

## Introduction to Java

Lab Project: 05

Points Possible: 125

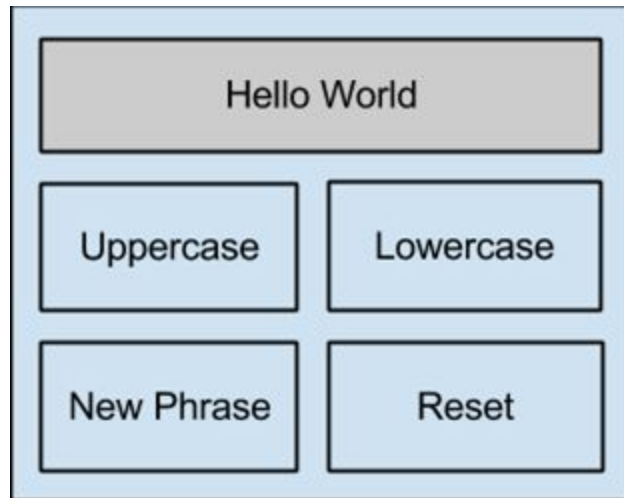
Due Date: Oct. 29th, 2015 (11:59pm)

**Objective:** Create a GUI Hello World application using Java's Swing components.

### Grade Table:

Programming Guidelines are followed and jar file is executable	10
Documentation report is created with screenshots	10
JFrame with Title is created	10
JLabel is created and displays a changing value	10
JPanel is created to manage the display of buttons	15
Uppercase JButton converts display to uppercase	15
Lowercase JButton converts display to lowercase	15
Reset JButton restores program to original state	15
New JButton gets a new String value from the user via a dialog box	15
Total Points Possible	125

**Instructions:** The goal of this project is to create a simple GUI program. The GUI interface needs to contain 1 JLabel and 4 JButtons. The functionality of the buttons is discussed below. The GUI components need to be contained within a JFrame. Additionally a JPanel should be used to help control the layout of the buttons. Use a GridLayout for the layout manager. The buttons should be displayed in a 2 by 2 grid. Here is an *approximate* picture for the layout for the components:



**Functionality:** Each of the buttons needs to perform a different function:

- Uppercase: should display the string of the label in all uppercase letters, use a String method for this - do not hardcode a String in all upper case.
- Lowercase: should display the String in the label in all lowercase letters, use a String method for this - do not hardcode a String in all lower case.
- New Phrase: should get input from the user via a dialog box. Then place this input into the label. The case buttons will need to be able to alter this string!
- Reset: should restore the contents of the label to (exact case): "Hello World"

**Misc. Notes:**

- At launch the label of the text should read "Hello World"
- Make sure to make your jar file executable. This is a GUI program. Assuming everything has been done correctly, when you double click on the jar file's icon the program should launch!

**Turn In:**

1. Create an executable jar file as demonstrated in class (see the class Blackboard site for notes) that contains your source code and class files named "project05LastName.jar"
2. Create a short documentation report (doc or docx) containing screen shots as needed of your program meeting or attempting to meet the specifications in the above grading table. If you are unable to meet various specifications include any error message that are generated when you attempt to compile or run your program. Include a brief description (1 paragraph is fine) documenting your work and describing the functionality of your program. In the report include the version of your Java Compiler (at the command line run "javac -version" and any other tools you used.
3. Submit the resulting report and jar file to Blackboard

*If you have any questions email me early and often at the below address!*

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