**Data Basis:**

The data used for this application is the R mtcars data set. This data set relates several car attributes, e.g. weight (wt), horsepower (hp) and displacement (disp.) to gas consumption resp. miles per gallon (MPG) for certain types of cars.

**Filtering Data:**

For the cars available in data frame «mtcars», in the sidebar panel, several attributes can be chosen using a slide bar and radio buttons. Based on these attributes, the cars fulfilling these values are filtered. After filtering, the graphics, list of selected cars and statistics displayed for the cars (see the according tabs) are updated accordingly. If no car fulfills the filter criteria, no values are displayed.

**2D Plots:**

In two tabs, 2D scatter diagrams are displayed, which show for the various cars analyzed (see above) the relation between MPG vs. weight respectively MPG vs. displacement. The colors display the number of cylinders, the size of the data points gives an impression of the horse powers per data point. Each data point symbolizes a car in the underlying data set. You can hover over any data point, displaying the according values. If you click on any, the value will be memorized in one of the text fields beneath the plots. The second text field if displaying the value the mouse cursor is currently hovering over. This feature migh be useful to compare two values in the plot.

**3D Plot:**

The 3D-plot unites the 2D plot information in just one joint plot. Depending on the browser you use, graphical display might be a challenge. It is recommended to use the Internet Explorer. If the plot does not get displayed when you open the tab, please try moving your mouse over where the plot should appear. Latest then, it should be displayed. By clicking on the graph and moving the mouse cursor, the 3D-perspective can be moved around.

**List of selected Cars:**

One of the tabs provides a list of the selected cars. Within the list, which is based on standard Shiny functionality, you can navigate, sort and filter using the fields with the according labels.

**Stats for selected Cars:**

For the selected cars, the average values for several attributes (horse powers, weight etc.) are calculated and displayed. For some values (e.g. transmission type), average calculation does not make sense, so these values are not calculated.