

Java – Guess My Number

Purpose

This lab was designed to teach you how to use an algorithm called bisection search.

Description

Ask the user to think of a number between zero and one hundred. Your goal is to guess the number in as few guesses as possible. The user will inform you if you guessed too high, low or correct. Start by always guessing the middle number 50. If the user informs you, it's too low, then try 75. If 50 was too high, then try 25. Always guess the middle of the range of numbers left. In doing so, the range of numbers will be cut in half after each guess. If done correctly, no more than 7 guesses are needed. Print out "you cheated" if you reach 7 guesses and are still wrong.

Program Shell

Create a file called `GuessMyNumber.java`

Sample Execution

```
Please think of an integer between 0 and 100!
```

```
I will guess it in 7 choices or less.
```

```
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.
```

```
Is your secret number 50?
```

```
Enter h, l, or c: h
```

```
Is your secret number 24?
```

```
Enter h, l, or c: h
```

```
Is your secret number 11?
```

```
Enter h, l, or c: l
```

```
Is your secret number 17?
```

```
Enter h, l, or c: l
```

```
Is your secret number 20?
```

```
Enter h, l, or c: l
```

```
Is your secret number 22?
```

```
Enter h, l, or c: l
```

```
Is your secret number 23?
```

```
Enter h, l, or c: c
```

```
Game over. Your secret number was 23
```