1. All assignments are turned in on ELMs. ALL late assignments will have a 30 point penalty. NO EXCEPTIONS!!
2. Make sure you save the file with the filename: your_last_name_first_Initial_assignment_name in a word document. For Example: Mazzullo_S_HW4 or Mazzullo_S_Project_2
3. Your homework should include the following **when applicable**:
    a. your name at top of document
    b. name of Assignment at the top of document (e.g., Homework 1, Write-Up project, etc.)
    c. answers to any question asked
    d. results in the output window, if applicable (copy and paste all results)
    e. code you used, if applicable (copy and paste what is in your editor)
    f. CLEARLY mark your answer. DO NOT EXPECT THE GRADER TO FIND YOUR ANSWERS!!
4. Read instructions to homework, projects and write-up thoroughly and do exactly as directed. Order of what you turn in will matter!

Homework 4:

The files you will be using today are called HW_4_Final_Exam_Work *and* REG_Test1_2.

We will start with the first file: HW_4_Final_Exam_Work . It has 3 variables:

Final_Grade
Final_Exam
Class_Work

(Suggestion: Do a PROC PRINT to see the data, this will be very helpful to you.)

1. Do a PROC FORMAT to change the following:
   Determine the letter grade (LETTER_GRADE) for the Final_Grade (10 point scale: 90-100 A, 80-<90 B, 70-<80 C, 60-<70D, and <60 F)
2. Make a frequency chart for Letter_Grade
3. Create a Scatterplot of the final grade vs final exam grade.
4. Create a scatterplot of the final grade vs class work.
5. Determine then state the Pearson Correlation Coefficient for the following:
    a. final grade and final exam
    b. final grade and class work
6. Do a regression on the following:
    a. Predict final grade based on final exam grade
        i. Speak to meaning and implication of the following:
            1. P-value of ANOVA table
            2. P-value of the slope and intercept
            3. R^2 value
            4. Residual Analysis
                a. Fit vs Residuals
                b. Probability Plot
                c. Boxplot

ii. Should you use this regression equation, if so, what is the regression equation?

b. Predict final grade based on class work
   i. Speak to meaning and implication of the following:
      1. P-value of ANOVA table
      2. P-value of the slope and intercept
      3. R^2 value
      4. Residual Analysis
         a. Fit vs Residuals
         b. Probability Plot
         c. Boxplot
   ii. Should you use this regression equation, if so, what is the regression equation?

Now we will work with the second file: REG_Test1_2. It 2 variables:

Test_1 and Test_2

(Suggestion: Do a PROC PRINT to see the data, this will be very helpful to you.)

7. Do a Regression analysis predicting Test_2 based on Test_1.
   a. Speak to meaning and implication of the following:
      i. P-value of ANOVA table
      ii. P-value of the slope and intercept
      iii. R^2 value
      iv. Residual Analysis
         1. Fit vs Residuals
         2. Probability Plot
         3. Boxplot
   b. Should you use this regression equation, if so, what is the regression equation?