This assignment is meant to be made after you have completed the basic assignment. This assignment will earn you at most 2.5 points. The other 7.5 points can be earned in the basic assignment.

2 B Homework assignment – Guessing Game Advanced

Write a program called GuessingGameAdvanced that plays a game with the user. The user is asked to think of an integer number, called the *code*, and the computer tries to guess it.

Input

The input consists of the text "go", to be typed when the user has thought of a secret code, followed by answers "higher", "lower", or "guessed", depending on whether the computer's guess was smaller or greater than the code, respectively, or equal to the code.

You may assume that the input is in compliance with this description. So there is no required reaction if the user enters a text that is not in the description.

Output

- Start your program with the line "Think of a secret number not smaller than 0 and not greater than 1000. Type 'go' when you have one.".
- After the user has entered "go", the program outputs a numbers as a first guess and continues with guesses after the user's reaction.
- The user gives one of the following replies to each guess: "lower" when the guess is greater than the code and "higher" when the guess is smaller than the code.
- When the guess is right, the user enters: "guessed" and when the maximum number of guesses has been reached without a good guess, the program prints "I give up.". This should not happen! Your program should find the secret number within the maximum number of guesses, which is 10.

For your convenience, you can have your program also allow "h" and "l" for higher and lower. Your program will be tested, however, with only "higher" and "lower" as input.

• In this version, there is no recording or printing of the guessing history.

Example

Input is preceded by a >. Note the exchange of input and output, compared to the basic version.

Think of a secret number not smaller than 0 and not greater than 1000. Type 'go' when you have one.

>go

10

>higher

900

>lower

48

>higher

50

>guessed

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