



Exercise: guess my number

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10/10 points (graded)

ESTIMATED TIME TO COMPLETE: 15 minutes

In this problem, you'll create a program that guesses a secret number!

The program works as follows: you (the user) thinks of an integer between 0 (inclusive) and 100 (not inclusive). The computer makes guesses, and you give it input - is its guess too high or too low? Using bisection search, the computer will guess the user's secret number!

Here is a transcript of an example session:

```
Please think of a number between 0 and 100!
Is your secret number 50?
Enter 'h' to indicate the guess is too high. Enter 'l' to indicate the guess is too low. Enter
'c' to indicate I guessed correctly. l
Is your secret number 75?
Enter 'h' to indicate the guess is too high. Enter 'l' to indicate the guess is too low. Enter
'c' to indicate I guessed correctly. l
Is your secret number 87?
Enter 'h' to indicate the guess is too high. Enter 'l' to indicate the guess is too low. Enter
'c' to indicate I guessed correctly. h
Is your secret number 81?
Enter 'h' to indicate the guess is too high. Enter 'l' to indicate the guess is too low. Enter
'c' to indicate I guessed correctly. l
Is your secret number 84?
Enter 'h' to indicate the guess is too high. Enter 'l' to indicate the guess is too low. Enter
'c' to indicate I guessed correctly. h
Is your secret number 82?
Enter 'h' to indicate the guess is too high. Enter 'l' to indicate the guess is too low. Enter
'c' to indicate I guessed correctly. l
Is your secret number 83?
Enter 'h' to indicate the guess is too high. Enter 'l' to indicate the guess is too low. Enter
'c' to indicate I guessed correctly. c
Game over. Your secret number was: 83
```

Important

[Hint: Endpoints](#)

[Python Trick: Printing on the same line](#)

[Click to See Test Cases](#)

Note: your program should use `input` to obtain the user's input! Be sure to handle the case when the user's input is not one of `h`, `l`, or `c`.

When the user enters something invalid, you should print out a message to the user explaining you did not understand their input. Then, you should re-ask the question, and prompt again for input. For example:



Is your secret number 91?
Enter 'h' to indicate the guess is too high. Enter 'l' to indicate the guess is too low. Enter 'c' to indicate I guessed correctly. y
Sorry, I did not understand your input.
Is your secret number 91?
Enter 'h' to indicate the guess is too high. Enter 'l' to indicate the guess is too low. Enter 'c' to indicate I guessed correctly. c


```
1 low = 0
2 high = 100
3 print('Please think of a number between 0 and 100!')
4 while True:
5     guess = (high + low)//2
6     print('Is your secret number ' + str(guess) + ' ?')
7     a = input("Enter 'h' to indicate the guess is too high. Enter 'l' to indicate the guess is too
8     if a == 'c':
9         print('Game over. Your secret number was:', str(guess))
10        break
11    elif a == 'l':
12        low = guess
13    elif a == 'h':
14        high = guess
15    else:
```

Press ESC then TAB or click outside of the code editor to exit

Correct


Test results

CORRECT

 Secret number is 83

Output:

```
Please think of a number between 0 and 100!
Is your secret number 50 ?
Enter 'h' to indicate the guess is too high. Enter 'l' to indicate the guess is
too low. Enter 'c' to indicate I guessed correctly.l
Is your secret number 75 ?
Enter 'h' to indicate the guess is too high. Enter 'l' to indicate the guess is
too low. Enter 'c' to indicate I guessed correctly.l
Is your secret number 87 ?
Enter 'h' to indicate the guess is too high. Enter 'l' to indicate the guess is
too low. Enter 'c' to indicate I guessed correctly.h
Is your secret number 81 ?
Enter 'h' to indicate the guess is too high. Enter 'l' to indicate the guess is
too low. Enter 'c' to indicate I guessed correctly.l
Is your secret number 84 ?
Enter 'h' to indicate the guess is too high. Enter 'l' to indicate the guess is
too low. Enter 'c' to indicate I guessed correctly.h
Is your secret number 82 ?
Enter 'h' to indicate the guess is too high. Enter 'l' to indicate the guess is
too low. Enter 'c' to indicate I guessed correctly.l
Is your secret number 83 ?
Enter 'h' to indicate the guess is too high. Enter 'l' to indicate the guess is
too low. Enter 'c' to indicate I guessed correctly.c
Game over. Your secret number was: 83
```

Hide output 



Secret number is 42

Output:

```
Please think of a number between 0 and 100!
Is your secret number 50 ?
Enter 'h' to indicate the guess is too high. Enter 'l' to indicate the guess is
too low. Enter 'c' to indicate I guessed correctly.h
Is your secret number 25 ?
Enter 'h' to indicate the guess is too high. Enter 'l' to indicate the guess is
too low. Enter 'c' to indicate I guessed correctly.l
Is your secret number 37 ?
Enter 'h' to indicate the guess is too high. Enter 'l' to indicate the guess is
too low. Enter 'c' to indicate I guessed correctly.l
Is your secret number 43 ?
Enter 'h' to indicate the guess is too high. Enter 'l' to indicate the guess is
too low. Enter 'c' to indicate I guessed correctly.h
Is your secret number 40 ?
Enter 'h' to indicate the guess is too high. Enter 'l' to indicate the guess is
too low. Enter 'c' to indicate I guessed correctly.l
Is your secret number 41 ?
Enter 'h' to indicate the guess is too high. Enter 'l' to indicate the guess is
too low. Enter 'c' to indicate I guessed correctly.l
Is your secret number 42 ?
Enter 'h' to indicate the guess is too high. Enter 'l' to indicate the guess is
too low. Enter 'c' to indicate I guessed correctly.c
Game over. Your secret number was: 42
```



Secret number is 91

Output:

```
Please think of a number between 0 and 100!
Is your secret number 50 ?
Enter 'h' to indicate the guess is too high. Enter 'l' to indicate the guess is
too low. Enter 'c' to indicate I guessed correctly.l
Is your secret number 75 ?
Enter 'h' to indicate the guess is too high. Enter 'l' to indicate the guess is
too low. Enter 'c' to indicate I guessed correctly.l
Is your secret number 87 ?
Enter 'h' to indicate the guess is too high. Enter 'l' to indicate the guess is
too low. Enter 'c' to indicate I guessed correctly.l
Is your secret number 93 ?
Enter 'h' to indicate the guess is too high. Enter 'l' to indicate the guess is
too low. Enter 'c' to indicate I guessed correctly.h
Is your secret number 90 ?
Enter 'h' to indicate the guess is too high. Enter 'l' to indicate the guess is
too low. Enter 'c' to indicate I guessed correctly.l
Is your secret number 91 ?
Enter 'h' to indicate the guess is too high. Enter 'l' to indicate the guess is
too low. Enter 'c' to indicate I guessed correctly.y
Sorry, I did not understand your input.
Is your secret number 91 ?
Enter 'h' to indicate the guess is too high. Enter 'l' to indicate the guess is
too low. Enter 'c' to indicate I guessed correctly.c
Game over. Your secret number was: 91
```



Secret number is 8



Output:

```
Please think of a number between 0 and 100!  
Is your secret number 50 ?  
Enter 'h' to indicate the guess is too high. Enter 'l' to indicate the guess is  
too low. Enter 'c' to indicate I guessed correctly.h  
Is your secret number 25 ?  
Enter 'h' to indicate the guess is too high. Enter 'l' to indicate the guess is  
too low. Enter 'c' to indicate I guessed correctly.h  
Is your secret number 12 ?  
Enter 'h' to indicate the guess is too high. Enter 'l' to indicate the guess is  
too low. Enter 'c' to indicate I guessed correctly.h  
Is your secret number 6 ?  
Enter 'h' to indicate the guess is too high. Enter 'l' to indicate the guess is  
too low. Enter 'c' to indicate I guessed correctly.l  
Is your secret number 9 ?  
Enter 'h' to indicate the guess is too high. Enter 'l' to indicate the guess is  
too low. Enter 'c' to indicate I guessed correctly.h  
Is your secret number 7 ?  
Enter 'h' to indicate the guess is too high. Enter 'l' to indicate the guess is  
too low. Enter 'c' to indicate I guessed correctly.l  
Is your secret number 8 ?  
Enter 'h' to indicate the guess is too high. Enter 'l' to indicate the guess is  
too low. Enter 'c' to indicate I guessed correctly.c  
Game over. Your secret number was: 8
```



Secret number is 68

Output:



```
Please think of a number between 0 and 100!  
Is your secret number 50 ?  
Enter 'h' to indicate the guess is too high. Enter 'l' to indicate the guess is  
too low. Enter 'c' to indicate I guessed correctly.l  
Is your secret number 75 ?  
Enter 'h' to indicate the guess is too high. Enter 'l' to indicate the guess is  
too low. Enter 'c' to indicate I guessed correctly.h  
Is your secret number 62 ?  
Enter 'h' to indicate the guess is too high. Enter 'l' to indicate the guess is  
too low. Enter 'c' to indicate I guessed correctly.l  
Is your secret number 68 ?  
Enter 'h' to indicate the guess is too high. Enter 'l' to indicate the guess is  
too low. Enter 'c' to indicate I guessed correctly.right  
Sorry, I did not understand your input.  
Is your secret number 68 ?  
Enter 'h' to indicate the guess is too high. Enter 'l' to indicate the guess is  
too low. Enter 'c' to indicate I guessed correctly.correct  
Sorry, I did not understand your input.  
Is your secret number 68 ?  
Enter 'h' to indicate the guess is too high. Enter 'l' to indicate the guess is  
too low. Enter 'c' to indicate I guessed correctly.yes  
Sorry, I did not understand your input.  
Is your secret number 68 ?  
Enter 'h' to indicate the guess is too high. Enter 'l' to indicate the guess is  
too low. Enter 'c' to indicate I guessed correctly.okay  
Sorry, I did not understand your input.  
Is your secret number 68 ?  
Enter 'h' to indicate the guess is too high. Enter 'l' to indicate the guess is  
too low. Enter 'c' to indicate I guessed correctly.yes that is my guess  
Sorry, I did not understand your input.  
Is your secret number 68 ?  
Enter 'h' to indicate the guess is too high. Enter 'l' to indicate the guess is  
too low. Enter 'c' to indicate I guessed correctly.c  
Game over. Your secret number was: 68
```

If you believe you have correct code but it is marked incorrect after clicking "Check"...

After you submit your code, you can see every test case the graders runs on your code. They compare what your code outputs with what our answer code is supposed to output. Click the small link titled "See Full Output" below the Test Results header.

Submit

✓ Correct (10/10 points)

Exercise: guess my number

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Topic: Lecture 3 / Exercise: guess my number

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