## Easter Bunny

*Your task is to collect as many eggs as possible.*

On the first line, you will be given a **number** representing the **size of the field**. On the following few lines, you will be given a **field** with:

* **One bunny** - randomly placed in it and marked with the symbol **"B"**
* **Number** of eggs placed at different positions of the field and **traps** marked with **"X"**

Your job is to determine the direction in which the bunny should go to collect the **maximum** number of eggs. The directions that should be considered as possible are **up, down, left,** and **right.** If you reach a **trap** while checking some of the directions, you should **not** consider the fields after the trap in this direction. For more clarifications, see the examples below.

Note: Consider **ONLY** the paths from which the bunny has collected 1 or more eggs.

### Input

* **A number** representing the size of the field
* **The matrix** representing the field (each position **separated by a single space**)

### Output

* **The direction** which should be considered as **best (lowercase)**
* The field **positions** from which we are **collecting eggs as lists**
* The **total** number of eggs collected

### Constraints

* There will **NOT** be two or more paths consisting of the same total amount of eggs.

### Examples

|  |  |  |
| --- | --- | --- |
| **Input** | **Output** | **Comment** |
| 5  1 3 7 9 11  X 5 4 X 63  7 3 21 95 1  B 1 73 4 9  9 2 33 2 0 | right  [3, 1]  [3, 2]  [3, 3]  [3, 4]  87 | The number of eggs if the bunny goes up is equal to 7. If he goes down = 9, there are no eggs on the left and 87 on the right. That's why the bunny should follow this direction (right) and collect the eggs provided there. |
| 8  4 18 9 7 24 41 52 11  54 21 19 X 6 34 75 57  76 67 7 44 76 27 56 37  92 35 25 37 52 34 56 72  35 X 1 45 4 X 37 63  105 X B 2 12 43 5 19  48 19 35 20 32 27 42 4  73 88 78 32 37 52 X 22 | down  [6, 2]  [7, 2]  113 |  |