



October 31 - November 3, 2002

[F] Why Johnny Can't Count

Program: johnny.(c|cpp|java) Input: johnny.in Output: johnny.out

#### Description

Poor Johnny; He can hardly count. Johnny needs a program to "spell out" numbers into their equivalent English text. For example, the number 109210 is read in English as: "one hundred and nine thousand, two hundred and ten". To make the program easier, Johnny is willing to accept the following compromises:

- 1. The program will be given positive integers less than a million.
- 2. No need to print any punctuation marks.
- 3. Use singular words, not plural. For example: "thousand" rather than "thousands".
- 4. Don't use the word "and" in the phrase. For example, instead of converting the number 102 into "one hundred and two", all you need to do is convert it to "one hundred two". Similarly, 109210 would be spelled out as: "one hundred nine thousand two hundred ten".

On the other hand, Johnny requires the following:

- 1. Johnny hates spelling mistakes. The output should be spelled correctly and using only small letters. The list of allowable words in the output is: zero, one, two, three, four, five, six, seven, eight, nine, ten, eleven, twelve, thirteen, fourteen, fifteen, sixteen, seventeen, eighteen, nineteen, twenty, thirty, forty, fifty, sixty, seventy, eighty, ninety, hundred, thousand.
- 2. Johnny requires that the output be sorted in a non-decreasing order to make it easier for him to locate the numbers.
- 3. For an unclear reason, there will be duplicates in the input file, and Johnny insists that each instance be printed.

## Input Format

The input is made of one or more positive integers terminated by a negative number (which is not part of the input data.) Each number appears on a separate line.

### **Output Format**

For each number, you should print exactly one line showing the number and its equivalent phrase as shown in the sample output. Use a single space character as a separator. Note the colon character ':' after the number.

# Sample Input

```
johnny.in

199
123456
14
199
421000
112
999999
199
```

## Sample Output

johnny.out

14: fourteen

112: one hundred twelve

199: one hundred ninety nine

199: one hundred ninety nine

199: one hundred ninety nine

123456: one hundred twenty three thousand four hundred fifty six

421000: four hundred twenty one thousand

999999: nine hundred ninety nine thousand nine hundred ninety nine