# Easter Bunny



*After getting the colors for painting the Easter eggs, our next task would be to collect as many eggs as possible for the holiday.*

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

* **one bunny** randomly placed in it and marked with symbol **B**
* **number** of eggs placed at different positions of the field and **traps** marked with **X**

Your job is to find out the **direction** in which the bunny should go in order to collect **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.

### Input

* **Number** representing the size of the field (matrix NxN)
* **Matrix** representing the field (each position **separated by 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

### Constrains

* One of the directions will always have higher number of eggs than the rest directions

### 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 |  |