Question-2

Five visualizations performed are

1. Histogram of Math scores: The histogram shows the frequency distribution of math scores, making it easy to identify the range of scores where most of the students lie.
2. Boxplot of Reading scores: The boxplot shows the distribution of reading scores and helps to identify any outliers, giving an idea of the spread of scores.
3. Scatter plot of Math and Writing scores: The scatter plot shows the relationship between math and writing scores, making it easy to identify any correlation between the two variables.
4. Bar plot of Race/Ethnicity and Math scores: The bar plot shows the mean math scores for different race/ethnicity categories, making it easy to compare the performance of students from different backgrounds.
5. Heatmap of Correlation Matrix: The heatmap of the correlation matrix shows the correlation between different variables, making it easy to identify any strong or weak correlations between variables.

Evaluation of the different elements of the student performance dataset is made simpler with the aid of these five distinct visualizations. The histogram displays the frequency distribution of math scores, the boxplot displays the variance of reading scores, the scatter plot displays the connection between math and writing scores, the bar plot displays the average math scores for different ethnic and racial categories, and the heatmap displays the relationship between various variables. These visualizations offer a thorough comprehension of the student performance dataset when taken together.