handle. Then follows t datasets where every dataset starts with a pair of integers v ($1 \leq v \leq 100$) and e ($0 \leq e \leq 200$). v denotes the number of neighbors and e denotes the number of allowed direct connections among them. The following e lines contain the description of the allowed direct connections where each line is of the form '*start end cost*', where *start* and *end* are the two ends of the connection and *cost* is the cost for the connection. All connections are bi-directional and there may be multiple connections between two ends.

Output

There may be three cases in the output

1. No way to complete the task,
2. There is only one way to complete the task,
3. There are more than one way.

Output '`No way`' for the first case, '`No second way`' for the second case and an integer c for the third case where c is the second best cost. Output for a case should start in a new line.

Sample Input

```
4
5 4
1 2 5
3 2 5
4 2 5
5 4 5
5 3
1 2 5
3 2 5
5 4 5
5 5
1 2 5
3 2 5
4 2 5
5 4 5
4 5 6
1 0
```

Sample Output

```
Case #1 : No second way
Case #2 : No way
Case #3 : 21
Case #4 : No second way
```