CSE 6331 Cloud Computing
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Programming Assignment 5
Data Visualization
Due: In Blackboard

Description:
It is difficult to find meaning in large volumes of "textual" output, most users prefer pictures: graphs, pie charts, etc.
Various mechanisms for visualizing data within a browser, which are "light weight" and require no plugins, or additional (local) downloads support showing results which are easy to read and understand.
(Free) supporting tools and libraries include:

Javascript:
d3js.org
InfoVis: philogb.github.io/jit/demos.html
js.cytoscape.org
Other:
developers.google.com/chart/
www.highcharts.com (HTML5)
https://www.slant.co/options/10577/alternatives/~d3-js-alternatives or
https://alternativeto.net/software/d3-js/
(use only one of the free javascript ones)

Your assignment is to visualize and display the results from your previous assignments within a browser, allow a user to select intervals or attributes in a data set, show results as a pie chart, a histogram, or a scatter or point chart (possibly connected: a line).

Using those SQL tables to do queries, rather than display the results as text, display as an image (a picture).

For example:
For Earthquakes:
For a 7 day period show quakes in magnitude intervals: less than 2, 2 to 2.5, 2.5 to 3.0, up to 6.0 to 6.5
Show this as a horizontal barchart as well as a pie chart
For the Titanic data:
On a pie chart show percent female survivor and not for 1st,2nd and 3rd class passengers
On a bar chart show numbers of male survivors and not for 1st,2nd and 3rd class passengers
Using ML clustering, for 8 clusters in Titanic data, based on age and fare price show centroids on point (scatter) chart.

Users of this service will interact with your service through web page interfaces, all processing and web service hosting is (of course) cloud based.

Please, submit in Blackboard. Work must be individualized, but may be done in a group.

You must submit this lab, working (or partially) by the due date.
Your program should be well commented and documented, make sure the first few lines of your program contain your name, this course number, and the lab name and number.
Your comments should reflect your design and issues in your implementation.
Your design and implementation should address error conditions.