Assignment Day11

1) Using the data in Excel file Loans, construct a scatter chart for monthly income versus loan amount. Apply simple linear regression. What is the regression model? If an individual has 7336 as monthly income, what would you predict the loan amount to be?

2) The Excel file Major League Baseball provides data on the 2010 season.
   a. Construct and examine the correlation matrix. Is multicollinearity a potential problem?
   b. Suggest an appropriate set of independent variables that predict the number of wins by examining the correlation matrix.
   c. Find the best multiple linear regression model for predicting the number of wins. How good is your model? Does it use the same variables you thought were appropriate in part(b).

3) For the Excel file Auto Survey.
   a. Find the best regression model to predict miles/gallons as a function of vehicle age and mileage.
   b. Using your result from part(a), add the categorical variable Purchased to the model. Does this change your result?
   c. Determine whether any significant interaction exists between Vehicle Age and Purchased variables.