

CS 532 Lab #1

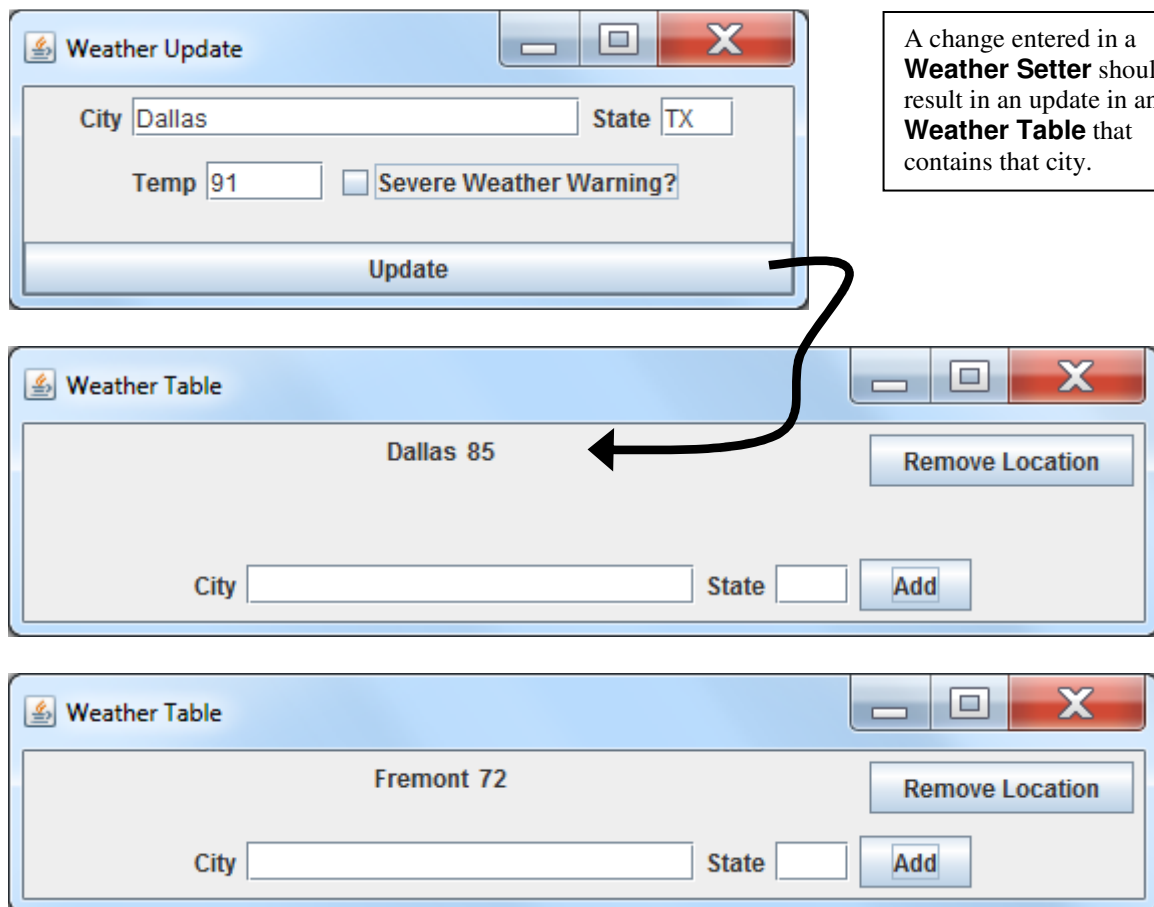
Due 10/6/14

In this lab, you will build a GUI where incoming weather data will update various views of the weather information. Some initial code for the GUI has been given to you and demonstrated in class. Recall that the **main()** function is in **WeatherProg.java**. The application can be improved by modifying it to use the MVC design pattern. Any changes made by a “Weather Setter” should be automatically updated in the “Weather Table” views.

Get the existing code working first so you become more familiar with the code. Then have a JTable in each Weather Table view so that multiple cities can be displayed.

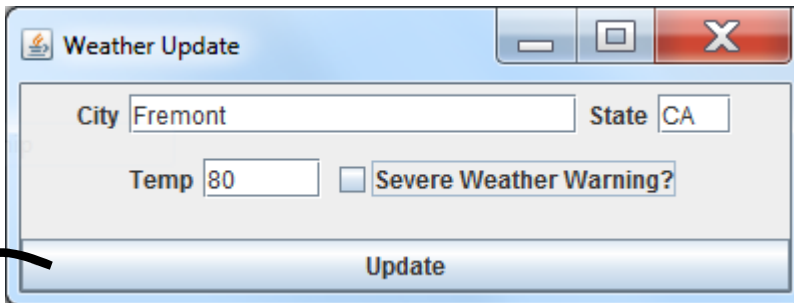
Step 1: Use a MVC architecture

Get the existing code working first so you become more familiar with the code. You should be able to draw a picture of what happens step-by-step from the user entering new weather data for a particular city to the Weather Table displaying the updated information. Think about this at a high level before modifying the code. Make sure your program supports multiple Weather Tables as shown below.



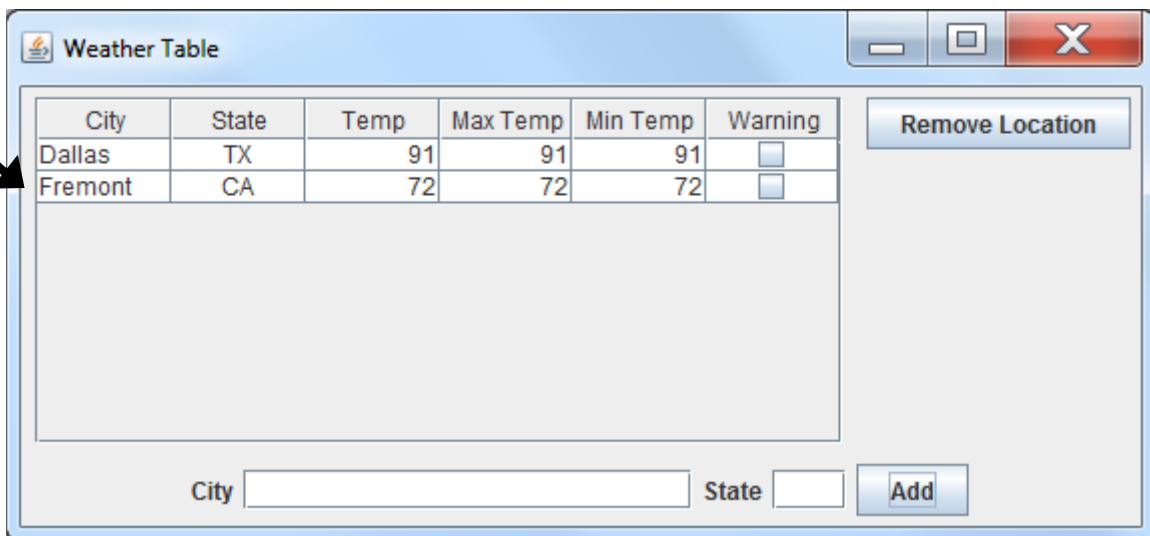
Step 2: Use a JTable

1. Add a minimum and maximum temperature for each city. The min and max temps start out the same as the first recorded temperature for the city. As the temperature goes up or down, the max and min temps should be updated, as well.
2. Instead of each Weather Table displaying information for only one city, display a table that can show multiple cities at the same time. In addition, you should be able to remove rows from the table at any time. Once again, make sure that any change to a city's weather result in all Weather Tables being updated.

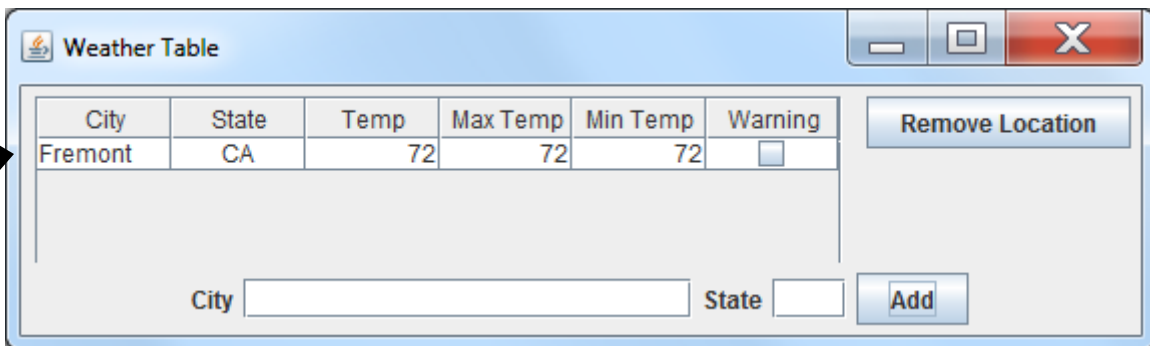


A dialog box titled "Weather Update" with a blue header bar. It contains a "City" text field with "Fremont" entered, a "State" text field with "CA" entered, a "Temp" text field with "80" entered, and a checkbox labeled "Severe Weather Warning?". Below these fields is an "Update" button.

A change entered in a **Weather Setter** should result in an update in any **Weather Table** that contains that city.



A dialog box titled "Weather Table" with a blue header bar. It contains a table with 6 columns: City, State, Temp, Max Temp, Min Temp, and Warning. The table has two rows: Dallas, TX (Temp: 91, Max Temp: 91, Min Temp: 91, Warning: ☐) and Fremont, CA (Temp: 72, Max Temp: 72, Min Temp: 72, Warning: ☐). To the right of the table is a "Remove Location" button. Below the table are "City" and "State" text fields and an "Add" button.



A dialog box titled "Weather Table" with a blue header bar. It contains a table with 6 columns: City, State, Temp, Max Temp, Min Temp, and Warning. The table has one row: Fremont, CA (Temp: 72, Max Temp: 72, Min Temp: 72, Warning: ☐). To the right of the table is a "Remove Location" button. Below the table are "City" and "State" text fields and an "Add" button.