# C++ Fundamentals – Retake Exam – 17 December 2023

Please submit your source code to all below-described problem in [Judge](https://judge.softuni.org/Contests/4436/CPlusPlus-Fundamentals-Retake-Exam-17-December-2023).

## Super Large Numbers Comparison

The scientific world often uses **super-big integer numbers**. A number sometimes hundreds, if not thousands, of digits. There're a **few pre-ready libraries out there**, but for this task you'll not need to use one. Instead, you must put the **foundation of such a library yourself**.

You must write a program, which will read two vectors, each one on a separate line, and perform comparison on each element of these vectors.

* Reads two vectors of **super-large numbers** (bigger than long long, but only greater than 0). The first row contains the first vector (numbers separated with space), and the second row contains the second vector, with numbers again separated by space.
* Produce one string as output, where the char at each string position will indicate how compares the corresponding numbers of the two vectors:
  + '=', if the two vectors at that index contain **the same** number at that position;
  + '<', if **the number in vector 1 at that position is greater than the number at vector 2** of that position;
  + '>', if **the number in vector 2 at that position is greater than the number in vector 1** at that position
  + '+', if **only vector 1 has a number at that position**;
  + '-', if **only vector 2 has a number at that position**.

**Hints:**

Since we're in the still new to C++ and the world of huge numbers, you should read and compare the numbers in each vector **as strings** by using the string's <, > or == operators.

Also, you must consider the length of the compared numbers, as the number 999 in definitely smaller than the number 11111.

### Examples

|  |  |
| --- | --- |
| **Input** | |
| 123456789012345678901234567890 98765432109876543210987654 123456789098765432101234567890  234567890123456789012345678901 876543210987654321098765432109 23456780987654321012345678901 | |
| **Output** | **Explanation** |
| >>< | The 1st number in the 2nd vector is bigger than the 1st number in the 1st vector, this is why the first character is >.  The 2nd number in the 2nd vector is also bigger, that's why the second character is also >.  The 3rd number in the first vector is bigger than the 3rd number of the 2nd vector, that's why the character is < |

|  |  |
| --- | --- |
| **Input** | |
| 123456789012345678901234567890 63315432109876543210987654 123456789098765432101234567890  123456789012345678901234567890 63315432109854321098765432 | |
| **Output** | **Explanation** |
| =<+ | The 1st number in the 1st vector is equal to the 1st number in the 2nd vector, so the first character is =.  The 2nd number in the 1st vector is also bigger then the one in the 2nd, that’s why the second character is <.  There's no 3rd number in the 2nd vector, that's why we print out +. |