**Lab - Using Excel to Sort and Filter Data​**

**Objectives**

In this lab, you will learn the basics of sorting and filtering data in Microsoft Excel.

**Part 1: Download and Prepare a Sample Data Set**

**Part 2: Sort the Data**

**Part 3: Filter the Data**

**Background / Scenario**

Sorting and filtering the data facilitates data analysis through grouping and including or excluding specific data. This ensures consistency, accuracy, and better decision-making processes.

**Required Resources**

* Mobile device or PC/laptop with a browser, Microsoft Excel, and internet access

**Note**: The precise steps to format and manipulate data in Excel can vary between platforms and versions. The instructions in this lab are based on the free version of Excel available from Office.com and may have to be modified to match the user’s platform, software, or version to achieve the results shown in this lab.

**Instructions**

**Part 1: Download and Prepare a Sample Data Set**

**Step 1: Adjust column widths.**

1. Open the downloaded sample CSV file **Bike Sales\_Sort\_Lab 4.1.2.csv** in Excel.
2. To make all the data visible and more readable, enlarge the column widths to fit:  
   1) Select the entire worksheet by clicking the top left corner. (The triangle left of **column A**.)  
   2) Move the cursor to the line between two columns, for example, columns A and B, click and drag the mouse to the right until all data is visible.
3. All columns are now wider and the same width. Adjust each column width so the column is only wide enough to contain the data.
4. Note that text data is left justified in each cell, whereas numeric data is right justified.

**Step 2: Freeze top row.**

Because there are many rows of data, column headings will disappear when you scroll down the worksheet. You can freeze the top row so that this information is always visible.

1. Click **View** > **Freeze Panes** > Select **Freeze Top Row**.
2. Now if you scroll down, the heading for each column is still displayed.  
     
   *Note: The data has been changed for readability only, and it has not been sorted or manipulated. Because this is a text (CSV) file, any changes to presentation of the data (such as column width or freezing the top row) will not be retained unless the file is saved in Excel spreadsheet format.*

**Part 2: Sort the Data**

In this part of the lab, you will sort the data by country and sub-category.

**Step 1: Select the Sort tool.**

1. Press **Ctrl+A** to select all the data.
2. Click **Home** > click **Sort & Filter** > select **Custom Sort**.

**Step 2: Select the Sort criteria.**

1. Verify that the **My data has headers** checkbox is selected.
2. Select **Country** as the Column for the Sort by dropdown list. Select **Sort Ascending** as the order.
3. To sort by **Sub-category**, click **+ Add Level** and select **Sub\_Category** as the column. For Order, select **Sort Ascending** from the drop down.
4. Click **OK** to continue. Note that the data is now sorted in ascending order by Country and then Sub-category.

To clear sorting and filtering, select the column being sorted (**Sub\_Category**, in this case). Then click on the Sort & Filter button in the toolbar and choose **Clear**.

If you need to remove all filters in a worksheet, you can select the Sort & Filter tools and then click on the Filter option in the drop-down menu.

**Part 3: Filter the Data**

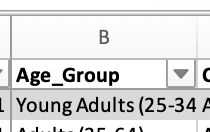
In this part, you will convert the data into a table and filter the data.

**Step 1: Covert data to a table.**

1. Before filtering the data information, it is best to convert it to a table. Use **Ctrl+A** to select all the data.
2. To convert the data, click **Home** > select **Format as Table**.
3. Select a table style of your choosing. Ensure that the checkbox **My table has headers** is selected. Click **OK** to accept the range of cells to be in the table.
4. Under Table Name, replace Table1 with **BikeSales** as the table name.

**Step 2: Set and display filtered data.**

1. Note the drop-down arrows at the top of each column of the table. By clicking the drop down on each column, you can filter the data to view only rows that match those specific values.  
   For example, click the drop-down arrow on the Age\_Group column. Unselect the **(Select all)** checkbox and select **Young Adults (25-34)**.



Note the row numbers on the left of the table. The data has not been moved; filtering is displaying only those rows that you chose.

Note the filtered column, **Age\_Group**, shows a Filter icon instead of the dropdown arrow to indicate the data is being filtered by that column.

1. To show all data in a column, click the Age Group drop down button again and check the**(Select all) checkbox**.

**Reflection Questions**

Use data sorting and filtering on relevant columns to determine the following:

1. How many Senior customers were there in December 2021?

Answer They were 2

2. Which three days in December had the highest profit in Germany?

Answer // December 7,12,18

3. Which country and state had the most revenue in one day?

USA, California in December 2021

4. In which US state were the most sales made in December 2021? Remember that each row represents one sale.

Answer // California

Try and examine other filters of your choosing.