

Lab Record



Incharge:

Certificate

This is to certify that Mr. Divyanshu Kakwani, USN 1RV13IS015 of Semester 6, Information Science and Engineering has satisfactorily completed the course of experiments in practical Database Management system prescribed by VTU university during the academic year 2015-2016.

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Semaphore implementation

Specification: implement sema_up and sema_down

```
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TCP Server

Task: Create a tcp server

LAST_EPOCH=16918

Hasmukh and his birthday party

Problem

Hasmukh is celebrating his 20th birthday in his hometown Jhalor. To make his birthday special, he has decided to invite all the people of Jhalor to his party.

The city Jhalor consists of N houses interconnected by exactly $N-1$ roads in such a way that any house is connected by any other. One of these houses is owned by Hasmukh from where he sends out his servants, one to each house of the city, to distribute the invitation cards.

As commanded by Hasmukh, each servant goes directly to his assigned house as quickly as possible.

Hasmukh is tight on time. So he wants you to tell him how long would it take for all his servants to return home so that he can give them further errands.

Input

The first line contains the number of test cases T . Each test case starts with a line containing two numbers N and H , where N is the number of vertices, and H is the location of Hasmukh's house. This is followed by $N-1$ lines, each containing three numbers u, v, D — where u and v are the two ends of a road and D is the time taken to travel through this road.

Note that the houses are numbered from 0 to N-1.

Output

For each test case, print the time taken, in mins, for all the servants to return

Constraints

‘ ‘ ‘

$0 < T \leq 100$

$0 < N \leq 1000$

$0 < H < N$

$0 < u, v < N$

$0 < D \leq 10^9$

‘ ‘ ‘

Time Limit

‘1.0000 seconds ‘

Example

Input

‘ ‘ ‘

1

3 0

0 1 4

0 2 5

“ “

Output

“ “

10

“ “

Explanation

All the servants start at house 0. Following Hasmukh’s command, one of the servants goes to the house numbered 1 and another to the house numbered 2. The first one returns in 4 to reach house 1 and 4 to return , and the second returns in 10 mins. Hence, the