**Towson University**

**Department of Computer and Information Sciences**

**Setting Up and Using DrJava Revised 1/26/2018**

**Overview**

This information helps you create and run Java programs, manage files, open existing projects to continue previous work, and copy and paste output. It is written to the Windows platform. If you have a Mac, adapt it accordingly.

**Section I** and **II** includes information to create the folders where you will store your files on a computer's primary hard drive, typically the C: drive. Section II just shows you how to create matching folders for backup.

**Section III** explains how to launch DrJava and set application preferences.

**Section IV** is probably the most important. It has detailed instructions on how to create and save new programs.

**Section V** covers closing down and saving files. Since you'll be working on multiple, your work will not necessarily be "preserved" or synced. In here, you'll learn how to copy your work to your H: drive for backup.

**Section VI** shows you how to open an existing DrJava file to continue coding or to run it.

**Section VII** explains how to copy and paste the output from your Java applications to email or other documents.

# Create a C: Drive Folder to Save Java Files on Home, Laptop, and CIS Lab Computers

## Overview:

### During each lab, you will be creating one or more new Java programs. Before you do that, you will need to specify a folder location (path) where your project's files will be stored. This has to be done correctly or you will run into problems later on.

### When you are working in lab, you must use your lab computer's C: drive to store your projects. Never work from your H: drive.

### In between lab sessions each week, you will make copies of your important files and folders and store them on your H: drive or another suitable backup location. You must have a backup. If you lose work and cannot recover it from backup, you will lose points or get a 0 for the lab.

### You need a consistent place to save your work. Since you probably will use multiple computers during the course, you need to create and maintain the same folder tree structure everywhere so it's easy to keep things in sync.

## Find or create a file tree on the C: drive on all computers you use (home, laptop, and CIS labs and classrooms). This is usually a one-time setup for each computer you work on:

### Login the computer.

### Open Windows File Explorer by clicking the icon on the desktop with the computer's name (in CIS labs and classrooms). Or open Windows File Explorer from the Windows ***Start*** menu (for home computers, laptops, and other computers).

### In Windows File Explorer, find the C: drive icon and expand it.

### Look for a folder named **C:\home\student**. If it's not there, create it. If you don't know how to create nested folders on a Windows drive, Google it or find a YouTube that shows you how.

### Create a subfolder nested inside of **C:\home\student** with your last name. Use lowercase letters and digits only—and no punctuation (like hyphens, etc.). Example: **C:\home\student\bachman**. If you have a hyphenated last name, like Jones-Smith, name it **C:\home\student\jonessmith**.

### Here's an example of how it should look, using your own last name:

### Repeat these steps if you use other computers.

# Create an Identical Folder Tree on Your H: Drive (one-time only) for BACKUP Purposes

## This only works and is needed on campus computers in CIS labs and classrooms. You can skip this step on home or laptop computers.

### Find your H: drive in Windows File Explorer.

### Create the identical folder tree as you have on the C: drive. This is how it should look when you're done:

# Launch DrJava and Set Application Preferences

## Launch DrJava. How you do it will vary depending on whether you're on a home/laptop or lab computer.

### Home or laptop: double click the DrJava .exe file from when you installed it—or if you created a shortcut, click that.

### Computers in CIS labs: Open the Windows start menu and look for a folder named **pgms** in the list of available applications on the computer. Open it. DrJava should be in there. The CIS department consolidated all the applications used in our department courses into a single folder for your convenience.

## Set the application preferences (typically a one-time-only task on each computer you use). In the DrJava menu bar, click on the **Edit** menu item and choose **Preferences** from the dropdown list.

1. In the **Preferences** window, find these sections and make these changes, or verify that they are set like this:  
   1. **Display Options > Show All Line Numbers** = **checked** (makes it easy find your way in code)
   2. **Display Options > Fonts > Main Font** = **Monospaced – 22** (makes it easier to see, especially when screen sharing)
   3. **Miscellaneous > Indent** **Level** = **2** (maximizes horizontal space without excessive waste)
   4. **Miscellaneous > Recent Files List Size** = **9** (you often are working on quite a few things)

# Create, Run, and Save a New Java Program using Starter Code

## This starter code is a template to get you started and has labeled sections that will guide you through creating your first simple programs. Think of it as a set of training wheels on a bike—it's there to help you ride straight and not fall.

## Highlight the following text, all the way down to the final closing curly brace. Then click ***Edit > Copy***, right-click and select **Copy**, or use the shortcut key combination, **Ctrl + C**.

/\*

COSC 236

Your name:

Description:

Filename:

Date started:

Modification history:

Classes: main

\*/

public class Lab0\_Problem1

{

public static void main(String [] args)

{

// DECLARATIONS

// Input-capture variables:

// Expression-result variables:

// Counter, accumulator, or flag variables:

// Other variables:

// Instantiations:

// INITIALIZE VARIABLES

// INPUT

// PROCESSING AND CALCULATIONS

// OUTPUT

}

}

## Launch DrJava if it's not already running (See Section III).

## Paste the starter code you just copied into DrJava's code window on the right.

## As soon as you have the starter code in place, save your work, click the **Compile** button in DrJava. This will force a first-time save, much like in Word, PowerPoint, etc. Here's what you'll see:

### 

### Choose **Yes** in the **Save All** Files dialog box.

### Examine the "Look in:" dropdown box in the window. Navigate to your **C:\home\student\lastname** folder and make sure it shows up in the dropdown. Use the down arrow or the icon to the right with the up arrow in the folder to move around the file system.

### 

### Once you're sure you're where you should be, click the **New Folder** button with the orange asterisk in it and name based on the lab that you're working on (0, 1, 2, 3, etc.). It will ALWAYS be Lab + the number, just like below:

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### Once you create the Lab folder, double click to navigate into it and make it current. Your Look In: dropdown should now show it, like this. If you're good, click **Save**.

### Be sure the name of the file in the File Name box is EXACTLY the same as your CLASS in the beginning of your source code, including capitalization. DrJava insists on this. The names to use are part of the lab assignment, so use them EXACTLY as specified. The name of the file will appear in the left-hand pane of the DrJava window with a .java extension like this:

## As you continue to write your program's source code, click **Compile** occasionally to force a save and to incrementally verify that your code is working.

## You also don't want to get carried away writing a lot of code, have something go wrong (like the computer crashes), and then you lose your work. Saving frequently is good insurance.

## When you're done and have desk-checked your source code, click the **Compile** button, then if it compiles successfully without errors, click **Run** to execute your program.

## Examine the output window and the bottom of the DrJava IDE for any errors or the output from your program if it runs successfully.

## The **Interactions** tab includes all the back-and-forth dialog, error messages, etc. The **Console** tab shows only the output generated by your program if it runs successfully.

## If you want to work on another program (class) you MUST close DrJava to avoid mixing up things. Save your work:

### Save your work (if you successfully compiled the program, it auto-saves, but you can always choose **FIle > Save All** to be sure.

### Close DrJava with **File > Quit**

### Re-launch DrJava to open an existing project or create a new one.

# Close Down DrJava, Manage Your Files, and Leave Lab

## You can't expect to get the same computer each week for lab. Even if you could, you can't be sure someone won't delete your files in between. So you'll need to keep the files someplace safe.

## When you're done working on your project, save your work as shown in II. J. A and B above.

## Using Windows Explorer, copy your files and folder structure to your H: drive into a parallel folder tree. Or use your alternate backup solution.

## You MUST close DrJava in between so you don't co-mingle things.

## Before leaving the lab:

### Make sure to logoff the computer so no one can get to your H: homeshare files, email, Blackboard, PeopleSoft, etc.

### Gather all your personal belongings (phones, backpacks, notebooks, etc.).

### Clean up your work area of any debris, even if you didn't put it there.

### Reposition the monitor, keyboard, and chair neatly for the next student.

# Open an Existing Project

### Launch DrJava

### Click **File > Open** and navigate to the folder on your C: drive where your project is stored, select the click the file with the .java extension, and then click **Open**:

### 

#### .

# Copy, Save, or Print Output

## Click on the tab you want to activate in the output window. **Console** is the usual one but you can also choose **Interactions** or **Compiler Output**.

## Highlight the text you want to copy with your mouse cursor.

## Right click the text and choose from one of the options. This is for the **Console** tab:

## If you choose the **Interactions** tab, you have additional options, including **Copy**, so this may be more versatile:

## Once you have copied your text or saved it, you can email it, paste it into another document (Word, PowerPoint, email message, etc.