**Resources**: Microsoft Excel®, [DATCB565 Comp3 Part 1 Data File](https://portal.phoenix.edu/api/contentservices/rest/contentresolver/02-DOCUMENT-5e6289d7357de5d62f815886)

**Instructions**: The Excel file for this assignment contains a database with information about the tax assessment value assigned to medical office buildings in a city. The following is a list of the variables in the database:

* *FloorArea*: square feet of floor space
* *Offices*: number of offices in the building
* *Entrances*: number of customer entrances
* *Age*: age of the building (years)
* *AssessedValue*: tax assessment value (thousands of dollars)

Use the data to construct a model that predicts the tax assessment value assigned to medical office buildings with specific characteristics.

**Construct**a scatter plot in Excel with *FloorArea* as the independent variable and *AssessmentValue* as the dependent variable. Insert the bivariate linear regression equation and r^2 in your graph. Do you observe a linear relationship between the 2 two variables?

**Use** Excel’s Analysis ToolPak to conduct a regression analysis of *FloorArea*and *AssessmentValue*. Is FloorArea a significant predictor of *AssessmentValue*?

**Construct** a scatter plot in Excel with *Age* as the independent variable and *AssessmentValue*as the dependent variable. Insert the bivariate linear regression equation and r^2 in your graph. Do you observe a linear relationship between the 2 variables?

**Use**Excel’s Analysis ToolPak to conduct a regression analysis of *Age* and *AssessmentValue*. Is *Age* a significant predictor of *AssessmentValue*?

**Construct** a multiple regression model.

* Use Excel’s Analysis ToolPak to conduct a regression analysis with *AssessmentValue*as the dependent variable and *FloorArea*, *Offices*, *Entrances*, and *Age*as independent variables. What is the overall fit r^2? What is the adjusted r^2?
* Which predictors are considered significant if we work with α=0.05? Which predictors can be eliminated?
* What is the final model if we only use *FloorArea*and *Offices*as predictors?

**Suppose** our final model is: *AssessedValue*= 115.9 + 0.26 \* *FloorArea*+ 78.34 \* *Offices*

What would be the assessed value of a medical office building with a floor area of 3500 sq. ft., 2 offices, that was built 15 years ago? Is this assessed value consistent with what appears in the database?

**Summarize** your analysis in 750 words or more.