Road Trip Planning Spreadsheet

In this lab you will be designing a spreadsheet using LibreOffice Calc as a planning tool for a road trip. In the end you should have a detailed list of stops for the trip, and an analysis of how much gas you’ll have to plan on spending. Use the internet to find suitable stops along your route, plan to drive no more than 5 hours straight, and assume your car has a 15 gallon tank.

Goal:

Understand how to use the following spreadsheet concepts and features:

1. How to design and create a planning spreadsheet
2. How to use meaningful functions
3. How to implement different filtering methods

On The Road:

You and a friend are heading from Bellingham, WA to Riverside, Iowa to visit the future birthplace of Captain James Tiberius Kirk. In preparation of this journey, your friend has asked you to plan all of the stops you will take along the way. Remember, you must stop at least every 5 hours and your gas tank holds 15 gallons of gas. Assume you get 25 miles to the gallon.

To plan the trip you will create a spreadsheet that keeps track of your progress. You can find your stops using Google Maps or some other internet tool. Some columns that you are required to have on your spreadsheet include where you stop, how many miles it will take you to get there from your last stop, how much time it will take you to travel to the stop, how long you’ll stay at the stop, and how much you’ll have to pay for gas to travel to that stop. Use formulas to calculate the amount you’ll pay for gas, and the total gas that you have in your gas tank after traveling to the stop. You do not have to re-fuel at every stop, but once your tank gets to 1 gallon you are required to stop. Use conditional formatting to indicate when you are getting close to needing to re-fuel.

Your friend has also requested that you visit their aunt in Winnipeg, Manitoba, so you’ll have to include a stop there along your journey. While in Canada you’ll need to account for the difference in fuel prices. Assume the average gas price in the US is $3 per gallon and the average gas price in Canada is $4.64 US dollars per gallon. (Canadians measure their gas in liters and Canadian dollars so this is a converted amount from their typical average gas price) Use conditional formulas to calculate the different cost of gas depending on whether you are in Canada or the US.

You should include a summary at the end of your spreadsheet that tells you how many miles you’ve traveled, how much you’ve spent on gas, and how long it will take you to reach your destination. Remember to incorporate elements of good spreadsheet design so anyone looking at your spreadsheet will be able to interpret the information easily.
Here's an example to help get you started:

<table>
<thead>
<tr>
<th>Stop</th>
<th>Country</th>
<th>Miles from last stop</th>
<th>Time to Stop (hrs)</th>
<th>Time at Stop (hrs)</th>
<th>Gallons in Tank Arriving</th>
<th>Gallons in Tank Leaving</th>
<th>Cost of Gas spent travelling</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bellingham, WA</td>
<td>US</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>15</td>
<td>15</td>
<td>$0.00</td>
<td>Let's go!</td>
</tr>
<tr>
<td>Bellingham, WA</td>
<td>US</td>
<td>189</td>
<td>3</td>
<td>2</td>
<td>7</td>
<td>7</td>
<td>$22.68</td>
<td>Stop for lunch</td>
</tr>
<tr>
<td>Spokane, WA</td>
<td>US</td>
<td>173</td>
<td>2.5</td>
<td>0.25</td>
<td>1</td>
<td>15</td>
<td>$20.76</td>
<td>Gas up.</td>
</tr>
</tbody>
</table>

Name your spreadsheet RoadTrip and turn it in to Canvas.