Use the dataset given to your team

PART 1)

1. Use **%LET** statements to name the macro variables and set their values. The macro variables are referred to in the SAS code as **&categorical** and **&interval**, to distinguish those names from those of variables.
2. Use PROC UNIVARIATE to generate plots and descriptive statistics for continuous variables and PROC FREQ to generate plots and tables for categorical variables.
3. Use the TTEST procedure to test whether the mean of **SalePrice** is $135,000 in the data set. Is the mean value in the sample statistically significantly different from $135,000 at an alpha level of 0.05?
4. Use the TTEST procedure to test whether the mean of **SalePrice** is the same for homes with masonry veneer and those without. Provide your insights.
5. Create scatter plots to show relationships between continuous predictors and **SalePrice** and comparative box plots to show relationships between categorical predictors and **SalePrice**.
6. Run an analysis of variance with **SalePrice** as the response variable and **Heating\_QC** as the categorical predictor variable. Output diagnostic plots and look at Levene’s test of homogeneity of variances.
7. Use the LSmeans statement in proc glm to produce comparison information about   
   the mean sale prices of the different heating system quality ratings.
8. Examine the relationships between **SalePrice** and the continuous predictor variables in the data set. Use the CORR procedure.
9. Perform a simple linear regression analysis with **SalePrice** as the response variable, and one of the significant predictors. Explain why you have chosen that variable. What’s the prediction equation?
10. Perform a two-way ANOVA of **SalePrice** with **Heating\_Q**C and **Season\_Sold** as predictor variables. Before conducting an analysis of variance, you should explore the data. To further explore the numerous treatments, examine the means graphically. You can use the GLM procedure to discover the effects of both **Season\_Sold** and **Heating\_QC**.
11. Perform a two-way ANOVA of **SalePrice** with **Heating\_Q**C and **Season\_Sold** as predictor variables. Include the interaction between the two explanatory variables. Store the output to a dataset and adjust p-values using PROC PLM (explain why you would need to do that).
12. Perform a regression model of **SalePrice** with **Lot\_Area** and **Basement\_Area** as predictor variables.