# Problem 1 - Shockwave

Doctor T. decided to experiment with shockwaves. He performs his studies in a **rectangular** room of size **N \* M**. However what is interesting is that the shockwaves are also rectangular, through some unknown properties of matter. There are pressure plates which indicate each time a shockwave hits a certain area in the room.

You will be given **N** and **M** – **integers** indicating the **size** of the room – in **rows** and **columns**. There is a plate in each column. In the beginning the plates have value – **0**, because no shockwaves have been executed.

After that you will begin receiving lines of exactly **4 integers**, **separated** by a **single space** – **X1**, **Y1**, **X2**, **Y2**. These are **coordinates** of the **points** which are the **upper-left** and the **bottom-right corners** of the rectangular shockwave. You must **increase** the **value** of **each** **plate** in **the area** the **rectangular shockwave** **affects**, by **1**. You must perform this for **every shockwave input**.

When you receive the command “**Here We Go**”, that means Doctor T. is ready to check the results of the shockwaves. You must **print all the plates** on **rows**, each plate’s value **separated** by a **space**.

### Input

* On the first line of input you will receive **N** and **M** – **separated** by a **space**.
* On the next several lines you will receive the **4 integers** – separated by a space, until you receive the command “**Here We Go**”.

### Output

* Print all of the rows of the room, **each** on a **new line**, with all **columns** separated by a **single space**.

### Constrains

* The dimensions of the room - **N** and **M**, will be valid integers in **range [1, 25]**.
* Each of the given integers – **X1**, **Y1**, **X2**, **Y2**, will be **inside** the **valid room indexes**.
* **X2** will **always** be **greater than** or **equal to** **X1**, and **Y2** will **always** be **greater than** or **equal to** **Y1**.

### Examples

|  |  |  |
| --- | --- | --- |
| **Input** | **Output** | **Comments** |
| 5 5  0 0 2 2  2 2 4 4  Here We Go | 1 1 1 0 0  1 1 1 0 0  1 1 2 1 1  0 0 1 1 1  0 0 1 1 1 | We have a room with size – 5, 5. And we receive a shockwave from [0, 0] to [2, 2], so we **increase** all of the plates’ values in that range with **1**.  1 1 1 0 0  1 1 1 0 0  1 1 1 0 0  0 0 0 0 0  0 0 0 0 0  Then we receive the next one which is from [2, 2] to [4, 4].  1 1 1 0 0  1 1 1 0 0  1 1 2 1 1  0 0 1 1 1  0 0 1 1 1  So we just increase with the plates’ values in the given range with **1**. One of the plates gets hit a **second time** so its value becomes **2**. |
| 7 7  0 0 1 1  1 1 2 2  2 2 3 3  3 3 4 4  4 4 5 5  5 5 6 6  Here We Go | 1 1 0 0 0 0 0  1 2 1 0 0 0 0  0 1 2 1 0 0 0  0 0 1 2 1 0 0  0 0 0 1 2 1 0  0 0 0 0 1 2 1  0 0 0 0 0 1 1 |