

CPSC250L Lab 5

JOptionPane and Exceptions

Spring 2018

1 Introduction

This lab will extend the previous lab's exercises using `JOptionPane`.

2 Exercises

2.1 Lock with Reset

We will create two methods in the `Lock` class from last week called `resetNaive` and `resetRetry`.
COPY ALL SOURCE FILES FROM LAB 3 INTO THE `src` DIRECTORY.

Exercise 1

Implement the following methods in the `Lock` class.

1. `public void resetNaive()`

Using `JOptionPane.showInputDialog`, get a `String` combination from the user and if it's not `null`, grab the 3 numbers. When creating the `JOptionPane`, make sure that

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the prompt text is exactly "Type a new combination". If the `String` is null, you don't want to do anything (this allows the user to cancel!). Use a `Scanner` to scan the `String`, and extract the 3 integers. See <https://docs.oracle.com/javase/8/docs/api/java/util/Scanner.html#nextInt-int-> for a list of potential exceptions that may be thrown if the string is not formatted properly. **You do NOT need to catch these here.**

Create a new `Combination` using the three numbers, and if the combination is within the dial limit, that becomes the `Lock`'s new combination. If the combination is invalid, it throws an `InvalidLockCombinationException`. **This method should throw the exception, but not catch it.** Sometimes we want to handle exceptions, and sometimes we want them to pass a message to another method, which is the case here.

2. `public void resetRetry()`

While a good combination has not been found, keep trying to get one (**hint: use `resetNaive` within a while loop**). If asking for a combination using `resetNaive` throws an `InvalidCombinationException`, use `JOptionPane.showMessageDialog` to display the message "Type 3 integers in the range [0..R]" where R is your dial limit set by the constructor. When you output this string, **replace R with whatever the dial limit is!** If asking for a combination throws any other exception error (e.g. one from `Scanner`), use `JOptionPane.showMessageDialog` to display the message "Type 3 integers separated by spaces". (These dialogues must be exact). Keep trying to get a good combination until a good combination is found, then that becomes the Locks combination.

Exercise 1 Complete

Run:

```
git add .  
git commit -m "Completed exercise 1"  
git push origin master
```

3 Common Mistakes

1. Ensure that your work from the previous lab is correct!!!
2. In `resetRetry`, be sure to invoke `resetNaive` as opposed to reimplementing `resetNaive`'s functionality in `resetRetry`.
3. Ensure that your messages are exactly as the lab specifies, and use the classes that the lab tells you to use!