

CS161: Introduction to Computer Science

Lab Assignment 5

In today's lab, you will practice using conditionals by implementing a guessing game. The computer will pick a number between 1 and 50 (inclusive) and the user gets 10 chances to guess.

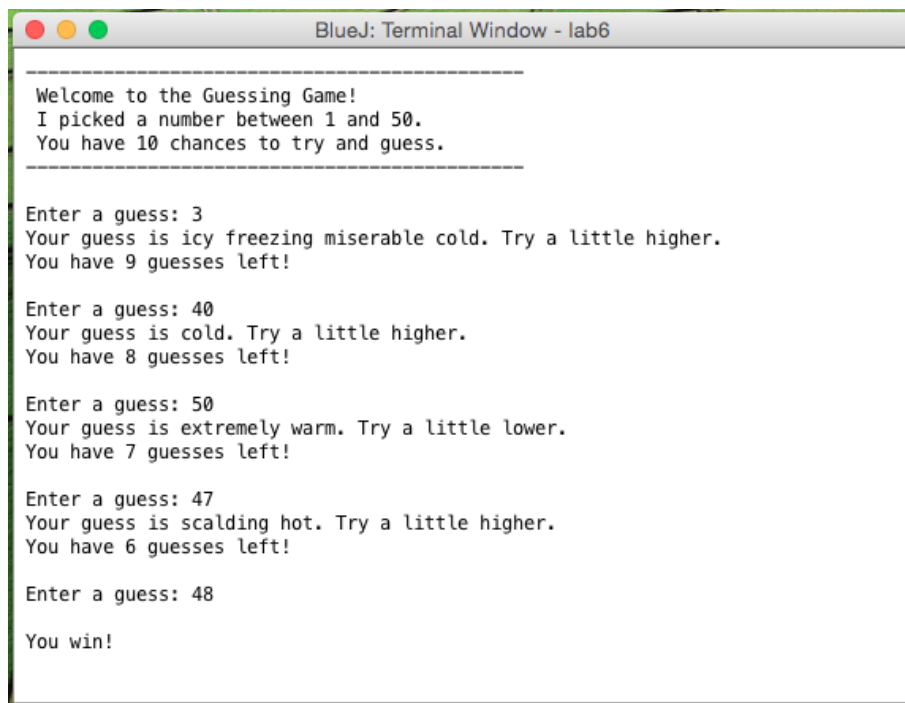
You should begin by creating a BlueJ project called lab5. Inside, create a Java class named `SecretNumber`.

Rules of the Game

To begin the game, you should pick a random integer between 1 and 50 (inclusive). The user gets 10 chances to guess the number. Each time the user guesses, you should print out a message telling them how close they are to the correct number (see the table below), whether they should guess higher or lower, and the remaining number of guesses.

Distance Away	Message to Print
within 1	"scalding hot"
within 2	"extremely warm"
within 3	"very warm"
within 5	"warm"
within 8	"cold"
within 13	"very cold"
within 20	"extremely cold"
more than 20	"icy freezing miserable cold"

You should use methods so that your `main()` method does not become too long. For example, you can have a method that controls a single round of the game (and call this method 10 times), a method to determine how far the user's guess is from the secret number, etc. Below is an example of me playing the game:



```
-----
Welcome to the Guessing Game!
I picked a number between 1 and 50.
You have 10 chances to try and guess.
-----

Enter a guess: 3
Your guess is icy freezing miserable cold. Try a little higher.
You have 9 guesses left!

Enter a guess: 40
Your guess is cold. Try a little higher.
You have 8 guesses left!

Enter a guess: 50
Your guess is extremely warm. Try a little lower.
You have 7 guesses left!

Enter a guess: 47
Your guess is scalding hot. Try a little higher.
You have 6 guesses left!

Enter a guess: 48

You win!
```

Extensions

- At the end of the game, print a custom message based on how many guesses it took the user:

Num. Guesses	Message to Print
1	"That was lucky!"
2-4	"That was amazing!"
5-6	"That was okay."
7	"Meh."
8-10	"This is not your game."
didn't guess in 10	"You are the worst I've ever seen."

- Modify the game so that the user can input an upper bound.

Submitting your lab assignment

Your `lab5` folder should have your `SecretNumber` class inside. Rename your folder *before* zipping. Submit your zipped folder to Moodle.