Muaymi wants to sort integer values into 4 different bags. Each bag accepts different values as follow conditions:

The first bag accepts only value of 1 digit.

The second bag accepts only value of 2 digits.

The third bag accepts only value o 3 digits.

The fourth bag accepts only value of 4 digits.

Your task is to write a program to help Muaymi put values in the correct bag and sort them. If there is no value in a bag, print 0. Hint: you can use the method

Arrays.sort(int[] your_array);

The input consists of size of value list and the second line is the list of values.

For example:

Input:

5

12 11 1 333 4444

Output wil be sorted value in each bag which is as follow:

1

11 12

333

4444