PROGRAMMING CHALLENGE 1: CHATTERBOT

A conversational robot (*Chatterbot*) is a computer program that can converse with a user (*Chatterbox*) in typed English sentences. Write a program that reads in lines of characters and for each line of input produces a response as follows:

- The first time that it reads in a line containing the string "hello", it should generate as a response the output line "Hi, how are you?".
- The second and subsequent times that it reads in a line containing the string "hello", it should generate as a response the output line "Hello again, welcome back!".
- When it reads in a line containing the string "thanks" or the string "thank
 you", it should generate as a response the output line "You are most
 welcome."
- When it reads in a line beginning with a string of the form "I xxxx you",
 where xxxx is any string, it should generate as a response an output line of the
 form "You xxxx me? I really xxxx you too.".
- When it reads in a line not containing any of the strings described above, it should generate as a response the output line "Sorry, I do not understand...".

The Chatterbot should check each line for the specified strings in the order listed above, and should generate only one response per input line. For example, the input line "I thank you" should generate as a response *only* the output line "You are most welcome", and it should *not* generate as a response the output line "You thank me? I really thank you too.".

The Chatterbot should not be case sensitive. In other words, it must recognise not only "hello" but also "Hello", "HELLO", "hello", etc.

For each line of input, the Chatterbot should also repeat it before giving a response. Each line of the user's input should be labelled with "Chatterbox: " and each line of the Chatterbot's response should be labelled with "Chatterbot: ". An extra blank line should separate each pair of input/output lines (as shown in the sample output below).

Sample Input File:

This is a test
Well, hello there!
I am fine, thank you.
Wait, I have to go...
Never mind. Thanks.
HELLO! I have returned.
I missed you so much!
I thank you... hello?

Sample Output:

Chatterbox: This is a test

I LOVE YOU, YOU CUTIE!

Chatterbot: Sorry, I do not understand...

Chatterbox: Well, hello there! Chatterbot: Hi, how are you?

Chatterbox: I am fine, thank you. Chatterbot: You are most welcome.

You and I think alike, you know ...

Chatterbox: Wait, I have to go ...

Chatterbot: Sorry, I do not understand ...

Chatterbox: Never mind. Thanks. Chatterbot: You are most welcome.

Chatterbox: HELLO! I have returned. Chatterbot: Hello again, welcome back!

Chatterbox: I missed you so much!

Chatterbot: You missed me? I really missed you too.

Chatterbox: I thank you... hello? Chatterbot: Hello again, welcome back!

Chatterbox: You and I think alike, you know...

Chatterbot: Sorry, I do not understand...

Chatterbox: I LOVE YOU, YOU CUTIE!

Chatterbot: You LOVE me? I really LOVE you too.

Evidence 1: Your program code.

Evidence 2: Screenshot of running program.