# 04. Molecules

*You are part of science team which is on an exploration mission in newly discovered planet inhabiting the goldilock zone of a distant star (insert random digits as name here).*

You have found a peace of tissue which consist of different molecules connected in order. Each connection has a different cost for transporting energy to the next molecule.

The biology team want from you do develop a program which **by given molecule as source takes the most efficient way to transport energy to specific molecule as destination**. On the way you **may have to pass through other molecules**.

There **may be more than one equally efficient paths**.

Your task is to find **one** of those paths and print the **minimum** **cost** for transporting energy.

Then on the next line separated by spaces print the **numbers of molecules you cannot transport energy to from the start molecule**.

## Input

The input will come from the console:

* On the first line the number of molecules **N**
* On the second line the number of connections between the molecules **M**
* On each **M** line the data describing the connections:

**{fromMolecule } {toMolecule} {energyCost}**

* On the next line two integers the start molecule and the destination molecule numbers in the following format: **{startMoleculeNumber} {destinationMoleculeNumber}**

## Output

* On the first line print the cost of the most efficient way.
* On the second line print the molecules to which there is no connection from start molecule.

## Constraints

* All input lines will be **valid integers you do not need to check that.**
* The range of the integers will be in the range **[1…1000]**
* The molecules number will be numbers from one increasing for each molecule.

## Examples

|  |  |
| --- | --- |
| **Input** | **Output** |
| 8  9  1 2 1  1 3 6  2 5 8  2 4 2  3 4 4  4 5 3  3 6 7  5 6 4  7 8 13  1 6 | 10  7 8 |
| 11  11  1 5 8  1 4 7  5 7 4  7 8 3  8 2 6  2 3 3  3 4 4  4 1 6  6 2 2  9 10 12  11 9 4  6 3 | 5  9 10 11 |

# *"The Cosmos is all that is or ever was or ever will be."*