

Instructions

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- This homework assignment is worth 65 points.
- Please submit a **.twb** file for each exercise to Blackboard.
- **Please strive for clarity and organization.**
- **Due Date: March 1, 2024 by 11:59 pm.**

Exercise 1

Using the `Global Superstore.xls` do the following:

- (3 points) Load the **Orders** sheet.
- (6 points) Create a new field, call it **Season**, which represent the season of the year. Which season has the most sales? Which season has the least sales?
- (5 points) Open a new worksheet. Create a parameter, call it **Sales Expectation**, set the data type to float, current value 100. Check range and use the following: minimum 0, maximum 1000, and step size 100.
- (5 points) Create a new calculated field, call it **Least Selling Products**, using the following formula:

$$\text{SUM}([\text{Sales}]) < [\text{Sales Expectation}]$$

- (10 points) Create an appropriate visualization that, for a season selection and sales expectation value, shows the products with total sales less than sales expectation. Report the least selling product for each season.
- (5 points) Create a new parameter called **Product Search**, set the data type to string, and leave the current value blank. After the parameter has been created, add the associated parameter control to the view. Then, create a new calculated field, call it **Product Match**, and enter the following formula:

$$\text{CONTAINS}(\text{LOWER}([\text{Product Name}]), \text{LOWER}([\text{Product Search}]))$$

- (6 points) Enter **hp** in the **Product Search**. What is the lest selling hp product in summer 2013? What is the least selling hp product in summer 2014?

Exercise 2

Consider the **Global Superstore.xls** datafile. Let's pretend that because 2011 is the oldest year in the company, management wants to use 2011 as a benchmark for the lowest acceptable sales number. So we will create a comparison metric that isolates sales in 2011. Using the **Global Superstore.xls** do the following:

- (a) (3 points) Load the **Orders** sheet.
- (b) (5 points) Create a new calculated field, call it **Sales_2011**, using the below formula.

`{EXCLUDE [Order Date]: SUM(IF YEAR([Order Date]) = 2011 THEN [Sales] END)}`

The above calculation says: “regardless of the order date dimension, always show the sum of sales of 2011.”

- (c) (6 points) Create a table looks the picture below.

		Category		
	Year of Order Date	Furniture	Office Supplies	Technology
Sales	2011	\$756,192	\$675,606	\$827,652
	2012	\$858,903	\$795,095	\$1,023,442
	2013	\$1,117,724	\$1,010,718	\$1,277,305
	2014	\$1,378,056	\$1,305,652	\$1,616,159
Sales_2011	2011	\$756,192	\$675,606	\$827,652
	2012	\$756,192	\$675,606	\$827,652
	2013	\$756,192	\$675,606	\$827,652
	2014	\$756,192	\$675,606	\$827,652

- (d) (5 points) Create a new calculated field, call it **Percentage Difference to 2011**, using the below formula.

`SUM([Sales]) / SUM([Sales_2011]) - 1`

The above formula calculates the percentage difference in sales from 2011.

- (e) (6 points) Create a table looks the picture below.

	Year of Order Date	Category		
		Furniture	Office Supplies	Technology
Sales	2011	\$756,192	\$675,606	\$827,652
	2012	\$858,903	\$795,095	\$1,023,442
	2013	\$1,117,724	\$1,010,718	\$1,277,305
	2014	\$1,378,056	\$1,305,652	\$1,616,159
Sales_2011	2011	\$756,192	\$675,606	\$827,652
	2012	\$756,192	\$675,606	\$827,652
	2013	\$756,192	\$675,606	\$827,652
	2014	\$756,192	\$675,606	\$827,652
Percentage Difference to 2011	2011	0.00%	0.00%	0.00%
	2012	13.58%	17.69%	23.66%
	2013	47.81%	49.60%	54.33%
	2014	82.24%	93.26%	95.27%

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¹Make sure you submit *.twb files in Blackboard.