## Criterion C: Development

**Techniques:**

-User Interface
-Methods
-Variables
-Arrays

User Interface:

The user interface must be organized and have buttons that retrieve data and update list boxes. This is accomplished by using methods and other commands. The Add button must update list boxes, add to an array, and calculate the average miles. It does this by retrieving the selection from the Jcombobox and the textbox. It uses the index of the combobox for many purposes. The selected index is used for the correlating week array and totalmiles arraylist. Also in the user interface is the calculate button. This retrieves data from multiple text boxes and uses them to calculate two things, the average price per mile and price per rider. Furthermore, the next and previous buttons shuffle through the week, displaying days and their average miles. This is achieved by simply adding one to the position of the array. An integer called counter is used to keep track of the position in this array.

Methods:

Methods are in the Day object except for the read and write methods. The methods are used to add miles to the total miles arraylist, add the miles within that array, and finally divide by the size to find the average miles driven on that day. There are seven Days, one for each day of the week. The read and write methods are used to store data that was previously entered in earlier sessions and also retrieve it.

Variables:

DollarsPerMile was the only global variable because it was determined in the main class by dividing dollarsSpent by milesDriven. Dollars spent and miles driven were created within the addButtonActionPerformed by getting them from the text boxes. Distance, trips, and splitting, were also like this but in the calculateButtonActionPerformed. In the Day object there were three variables, milesdriven, totalmiles, and averagemiles. These would be updated every time the Day methods were used.

Arrays:

I used two arrays in the main class and an arraylist in the Day object. The arraylist was called totalmiles and would store all the miles that had been entered for that day. The Week array held seven positions, each was a Day. This meant that each Day had and arraylist within it to store all the mile values. The final array was a string array that simply held the names of the days of the week in order, making it possible to display out the average values for each day and shift through them.