Problem 5: Anagrams

Source filename:	`anagrams.(cpp|java)`
Input filename:	`anagrams.in`
Output filename:	`anagrams.out`

Definition: Two words or phrases are anagrams of each other if each one can be obtained by rearranging the letters of the other. Every letter should be used (and used only once) to form the other word or phrase. The case of each letter is not significant (upper case may be changed to lower case and vice versa). Punctuation, spaces, digits, and other special characters may be used or eliminated in any way you like.

Example anagrams

Problem A: Anagrams ≡ Abnormal Rampages
Elvis ≡ lives
Dormitory ≡ dirty room

Input File (anagrams.in)

The input file contains several test cases. There are two lines of text for each test case. Each line contains a non-empty string (length ≤ 150). The input strings consist of one or more printable ASCII characters ($32 \leq ASCII\ value \leq 126$).

The two lines after the last test case contain the same identical string: "`<end>`". These two lines mark the end of the file and no output should correspond to these last two lines.

Output File (anagrams.out)

For each test case (with its two strings), your program should print to the output file (on a line by itself) the word "`YES`", if the strings are anagrams of each other, and "`NO`", otherwise. Notice that the words "`YES`" and "`NO`" should be printed in all caps and that the output file contains no spaces.

By definition, we will consider two identical strings to be anagrams, even if the two strings are empty.

Example Input   (The last anagram listed below is attributed to Steve Krakowski.)

```
Problem A: Anagrams
Abnormal Rampages
Elvis
lives
Dormitory
dirty room
Cher
cheer
Clint Eastwood
Old West Action
Snooze alarms
Alas! No more Z's
"That's one small step for a man, one giant leap for mankind." - Neil A. Armstrong
A thin man ran; makes a large stride; left planet, pins flag on moon!  On to Mars!
<end>
<end>
```

Corresponding Output

```
YES
YES
YES
NO
YES
YES
YES
```

Bored?

Here are a few more "fun" anagrams[1]. Attributions (if known) are shown in parentheses.

listen ≡ silent
Schoolmaster ≡ the classroom
Madam Curie ≡ Radium came
A telephone girl ≡ Repeating "Hello"
Western Union ≡ No Wire Unsent
Astronomers ≡ Moon starers
A telescope ≡ To see place
The eyes ≡ They see
Waitress ≡ A stew, Sir?
The Morse Code ≡ Here come dots
Slot machines ≡ cash lost in 'em
A domesticated animal ≡ docile, as a man tamed it
Software ≡ swear oft
"Raiders of the Lost Ark" ≡ Ford, the real star, is OK!
"Twenty Thousand Leagues Under the Sea" ≡ Huge water tale stuns. End had you tense. (by E.L. Benfer)
Alec Guinness ≡ Genuine Class (by Dick Cavett)
Mr. Mojo risin' ≡ Jim Morrison (from the Doors' song, "L.A. Woman")
The Great New York Rapid Transit Tunnel ≡ Giant work in street, partly underneath
Statue of Liberty ≡ Built to stay free
Eleven plus two ≡ twelve plus one
New York Times ≡ monkeys write (by Andrew Glines)
The Towering Inferno ≡ Not worth fire engine (GAMES magazine)
George Bush ≡ He bugs Gore (by Mike Morton)

And finally, two amazing anagrams attributed to Cory Calhoun:

"Just because some of us can read and write and do a little math, that doesn't mean we deserve to conquer the universe."
≡ A masquerade can cover a sense of what is real to deceive us; to be unjaded and not lost, we must, then, determine truth.

"To be or not to be: that is the question, whether tis nobler in the mind to suffer the slings and arrows of outrageous fortune"
≡ In one of the Bard's best-thought-of tragedies, our insistent hero, Hamlet, queries on two fronts about how life turns rotten.

---

[1] This list of anagrams was selected from the "Internet Anagram Server: Anagram Hall of Fame" found at
http://wordsmith.org/anagram/hof.html