IS300 for Spring 2022

**Management Information Systems – Homework 4 on Excel Lesson 3**

Learning Objectives: **Spreadsheet Modeling and Analysis Using Excel**

1. **What if Analysis Using Analyze Data** 
   1. Count Distinct
   2. Determining highest/Lowest values in a table.
   3. Asking questions about your data
2. **Descriptive Analytics** Using Summary Statistics
3. **Descriptive Analytics** Using Histograms and Histogram Graphs
4. **Using Conditional Formatting for Scales and Sorting**

**This homework assignment uses the following Excel file found on Beachboard.** File ***Homework 4 for Excel Lesson 3 data.xlsx.*** Rename this Excel File to: **Your Name -*Homework 4 for Excel Lesson 3 data.xlsx***

Note: You must turn in an Excel file, no PDF format will be accepted.

1. Use the worksheet **Export Query** in the Excel file. (Note: This is an extract of the Gran Cru Wine Competition.
2. Create a Table with the name wineries for the Entire dataset provided.
3. Use Conditional formatting to create Data Scales for the column Retail Value.
4. Use Conditional Formatting to create Data Bars for the column Alcohol %.
5. Use Analyze Data under the Analysis Tab to count how many Wineries have entered the competition. Use the field WineryName for this question. Hint: If a Wineries has three entries only count each winery one time. Save this in another tab. Rename the tab to: Count of Wineries and change the tab color to blue.
6. Use Analyze Data under the Analysis Tab to count how many Categories and Classifications there are. Hint: Counting unique occurrences. Save this in another tab. Rename the tab to: Count of Cat & Class and change the tab color to Green.
7. Use Analyze Data under the Analysis Tab to determine who your top 5 wineries in Total Retail are. Save this in another tab. Rename the tab to: Top 5 Wineries in Total Retail and change the tab color to red. It will look similar to:

|  |  |  |
| --- | --- | --- |
|  |  |  |
|  | **Winery Name** | **Sum of Retail Value** |
|  | xx | x |
|  | xx | x |
|  | xx | x |
|  | xx | x |
|  | xx | x |
|  | **Grand Total** | **$xxx** |
|  |  |  |

1. Use Analyze Data under the Analysis Tab to determine who your Lowest 5 in Retail value. Save this in another tab. Rename the tab to: Bottom 5 Retail and change the tab color to pink. Example below:

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **WineryName** | **State** | **WineID** | **Desc. of Wine** | **Retail Value** | **Quantity on Hand** | **Alcohol %** | **Category Name** | **Class Description** |
| x | x | x | x | x | x | x | x | x |
| x | x | x | x | x | x | x | x | x |
| x | x | x | x | x | x | x | x | x |
| x | x | x | x | x | x | x | x | x |

1. Select **Data, Data Analysis, then select descriptive analytics** to calculate:

Place the output below the Wineries table. Column A30 can be the start of your range.

|  |  |
| --- | --- |
| ***Quantity on Hand*** | |
| Mean | x |
| Standard Error | x |
| Median | x |
| Mode | x |
| Standard Deviation | x |
| Sample Variance | x |
| Kurtosis | x |
| Skewness | x |
| Range | x |
| Minimum | x |
| Maximum | x |
| Sum | x |
| Count | x |

1. Select Data, Data Analysis, then select descriptive analytics to calculate:

Place the output below the Wineries table. Row 30 or below. Start range Column D30, is a good place.

|  |  |
| --- | --- |
| ***Retail Value*** | |
| Mean | x |
| Standard Error | x |
| Median | x |
| Mode | x |
| Standard Deviation | x |
| Sample Variance | x |
| Kurtosis | x |
| Skewness | x |
| Range | x |
| Minimum | x |
| Maximum | x |
| Sum | x |
| Count | x |
|  |  |

11. Select Data, Data Analysis, then select descriptive analytics to create a Histogram, it will present the distribution of data arranged in intervals, this is called Bins. We will be use Alcohol %. Place your Bins next to the statistics. Column G30, is a good place to begin. Your bin will be:

|  |
| --- |
| **Bins for Histogram on Alcohol %** |
| 10 |
| 12 |
| 14 |
| 16 |
| 100 |

For output options, Select your output range. Select the range and place your output next to the bin already created.

Your output will look like:

|  |  |  |
| --- | --- | --- |
| **Bins for Histogram** | *Bins for Histogram on Alcohol %* | *Frequency* |
| 10 | x | x |
| 12 | x | x |
| 14 | x | x |
| 16 | x | x |
| 100 | x | x |
|  | More | x |

1. Select Data, Data Analysis, then select descriptive analytics to create a Histogram, it will present the distribution of data arranged in intervals, this is called Bins. We will be use Retail Value. Place your Bins below the Bins for Retail Value below the bins for the alcohol %.

|  |
| --- |
| *Bins for Retail Value Histogram* |
| 10 |
| 20 |
| 30 |
| 40 |
| 50 |
| More |

For output options, select new sheet and you want the count and a graph. Name the tab Retail History. Your output may look similar to the following:

|  |  |  |  |
| --- | --- | --- | --- |
| *Bins for Retail Histogram* | *Frequency* | *Bins for Histogram-Graph* | *Frequency* |
| 10 | x | x | x |
| 20 | x | x | x |
| 30 | x | x | x |
| 40 | x | x | x |
| 50 | x | More | x |
| More | x | x | x |

See Graph on next page.