CPSC 319: Data Structures, Algorithms and their Applications - Second assignment

The problem: an only slightly confused number and symbol sorter

The task your system has to perform is to sort a given list of natural numbers and symbols in descending order. In addition to the usual ordering on natural numbers, we have the following requirements on how the symbols are integrated:

- 0 < Do < 1
- 100 < Re < 101
- 1000 < Mi < 1001
- 3 < & < 4
- 3 < @ < &
- 1005000 < % < 1005001
- 55 < Asymbolwithareallylongname < 56
- 20 < $ < 21
- 15 < Fa < 16
- 103 < One < 104
- One < Three < 104
- One < Two < Three

If the given list contains any number of 666, then the result list should be sorted in ascending order, without any occurences of 666, but with one @ added (even if the list already contains @s).

Input file

In an input file the given list for your system will be given by a line for each of the numbers/symbols in the list.

Output file

In the output file, you output the result list one number/symbol in its own line in the required order. If during reading of the input list, your system encounters an input that is not a natural number or one of the symbols given above, it has to output:
Input error.
and terminate. Regarding blanks and empty lines, the same requirements as in assignment 1 have to be fulfilled.