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

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/2540/Algorithms-Advanced-with-Java-Exam-Retake-08-August-2020).

1. **Picker**

Your task is simple you are the best programmer of **automated** **pickers** inside the new all in automated storage. But a client has a strange request for the picking process.

You will be given strange **sculpture** created only by **steel** **spheres** **connected** by **steel** **bars**. The bars weight **differently**. You need to print the minimum **bars** that are required to **hold** the **entire** **structure** and also **add** up to **the** **least** **weight**. That is they right way for picking.

## Input

* The **first line** holds an integer **n** – the number of **spheres**
* On the **second line**, you will receive the number **m** – the number of **bars**
* At the next **m** **lines**, you will receive the sculpture in the format: **{from} {to} {barWeight}**

## Output

* Each bar of the minimum required to pick up the sculpture the represented by **{from} {to}** separatedby **space** eachona **new line**
* On the last line print the **added** up **sum** of the above **bar's weights**

## Constraints

* Number of spheres will be an integer in the range [**0**…**10000**]
* Number of bars will be an integer in the range [**0…10000**]
* The weights will be an integer in the range [**0…10000**]
* All spheres will be numbered from **0** to **N - 1**.

## Examples

|  |  |
| --- | --- |
| **Input** | **Output** |
| 5  5  0 1 3  1 4 2  2 4 4  0 2 15  0 3 3 | 1 4  0 1  0 3  2 4  12 |
| 10  9  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 | 2 4  1 3  3 7  7 8  7 6  1 2  0 1  62 |

*“The world and the universe is an extremely beautiful place, and the more we understand about it the more beautiful does it appear.”*

*― Richard Dawkins*