

Lab Exercise #5  
*Event Handling*  
Computer Science 2334

Group #: \_\_\_\_\_ Section #: \_\_\_\_\_

Members: \_\_\_\_\_

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*Learning Objectives:*

- Demonstrate your understanding of event handling in Java by completing a temperature conversion program.
- Modify a class such that it implements and uses *ActionListener* as the event listener on multiple GUI components.
- Implement *actionPerformed()* to handle multiple events from multiple components.
- Work with an appropriate data model for the program.

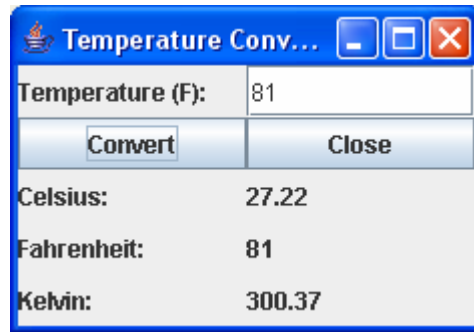
*Instructions:*

This lab exercise requires a laptop with an Internet connection. Once you have completed the exercises in this document, your group will submit it for grading. All group members should legibly write their names at the top of this lab handout.

***Make sure you read this handout and look at all of the source code posted on the class website for this lab exercise before you begin working.***

1. Review the source code for the *Temperature* class. This class is the data model for the temperature conversion program and you will use methods provided in this class to complete the *Converter* class.
2. Read through the source code of *Converter.java* and note the comments provided in the source code that give hints as to what needs to be done in the program. What is the name of the class that will be used to implement *ActionListener* in this program?

3. Label each component of the GUI below with the corresponding class variable.



4. Register the class that will serve as an *ActionListener* with the required components.

5. Add an *actionPerformed()* method to the class that serves as your *ActionListener* (the class that implements the *ActionListener* interface). This method should handle the events specified in the source code of *Converter.java*.

6. There is a mistake in the Constructor of the *Converter* class. Identify and fix this error. Explain the error below.

7. Test your program by filling in the following table:

Fahrenheit	Kelvin	Celsius
128.560		
3.030		
-25.700		
1024.034		

7. Submit this lab electronically by transferring the Converter.java and Temperature.java files to codd.cs.ou.edu and save them in a folder named lab5. Then ssh into codd.cs.ou.edu and use the following commands to submit your lab.

```
cd lab5
```

```
/opt/cs2334/bin/submit cs2334-<section #> lab5 <*.java>
```

where <section #> is replaced by the section number for your lab section (011, 012) and <\*.java> is either a list of the Java files to be submitted for the lab or the text \*.java.

8. Turn in this lab handout to your lab instructor.