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Exercise: guess my number

Exercise: guess my number

10.0/10.0 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](#)

Test Cases to Test Your Code With. Be sure to test these on your own machine - and that you get the same output! - before running your code on this webpage!

Test case 1. Secret guess = 42



```
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
```

Test case 2. Secret guess = 91

```
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
```



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 # Paste your code into this box
2 print('Please think of a number between 0 and 100!')
3 max = 100
4 min = 0
5 resp = ''
6 while resp != 'c':
7     palpite = int((max+min)/2)
8     print('Is your secret number', palpite, '?')
9     resp = input("Enter 'h' to indicate the guess is too high. Enter 'l' to indic
10    while resp not in ['h','l','c']:
11        print('Sorry, I did not understand your input.')
12        print('Is your secret number', palpite, '?')
13        resp = input("Enter 'h' to indicate the guess is too high. Enter 'l' to i
14    if resp == 'c': # Acertou!
15        print('Game over. Your secret number was: '. palpite)
16
```

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

Correta



```
print("Please think of a number between 0 and 100!")

# Upper bound is 100 (but will never reach) and the lowest is 0.
hi = 100
lo = 0
guessed = False

# Loop until we guess it correctly
while not guessed:
    # Bisection search: guess the midpoint between our current high and low guesses
    guess = (hi + lo)//2
    print("Is your secret number " + str(guess)+ "?")
    user_inp = input("Enter 'h' to indicate the guess is too high. Enter 'l' to indicate the

    if user_inp == 'c':
        # We got it right!
        guessed = True
    elif user_inp == 'h':
        # Guess was too high. So make the current guess the highest possible guess.
        hi = guess
    elif user_inp == 'l':
        # Guess was too low. So make the current guess the lowest possible guess.
        lo = guess
    else:
        print("Sorry, I did not understand your input.")

print('Game over. Your secret number was: ' + str(guess))
```

Test results

[Hide output](#)**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
```

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
```

[Hide output](#)

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.

Enviar

i Answers are displayed within the problem

Exercise: guess my number

Ocultar discussão

Topic: Lecture 3 / Exercise: guess my number

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- | | | |
|---|--|---|
| ? | <u>Loved this exercise, however got some some doubts.</u>
1. In the solution a new boolean <code>**guessed**</code> was invoked. What are the *cases when we need t... | 1 |
| ? | <u>Grader issue while answer seems correct</u>
I have got some issue with the grader showing incorrect results while in the ide it is exactly (from... | 3 |
| ? | <u>I am not sure how to make my output exactly match the correct output.</u> | 2 |
| 💬 | <u>Very nitpicky.</u>
Overall, I liked the exercise and got 10/10 on it. However, the grader is incredibly nitpicky with the... | 1 |
| 💬 | <u>Can someone tell me what is wrong with my code?</u>
I have created a code, but whenever I run it, it prints "Sorry, I did not understand your input" after... | 3 |
| ? | <u>Grader stuck in processing</u>
This happened before during week one too and it got fixed by itself but I'm not seeing anyone els... | 2 |
| ? | <u>I have a problem to submit for a syntax error</u>
I already tried running the code in the IDE and it did just right, but here I ran into a syntax proble... | 1 |
| 💬 | <u>Please, somebody could tell me what's wrong with this code? I checked it on IDEL and it works well.</u>
<code>print('Please think of a number between 0 and 100!')</code> <code>x = 0</code> <code>low = 0</code> <code>high = 100</code> <code>ans = ((high - low)/2)...</code> | 2 |
| ? | <u>Why does an Input text change alter the logic?</u>
When I initially submitted my solution I used the line <code>answer = input("Now is that answer too low ...</code> | 2 |
| ? | <u>It worked well when I ran my code but here displayed it is incorrect</u>
It worked well when I ran my code but here displayed it is incorrect and I do not understand why i... | 2 |



- | | | |
|---|--|---|
| ? | <u>Am i close or what ? been tryin for 2 hours</u>
<u>import random start = 1 end = 100 smallest = start largest = end counter = 0 Try_number= random...</u> | 3 |
| 💬 | <u>Give more explanation of the specific way you want the answer.</u>
<u>My code had guess = (high + low)/2 guess = int(guess) apparently the programme wanted: guess ...</u> | 5 |
| ? | <u>my code is find the answer but giving me an error and no points- please help.</u> | 2 |

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