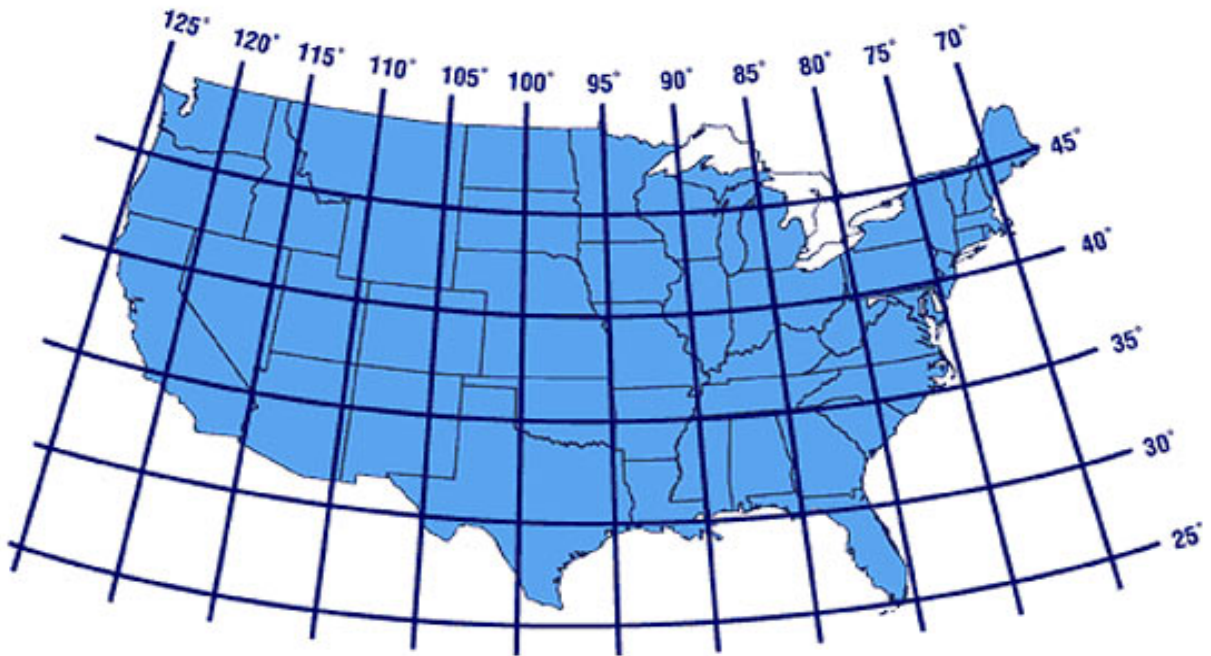


ShowUSA.java

Background:

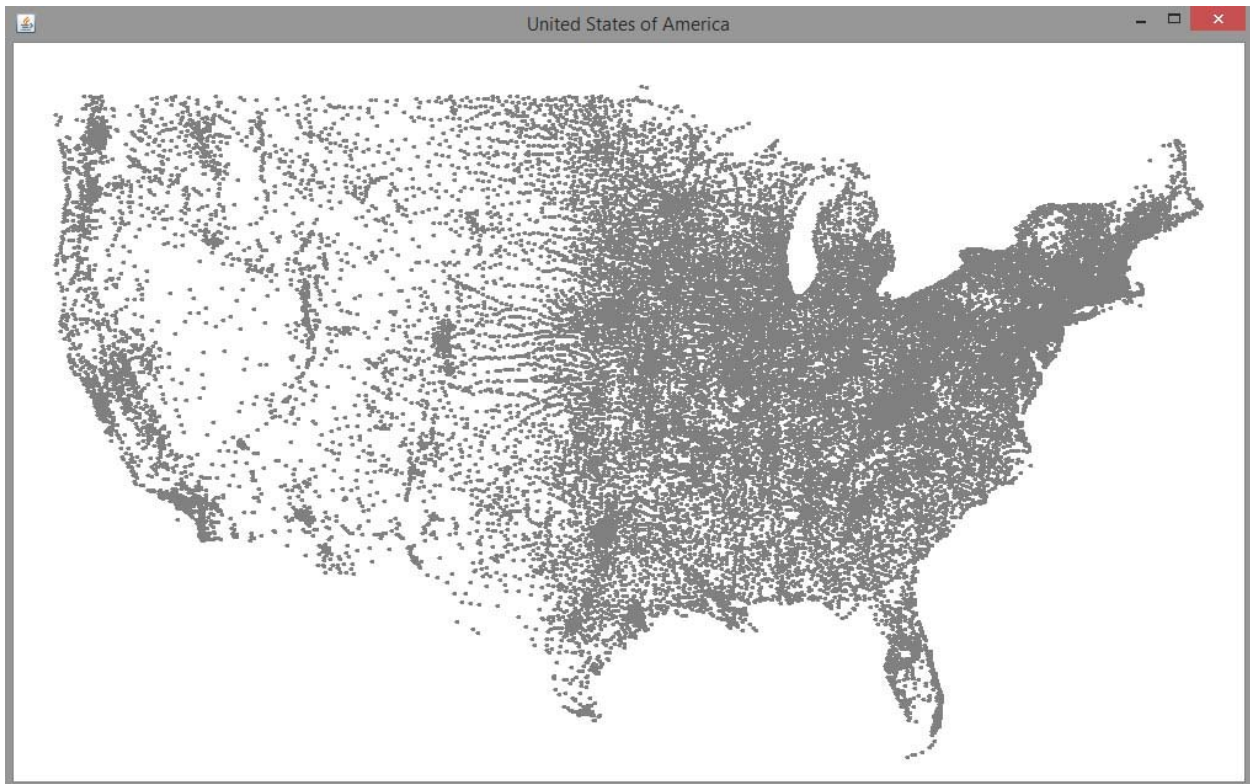
Text files can provide us with a great deal of information. This assignment asks you to use data in a text file to provide a graphical representation of the United States (lower 48). Consider the following US map, with longitudinal and latitudinal lines shown.



These longitudinal and latitudinal lines are similar to x and y values in a coordinate grid. If we could get longitude and latitude values for US cities, we could provide a map of the United States.

Assignment:

1. Read in the data from cities.txt. You are required to use `OpenFile` to create a `Scanner` instance that points to the text file. You may find the `String` methods **`indexOf`** and **`substring`** useful. Also, the **`parseDouble`** method from the `Double` class can help you to transform a `String` to a `double`. Translate the doubles to ints and plot these points on a `JFrame` (see below). If you are able to do this, and comment your code thoroughly, you can earn 6/10 points. Make use of the starter code on my web site. The code that you add should be relatively short. You should use gray as your "dot" color, and the diameter should be 4.



2. Now the hard part. For each data point in `cities.txt`, open `capitals.txt`, and compare the city and state names. If you find a capital, change the diameter to 12. These capital cities should be shown in red. You may find the **substring** and **indexOf** methods from the `String` class useful. You are not allowed to use the **contains** method from the `String` class.

