Christmas raffle   P51499_en

After playing the Christmas raffle and not winning anything, you suspect that the numbers are not drawn with the expected frequency. To study this, write a program to count the number of appearences of each number, and also to keep the most frequent number and the most frequent two-digit ending.

Input

Input consists of several cases. Every case consists of a non empty sequence of numbers between 0 and 10^9 ending with -1.

Output

For every case, after each number, print the most frequent number so far (if there is a tie, the smallest one), its number of occurrences, the two-digit ending most frequent so far (if there is a tie, the smallest one), and its number of occurrences. Print the endings always with two digits. Afterwards, print an empty line, followed by all the numbers in the input sorted in increasing order, with their number of accurrences. Print a line with 10 dashes at the end of every case.

Sample input 1

```
1234
142
842
1234
-1
9
9
0
0
9
-1
999999999
888888899
777777799
-1
```

Sample output 1

```
1234 1 34 1
142 1 34 1
142 1 42 2
1234 2 34 2

142 1
842 1
1234 2
----------
9 1 09 1
9 2 09 2
9 2 09 2
0 2 00 2
9 3 09 3

0 2
9 3
----------
999999999 1 99 1
888888899 1 99 2
777777799 1 99 3

777777799 1
888888899 1
999999999 1
----------
```

Problem information

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