## Problem 1: Network Planning

Time limit: 3 seconds

The administration of a university is constructing new departments and hostels and plans to deploy a robust network infrastructure to ensure seamless internet connectivity for all students. The campus network will connect multiple hostel buildings through a series of cables, represented by an undirected graph where intersections are connection points, and edges are communication cables.

To ensure optimal performance, the university wants to install a central router at an intersection such that the average communication delay (i.e., distance through cables) from this router to all other hostels is minimized. Your task is to help the university determine the best location for the central router.

### Input

The first line contains an integer for number of test cases. For each test case the first line contains two integers, $N\ (2 \leq N \leq 1500)$ and $M\ (1 \leq M \leq 5000)$, representing the number of hostel buildings and number of transmission cables, respectively.

The next $M$ lines contain two integers and one real number each, $U$ , $V\ (1 \leq U, V \leq N)$, indicating a cable that connects two buildings $U$ and $V$, followed by $D_{uv}$ indicating the distance between the buildings $U$ and $V$.

### Output

Output the identifier of the university building where the central router should be placed, minimizing the average communication delay to all other buildings. If multiple buildings have the same delay, select the smallest building identifier.

### Sample input & output

The following is an example of a sample input and corresponding correct outputs.

| Sample input | Sample Output |
|---|---|
| 1<br>6 6<br>1 2 833<br>1 3 673<br>2 4 57<br>3 4 473<br>4 5 944<br>4 6 36 | 4 |