**Java program:** Prob09.java

**Input File:** Prob09.in.txt

**Output:** Your output needs to be directed to stdout (i.e., using System.out.println())

**Introduction**

You are looking for words that are spelled almost exactly the same but have one letter different (e.g., air and fir). The two words must be the same length (e.g., man and many would not be a match, but man and men would be). The letters in both words must be in the same sequence (e.g., miles and smite would not be a match, but smile and smite would be).

**Program Input**

The file Prob09.in.txt will contain lines of input with a list of words on each line. Words will be separated by spaces. Capitalization should be ignored when comparing if the words are one letter different or not, but should be retained for alphabetization purposes. In the event that there are duplicate words, the first instance of the word should be kept and the rest of the instances discarded.

**Example Input:**

band bar bard bend dent fir forest forestay forestry lame land lime man many mile miles smile smite Air

**Program Output**

Your program’s output should consist of a list of word pairs where the two words meet the above conditions. The pairs of words should be in alphabetical order (i.e., the words within a matching pair should be alphabetized, and then the whole list should be alphabetized). A word can appear more than once in the output list if it matches more than one other word. Each word pair should be printed on a separate line.

**Example Output:**

Air fir

band bard

band bend

band land

forestay forestry

lame lime

smile smite

**Java program:** Prob10.java

**Input File:** Prob10.in.txt

**Output:** Your output needs to be directed to stdout (i.e., using System.out.println())

**Introduction**

A factorial is the product of a given positive integer (n) multiplied by all lesser positive integers and is represented as n! For example:

4! = 4 x 3 x 2 x 1 = 24

Your task is to write a program which will calculate factorials for numbers from 1 to 50.

**Program Input**

The file Prob10.in.txt will contain a list of numbers, one per line. All numbers will be integers between 1 and 50, inclusive. There will be no non-integer input.

**Example Input:**

5

10

15

**Program Output**

Your program should output the values of the factorials for the numbers encountered in the input file in the same order, one per line.

**Example Output:**

120

3628800

1307674368000