**Algorithms Advanced with C#: Exam**

1. **Creep**

The Zerg hivemind needs creep to so it can swarm new zones. You task here would be to optimize the creep tumors spread in such a way that creep can be placed at all the new zones but with minimum creep tumor vines length used. You will be given all the possible positions of the creep tumors and the vine’s lengths required to connect all of them.

## Input

* The **first line** holds an integer **n** – the number of **tumors/zones**
* On the **second line**, you will receive the number **m** – the number of vines
* At the next **m** **lines**, you will receive the vines lengths and connections in the format: **{from} {to} {length}**

## Output

* First line prints all the vines that you selected each on a new line in the following format **{from} {to}**
* On the last line print the **total sum of vine length used**

## Constraints

* Number of **tumors** will be an integer in the range [**0**…**10000**]
* Number of vines will be an integer in the range [**0…10000**]
* The distances will be integers in the range [**0…10000**]
* All **tumors** will be numbered from **0** to **N - 1**.

## Examples

|  |  |
| --- | --- |
| **Input** | **Output** |
| 4  4  0 1 3  1 4 2  2 4 4  0 3 3 | 1 4  0 1  0 3  2 4  12 |
| 5  10  1 0 29  3 4 63  2 3 1  0 2 52  4 0 27  0 3 99  4 2 35  3 2 9  3 1 57  4 0 10 | 2 3  4 0  1 0  4 2  75 |

“People think that stories are shaped by people. In fact, it's the other way around.”  
― **Terry Pratchett,**[**Witches Abroad**](https://www.goodreads.com/work/quotes/929672)