# 01.Warm Winter

Stack – LIFO – last in, first out -> dishes

Queue – FIFO – first in, first out -> store

*Anni started her small business. She made an Etsy shop named “Warm Winter”, where she sells her matching sets of winter hats and scarfs. Help her make the sets and figure out the prices of the sets in store.*

First you will be given **a sequence of integers representing the hats**. Afterwards you will be given another **sequence of integers representing the scarfs**.

Check all of the hats and scarfs in order to make sets. Take **the last given hat**, and the **first given scarf** and check **if the hat is bigger than the scarf** and if it is – you have to **create a set. A set is created when you add the value of the hat to the value of the scarf (that is the price of the set)**. If you have a set, **remove both** the hat and the scarf from their collections.

**If the scarf’s value is bigger** – **remove the hat and check the next one**.

If their values **are equal** – **remove the scarf** and **increment** the value of the hat with **1**

Mary wants to give her mother **the most expensive set size**, so you have to find out which one it is and print it in the following format: "**The most expensive set is: {maxPriceSet}**"

Afterwards **print the created sets** from **the first added to the last,** separated by a space.

### Input

* On the **first line** of input you will receive the integers, representing the **hats,** **separated** by a **single space**.
* On the **second line** of input you will receive the integers, representing the **scarfs**, **separated** by a **single space**.

### Output

* On the first line of output - print the biggest set in the format specified above.
* On the second line - print the sets, separated by a single space **in the order specified above.**

### Constraints

* All of the given numbers will be valid integers in the range [1, 10000].
* There will always be at least 1 set.
* Allowed time/memory: 100ms/16MB.

### Examples

|  |  |  |
| --- | --- | --- |
| ****Input**** | ****Output**** | ****Comment**** |
| **10 8 7 13 8 4**  **4 7 3 6 4 12** | **The most expensive set is: 16**  **15 16 13 12** | First, we take the last given hat – 4 and the first given scarf – 4. They are equal, so we have to remove the scarf and increment the hat with 1. The hat becomes 5 and the collection looks like this  Hats: 10 8 7 13 8 5  Scarfs: 7 3 6 4 12  Next, we take the hat with value 5 and the scarf with value 7 – the scarf is bigger, so we **remove** the **hat** and the collections should look like this:  Hats: 10 8 7 13 8  Scarfs: 7 3 6 4 12  After that we the hat 8 and the scarf 7 – the hat is bigger, so we have our first **set** with value 15. In the end we have to print the most expensive set, which in this case is with value 16, and the collection of sets, that we have created. |
| **9 5 4 7 8 5 2 6 9**  **1 4 5 7 9 6 3 5 4 7** | **The most expensive set is: 16**  **10 10 15 16** |  |