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Coding Arena



Time Left

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A B C D E F

Problem : TestVita

TCS is working on a new project called "TestVita". There are **N** modules in the project. Each module (**i**) has completion time denoted in number of hours (**H_i**) and may depend on other modules. If Module **x** depends on Module **y** then one needs to complete **y** before **x**.

As Project manager, you are asked to deliver the project as early as possible.
Provide an estimation of amount of time required to complete the project.

Input Format:

First line contains **T**, number of test cases.

For each test case:

1. First line contains **N**, number of modules.
2. Next **N** lines, each contain:
 - (**i**) Module ID
 - (**H_i**) Number of hours it takes to complete the module
 - (**D**) Set of module ids that **i** depends on - integers delimited by space.

Output Format:

Output the minimum number of hours required to deliver the project.

Constraints:

1. $1 \leq T \leq 10$
2. $0 < N < 1000$; number of modules
3. $0 < i \leq N$; module ID
4. $0 < H_i < 60$; number of hours it takes to complete the module **i**
5. $0 \leq |D| < N$; number of dependencies
6. $0 < D_k \leq N$; module ID of dependencies

Sample Input and Output

SNo.	Input	Output
1	1 5 1 5 2 6 1 3 3 2 4 2 3 5 1 3	16

Explanation:

Module 2 depends on module 1, hence complete module 1 first

After completing module 1 we can complete module 2 and then module 3

Module 4 and 5 can be started simultaneously in parallel after module 3 is completed.

Hence the answer = $5 + 6 + 3 + 2 = 16$

Note:

Please do not use package and namespace in your code. For object oriented languages your code should be written in one class.

Note:

Participants submitting solutions in C language should not use functions from `<conio.h>` / `<process.h>` as these files do not exist in gcc

Note:

For C and C++, return type of `main()` function should be `int`.

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Submit Answer

☐ I, **SHASHANK SINGH** confirm that the answer submitted is my own.



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