

# CSC108H lab – week 8

This document contains the instructions for the week 8 CSC108H lab.

## 1 Objectives

1. Practice loops in the context of reading and writing files.
2. Learn how to handle `IOExceptions`.
3. Practice more with text areas.

## 2 Starting up

Sit down with your partner. The rest of these instructions call you two `s1` and `s2`. Pick which one is which. `s1` should log in and start up DrJava, and be the first driver.

## 3 JTextAreas: showing a file

You have done this before. It is important material, and many of you had trouble with it last week.

In this section you will write code to display the contents of a file in a window.

Write a subclass of `JFrame` called `FileDisplay` that has one `40x80 JTextArea` (40 rows, 80 columns) in the center. The constructor takes the name of a file as a `String`, and displays the contents of the file in the text area. For example,

```
new FileDisplay("FileDisplay.java").show() makes a new window showing your class.
```

Make sure you `pack` the window at the end of the constructor.

Save `FileDisplay.java` directly in your H: drive. This will be important in the next section.

## 4 StringTokenizer

**Switch roles: `s2` drives and `s1` navigates.**

- Change the button text back to "Click me".
- Add a `JTextArea` to the center and move the button to the north.
- Change the code so that when the button is clicked the user is prompted to type a sentence. Using a `StringTokenizer` and a `while` loop make each word appear on a separate line in the `JTextArea`. For example, if the user types "What, me worry?" then the text area should contain

```
What,  
me  
worry?
```

Be sure to rewrite the comment.

Compile it, test it, and fix any errors.

Demonstrate to your TA that it works.

## 5 JavaDoc!

**Switch roles: s1 drives and s2 navigates.**

In this section, you'll see JavaDoc in action. Add a comment like this to `FileDisplay`:

```
/** A window showing a file. */
```

Add a comment like this to the `FileDisplay` constructor (assuming you named your parameter `f`):

```
/**  
 * A new window showing the contents of file f.  
 * @param f the name of the file.  
 * @throws IOException if there is a problem reading from f.  
 */
```

In the Start menu, select "Run". Type `javadoc *.java` in the window that appears. This runs JavaDoc on every Java file you have at the top of your H: drive. You will see lots of output.

In Windows Explorer, navigate to your H: drive. You'll see a file called `index.html`. Double-click on it, and gasp in astonishment at how cool this is. (Note: make sure your TA hears you gasp.)

Now do the same for `FileCopier.java`: add good comments, including using `@param` and `@throws` tags. Here, use one `@param` tag for each parameter. Then run `javadoc *.java` again, and reload `index.html` in your browser.