# Problem 2. Matrix Fun

You will receive an **array of arrays**. Each array will contain a **command,** a **secondary command**, a **number** and a **word** (except for the command **"get"**. There you will **not** be given a **secondary command**). Your task is, from each array to extract **a single character** and finally **print the result** (string from all the characters).

Here are all the possible commands and secondary commands:

* **filter**
  + **UPPERCASE** – filter all the uppercase letters then take the character at the given position
  + **LOWERCASE** – filter all the lowercase letters then take the character at the given position
  + **NUMS** – filter all the digits and take the digit at the given position
* **sort**
  + **A** – sort all the characters alphabetically and then take the character at the given position
  + **Z** – sort all the characters alphabetically in descending order and take the character at the given position
* **rotate**
  + The secondary command will be a number representing how many times to rotate the string (rotation means that the last element becomes first) – when done take the character at the given position
* **get**
  + just get the character at the given position (in this case there is no secondary command)

**NOTE: consider the position as a position, not an index**

### Input/Constrains

* The input will be an array of arrays. Each array will contain commands
* The input will always be valid

### Output

* Print the word that you built with all the extracted characters

### Examples

|  |  |  |
| --- | --- | --- |
| **Input** | **Output** | **Comment** |
| [["filter", "UPPERCASE", 4, "AkIoRpSwOzFdT"],  ["sort", "A", 3, "AOB"],  ["sort", "A", 3, "FAILCL"],  ["sort", "Z", 2, "OUTAGN"],  ["filter", "UPPERCASE", 2, "01S345U7N"],  ["rotate", 2, 2, "DAN"],  ["get", 2, "PING"],  ["get", 3, "?- 654"]] | SOFTUNI | We filter the uppercase characters ("AIRSOFT") and get the 4th (S); then we sort the second one (ABO) and take the 3rd (O) and so on… |