# Problem 2. Kamino Factory

The clone factory in Kamino got another order to clone troops. But this time you are tasked to find **the best DNA** sequence to use in the production.

You will receive the **DNA length** and until you receive the command **"Clone them!"** you will be receiving a **DNA sequences of ones and zeroes, split by "!"** **(one or several).**

You should select the sequence with the **longest subsequence of ones**. If there are several sequences with **same length of** **subsequence of ones**, print the one with the **leftmost** **starting index**, if there are several sequences with same **length and starting index**, select the sequence with the **greater sum** of its elements.

After you receive the last command "Clone them!" you should print the collected information in the following format:

"Best DNA sample {bestSequenceIndex} with sum: {bestSequenceSum}."

"{DNA sequence, joined by space}"

## Input / Constraints

* The **first line** holds the **length** of the **sequences** – **integer in range [1…100];**
* On the next lines until you receive **"Clone them!"** you will be receiving sequences (at least one) of ones and zeroes, **split by "!"** (one or several).

## Output

The output should be printed on the console and consists of two lines in the following format:

"Best DNA sample {bestSequenceIndex} with sum: {bestSequenceSum}."

"{DNA sequence, joined by space}"

## Examples

|  |  |  |
| --- | --- | --- |
| **Input** | **Output** | **Comments** |
| 5  1!0!**1!1**!0  0!**1!1**!0!0  Clone them! | Best DNA sample 2 with sum: 2.  0 1 1 0 0 | We receive 2 sequences with **same length** **of subsequence of ones**, but the second is printed, because its subsequence starts at **index[1].** |
| **Input** | **Output** | **Comments** |
| 4  **1!1**!0!**1**  1!0!0!1  **1!1**!0!0  Clone them! | Best DNA sample 1 with sum: 3.  1 1 0 1 | We receive 3 sequences. Both 1 and 3 **have same length** of subsequence of ones -> 2, **and both start from index[0]**, but the first is printed, because its **sum is greater.** |

"FEAR IS THE PATH TO THE DARK SIDE...

FEAR LEADS TO ANGER...

ANGER LEADS TO HATE...

HATE LEADS TO SUFFERING...."