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| **Data Set: mtcars** |
| **Question / Problem:**  For wt write an R statement to find the:  • Minimum value – identifying which car it belongs to  • Maximum value – identifying which car it belongs to  • mean, median, standard deviation  • Do a basic plot of a histogram and box plot |
| **Variables:**  **wt: Numerical**  **Car Name: Test/String(Categorical)** |
| **Techniques used:**  **Statistical Calculations**:   * **Minimum Weight**: Determined using min() to find the smallest value in wt. The car is identified using filtering techniques (which.min() or subsetting). * **Maximum Weight**: Determined using max() to find the largest value in wt. * **Mean, Median, and Standard Deviation**: Calculated with the functions:   + mean() for the average weight.   + median() for the middle value of the dataset.   + sd() for the standard deviation, which measures the spread of the weight values.   **Visualization**:   * **Histogram**:   + Displays the distribution of wt values across the dataset.   + Identifies patterns such as skewness, central tendency, and the frequency of weight ranges. * **Box Plot**:   + Provides a visual summary of wt, highlighting the median, quartiles, and potential outliers.   + Outliers in the dataset can be identified and further analyzed for their impact. |
| **Analysis and Visualisation:**                **Most cars are concentrated around the mean (3.21725) and within the range of 2 to 4 thousand pounds.**      **The minimum weight was 1.513 which belongs to Lotus Europa**  **The maximum weight was 5.424 which belongs to Lincoln Continental**  **The Mean was 3.21725**  **The Median weight was 3.325**  **The Standard Deviation was 0.9784574** |
| **Considerations:** |