CIVL 1112 – Assignment #7

Name: _____

Objective

The purpose of this assignment is threefold. First, you will get a chance to practice your skills in developing simple engineering spreadsheets. Second, you will be introduced to the graphing and charting capabilities of Excel. And finally, you get an opportunity to compute your current grade in the class.

You ***must*** hand in the coversheet for the assignment and a printout of each graph for Parts 1-3, and your calculations for Part 4. Also, submit your Excel file for Parts 1-3 to the Dropbox in eCourseware.

Part 1: There are two basic steps in this part of the assignment. Step 1 involves accessing information from the internet, and Step 2 deals with spreadsheet graphs. The sample output illustrates the basic spreadsheet layout you should aim to achieve. Use the data you find on the web.

1. The following links show the 300 most popular given names for male and female babies born during the last 100 years, 1921-2020, according to Social Security: Top 300 Female First Names or the Top 300 Male First Names. Write down the top ten first names and their percentages. You may want to browse the list for your name and add it to the top ten.

2. Create a spreadsheet table showing the first ten (or eleven) names and their percentages. The column of names should be left-justified, and the column of numeric data (i.e., percentages) and its heading should be center-justified. The numbers should appear with a percentage sign and exactly three digits after the decimal point. Use the data in your table to construct a bar chart.

Part 2: The life expectancy in the United States is relatively high (77.8 years for males and 82.3 years for females). The life expectancy is significantly different in other countries. There are three basic steps to Part Two. Step 1 involves accessing information from the internet, Step 2 deals with spreadsheet graphs, and Step 3 involves using the built-in functions of your spreadsheet program. The sample output illustrates the basic spreadsheet layout you should aim to achieve. Do **not** use the data in the sample output; use the data you find on the web.

1. The **CIA** provides an excellent source of information about countries around the world - The World Factbook. Examine their information about **Brazil, Nigeria, Norway, Japan,** and one more country of your choice. Write down the male and female life expectancies for these five countries.

2. Create a spreadsheet table with the life expectancies for the five countries. The column of country names should be left-justified, and the two columns of numeric data and their headings should be center-justified.

3. Construct a paired bar chart showing the male and female life expectancies. The chart should have a title (e.g., Life Expectancy).

Use the data collected in Step 1 to compute the mean, median, range, mean absolute deviation, and standard deviation of the male and female life expectancies.

Part 3: Develop a graph of the relationship between compressive failure stress and *w/c*. Use the data from the first lab (mix 1-2-2) and calculate the average using only the strength values. Using an x-y scatter plot.

Part 4: Compute your current grade in the class using the information in the class syllabus.

Part 5: Read Chapter 7 in the *Strategies for Creative Problem Solving* by Fogler and LeBlanc

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