1. Create a scatterplot matrix to compute and visualize the correlations between **Average Temperature**, **Total Cases**, and **Total Tests**
2. Construct a linear regression model where **Average Temperature** is used to predict **Total Cases** (use unstandardized **Average Temperature**)
3. Create a scatterplot with **Average Temperature** on the x-axis and **Total Cases** on the y-axis. The plot should also include a horizontal line for the mean number of **Total Cases**, a **LOESS line**, and the **regression line**.
4. Write up a brief APA style report that details your findings and your interpretations of the correlations between the specified variables and the simple regression analysis. Be sure to also include the scatterplot matrix and the scatterplot with the regression line from Questions 1 & 3 as figures in your submission.