**Algorithms Advanced with C#: Exam**

**1. Trains Part Three**

More trains more problems.

There is an issue with the fuel system you designed for the new Iron Girder 3.0. To be honest the fuel system is a mess, you created complex network but its not efficient enough and you need to fix it. Compute the most efficient fuel path, where most efficient means the most fuel delivered to the engine.

## Input

* The **first line** holds an integer **n** – the number of places where the fuel system splits into different tubes
* On the **second line**, you will receive the number **m** – the number of tubes
* On the **third** **line** the fuel source and the injector you need to put most fuel to as **{source} {injector}**
* At the next **m** **lines**, you will receive the fuel system in the format: **{from} {to} {throughput}**

## Output

* Single number the max fuel you can transfer.

## Constraints

* Number of fuel system splits will be an integer in the range [**0**…**10000**]
* Number of fuel tubes will be an integer in the range [**0…10000**]
* The throughput will be an integer in the range [**0…10000**]
* All fuel split nodes will be numbered from **0** to **N - 1**.

## Examples

|  |  |
| --- | --- |
| **Input** | **Output** |
| 5  5  0 4  0 1 1  0 1 5  2 3 4  3 4 15  0 3 10 | 10 |
| 10  9  0 8  0 1 12  1 2 14  1 3 6  2 3 32  3 7 7  2 4 1  7 6 9  7 8 8  1 8 10 | 12 |

“Moist groaned. It was the crack of seven and he was allergic to the concept of two seven o'clocks in one day.”

― Terry Pratchett, Raising Steam