**Categorical Variables Lab**

Research Question: What else influences housing prices in my area?

Goals for Lab:

* Multiple Regression with Categorical Variables
* Post-regression analysis

Deliverable:

Write-Up

Write a 2-3 page report of your results. The file should include:

* Plots
* Regression output
* Post-regression tests/analyses
* Explanation of results

**Steps for Lab:**

Use the same dataset as last lab (redfin)

Recode the Location for use in this regression (categorical)

Recode the Property Type data for use in this regression (categorical)

Necessary Packages: [XLConnect](https://cran.rstudio.com/web/packages/XLConnect), [tidyverse](https://cran.r-project.org/web/packages/tidyverse/index.html), [car](https://cran.r-project.org/web/packages/car/index.html)

Create Information for Report, based on the questions that follow.

Prepare and submit report

1. Estimate a regression with home sales price as the dependent variable and bedrooms, bathrooms, square feet, year built, location, and property type as explanatory variables.
2. Explain what you chose as the reference group for both of your categorical variables, and why.
3. Interpret the coefficients, including the categorical variables
4. Explain the statistical significance, or lack thereof, of the variables
5. Run and report on a VIF regression
6. Run and report partial F-tests.
7. Identify the most parsimonious model from the information above.