**Algorithms with Java: Exam 01-08-2020**

This document defines the exam for ["Algorithms – Advanced (Java)" course @ Software University](https://softuni.bg/trainings/2992/algorithms-advanced-with-java-june-2020). Please submit your solutions (source code) of all below described problems in [Judge](https://judge.softuni.bg/Contests/2524/Algorithms-Advanced-with-Java-Exam-01-August-2020).

1. **Data Transfer**

This time you are transferring data.

Your task is to transfer the **optimal** **amount** of **data** **from** **emitter** to **receiver** which are a part of a network.

You will be given the **network** represented by **emitters** and **receivers** and a **specified** single **source** and **destination** to which you want to calculate the **optimal** data transferable from that source.

You can transfer data from any emitter to any receiver as long as there is connection between them a connection can be directly linked or sequence of connections linking those elements. Each connection will have specified **data** **volume** transferable through it.

## Input

* The **first line** holds an integer **n** – the number of devices
* On the **second line**, you will receive the number **m** – the number of connections
* On the **third** **line** the emitter and the receiver as **{source} {destination}**
* At the next **m** **lines**, you will receive the network in the format: **{from} {to} {dataVolume}**

## Output

* On a **single** line print the **optimal** **amount** of data transferable.

## Constraints

* Number of devices will be an integer in the range [**0**…**10000**]
* Number of connections will be an integer in the range [**0…10000**]
* The data transfer will be an integer in the range [**0…10000**]
* All devices will be numbered from **0** to **N - 1**.

## Examples

|  |  |
| --- | --- |
| **Input** | **Output** |
| 5  5  2 4  0 1 3  1 4 2  2 4 4  0 2 15  0 3 3 | 4 |
| 10  9  1 8  0 1 17  1 2 14  1 3 6  2 3 32  3 7 7  2 4 1  7 6 9  7 8 8  1 8 10 | 17 |

*“A good traveler has no fixed plans and is not intent on arriving.”*

*― Lao Tzu*