



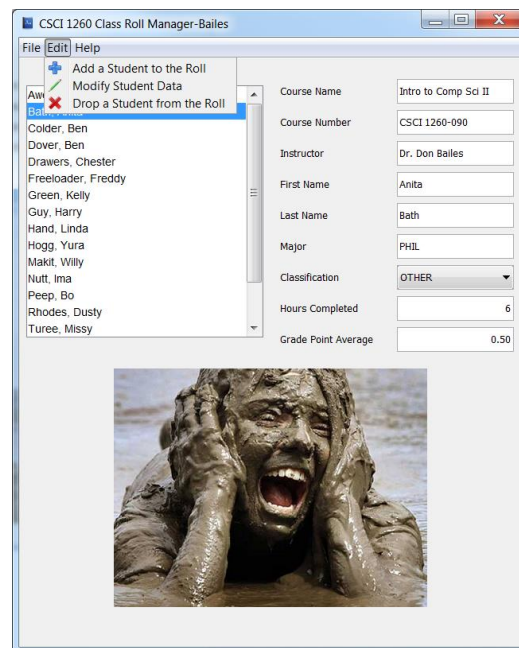
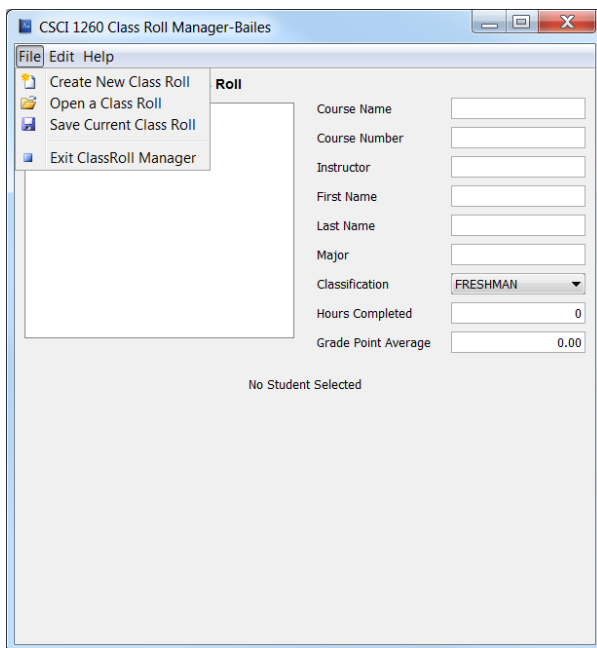
EAST TENNESSEE STATE UNIVERSITY

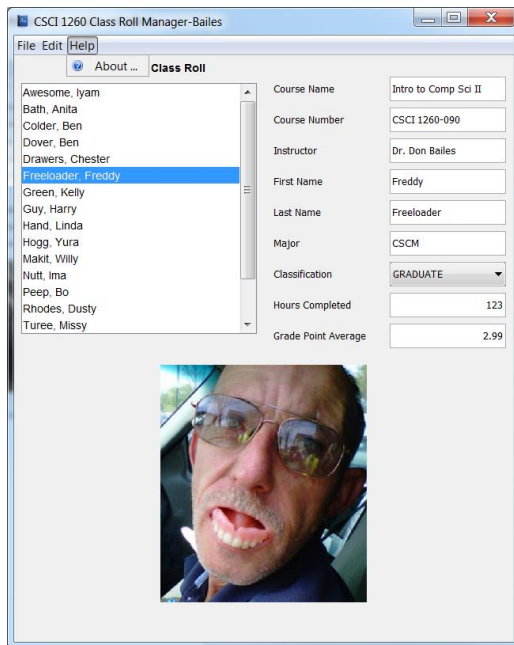
CSCI 1260 – Introduction to Computer Science II

Project 6 – Roll Manager GUI

Overview

We are ready for the final phase of the **Class Roll Manager** project. In this phase, we are to replace the console application user interface with a graphical one. If coded properly before, all of the classes except the driver class will require no modifications. The **driver class** in the previous version of the **Roll Manager** project series will be **entirely replaced** with a **JFrame-derived GUI main window** class and a brief driver class than instantiates the main window. Following are screen captures of the main window and about box.

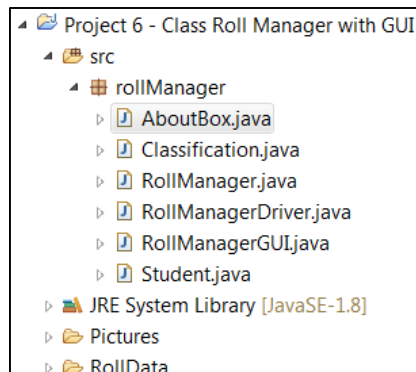




Specifications

Specifications

- The main window should have a list box in a scroll pane.
- The main window should have its own icon rather than the one provided by Java by default.
- As the selection changes in the **List Box**, the information in the **text fields** on the right should be the information for the selected Student in the **List Box**. The **picture** at the bottom on the window should be a photo of the currently selected Student. You can find suitable pictures on the internet for the Students if you do not have real digital pictures of all of them. Using actual pictures of the Students is good if you have them.
- The **About Box** may **NOT** be an ordinary **JOptionPane** dialog. It should be derived from **JDialog**. It should contain an appropriate picture and wording that conveys the same type of information as in the example above. Be sure to use your name and information rather than mine.
- All fonts used should be appropriate and of appropriate size for their uses.
- You may add additional features as long as those do not “get around” some of these specifications.
- All pictures should be in a folder named **Pictures**. The file names of the Student pictures in the **Pictures** subfolder must be an exact match to the corresponding file names present in each line of your **class roll** text file.



- The code below can be used to **scale the photos** to the **height in pixels** specified by the **second parameter**. This is necessary because the **photos** in your **.jpg** files may not all be the proper **height** and **width**.

```
* Get and scale the photo to fit the panel <br>
public ImageIcon getPhotoIcon (String fileName, int desiredHeight)
{
    ImageIcon icon = new ImageIcon ("Pictures\\" + fileName);

    Image pic = icon.getImage ( );
    double ratio = (double) pic.getWidth (null) / pic.getHeight (null);

    BufferedImage bl = new BufferedImage ((int) (desiredHeight * ratio), desiredHeight,
        BufferedImage.TYPE_INT_ARGB);
    Graphics gl = bl.getGraphics ( );
    gl.drawImage (pic, 0, 0, (int) (desiredHeight * ratio), desiredHeight, null);
    return new ImageIcon (bl);
}
```

- You will need information from both **GUI** chapters in the text and the associated PowerPoint presentations to complete this assignment.
- The menu bar across the top of the window must have at least **File**, **Edit**, and **Help** menus. Under **File**, one should find **Open**, **Save**, and **Exit**. Under **Edit**, one should find **Add**, **Modify**, and **Delete**. Under **Help**, one should find **About**. All of these should be fairly self-explanatory. For example, **Add** takes new information entered in the **text fields** on the top right and creates a **new Student** object which is then added to the **RollManager** (and thus to the **List Box**). **Modify** replaces information in the currently selected **Student** in the **List Box** with the (modified) information found in the **text fields**. **Delete** removes the currently selected **Student** from the **RollManager**.
- Use **Combo Boxes** for the **Classification**. Populate the **combo box** from **Classification.values ()**.
- Give the application a **Windows Look-and-Feel**.
- You may use **JOptionPane** dialogs but **only** for things for which they are **most appropriate**. Examples may be **error messages** from **catch handlers** or **requests** for **confirmation** of things like the user clicking **Delete** under the **Edit** menu. These dialogs are not substitutions for **JFileChooser** dialogs or for **JDialog** or **JFrame** derived classes where they are more appropriate.
- All interaction with the user should be handled in the **JFrame/JDialog** derived classes that you develop.
- Until **both GUI chapters** have been covered, you will not have all the information needed for this project. However, you may get started using information as it is presented. You may certainly read ahead and ask questions as you have them.
- Code similar to the following should comprise your **driver class** for this application.

```

17+ * Instantiate main window
25 public class RollManagerDriver
26 {
28+ * Instantiate main window
37- public static void main (String [ ] args)
38 {
39- SwingUtilities.invokeLater (new Runnable ( )
40 {
41- @Override
42 public void run ( )
43 {
44 new RollManagerGUI ( );
45 }
46 });
47 }
48 }

```

Submission

Create a ZIP file named LastnameFirstname_Project6.zip (e.g., BennettBrian_Project6.zip). Include the following files.

Code

Include a Source folder in the ZIP file. Place all source code into the Source folder in the ZIP file. If you navigate to your Project 6 folder in Windows Explorer (or Finder), you should see a src folder. Copy all contents (and the structure) of your src folder to the ZIP file's Source folder.

Due Date

The completed ZIP file must be submitted to the dropbox at or before
11:59pm on Thursday, April 28, 2016.