CSCI 183 Homework 2
Due Date: Feb 11th, 2022

Regression for House Price Prediction

What do you need to do?

1. Load the dataset into a pandas dataframe and find the data types for each column in the dataset.
2. Find the names of the columns of this dataframe.
3. Find the correlation matrix for this dataset. Report which features tend to have a high correlation with the target variable.
4. Create and compile as many graphs (feature vs target variable) as you can using the matplotlib library [https://matplotlib.org/gallery/index.html] for the given dataset.
5. Based on the graphs in step 4, identify features that have a linear relationship with the target variable.
6. Selecting different features from step 5, implement a linear regression algorithm and **find the slope, the intercept and the error of the regression model.**
7. Display the line of best fit from step 6.
8. Some options you can consider:
    a. linregress() from scipy.stats
    b. LinearRegression() from sklearn
    c. Manually code the gradient descent algorithm
9. Create a table similar to one given below for all the features selected in step 6.
10. Also attach images of the graphs to your report.

Observation Table:

Feature	Slope	Intercept
:		
:		

Submit your code as an .ipynb file and a document reporting your findings.