

A normalized Bulgarian phone number has the following format:

+359878123456, where

- +359 is the country code
- the next 2 digits are the mobile operator's code and are one of the following sequences: 87, 88, 89
- the next digit is a digit between 2 to 9
- the next 6 digits are digits between 0 and 9

The following formats are allowed:

0878123456 - 0 replaces +359

00359878123456 - 00 replaces +

All other symbol combinations are invalid bulgarian phone numbers.

Write a class `PhoneBook`, which represents a phone book and contains pairs - (name, normalized phone number). `PhoneBook` should have the following functionality:

- creating a new phone book from a text file - each line of the file contains a pair of the format (*name*, *number*), where *name* is an arbitrary name, and *number* is a phone number. When reading the file keep in mind that some of the lines may contain invalid phone numbers. Ignore them. `PhoneBook` must store all numbers in a normalized format.
- adding a pair
- removing a pair for a given name
- accessing the phone number for a given name
- printing all pairs, ordered by name

When implementing the class respect the fact that the most frequently used operation will be the printing.

Implement functionality, which stores the count of outgoing calls to numbers from the phone book. Implement an efficient way by which you can always print the top 5 phone numbers with most outgoing calls.

Your solution will be judged by the following criteria:

- correctness
- code readability
- code design
- efficiency (especially for the operation which are explicitly required to be efficient)