RISE 2.0
BY DIGITALBCG ACADEMY

IU 3.4.4 Power BI to Tableau Technical Test

2022

Instructions:

1. You have **1.5 hours** to complete this technical test using Tableau Desktop.
2. Follow the instructions in the following slides to create a dashboard report.
3. All data preparation and visualizations must be done in the same Tableau Desktop workbook.
4. Save your file as "**Tableau_test_<your full name>.twbx**" (Tableau packaged workbook).
5. In each dashboard, set the dashboard size to "Generic Desktop (1366 x768)".
6. Remember to save your work intermittently.

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Background

- American Olive Farmer (AOF) is one of the largest producers of olive oil and its derived products in USA.
- AOF has consolidated their monthly sales data from 2019 to 2020, and would like to perform an analysis on their business performance for this period.
- You are a data analyst tasked to create a dashboard report using Tableau Desktop, in order to help AOF management understand the key insights from the analysis of their sales data.

Power BI Technical Test

Data Understanding

5 min

1. You are provided this dataset: **aof_sales_data.csv**
2. Data Dictionary:

Rank	Ranking of game based on total global sales
Order ID	Unique ID of sales order
Employee ID	Unique ID of employee who closed the sales order
Employee Name	Name of employee who closed the sales order
Employee Job Title	Job title of employee who closed the sales order
Sales Region	Region in US that the sales is closed in
State	US State that customer is from
State Code	Abbreviated code to represent the US States
Product Category	Category of product sold
Product Name	Name of product sold
Quantity	Quantity of product sold
Unit Price	Unit price of product
Order Amount	Total sales amount made for the order

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Data Loading and Preparation

5 min

a. In a new Tableau Desktop file, connect to the **aof_sales_data.csv** data source.

b. Verify that the aof_sales_data.csv table is loaded automatically and that you can see the preview of the dataset.

c. Under the data preview pane, verify that the **Order Date** column is recognized as a **Date** type, and the **State** and **State Code** columns are recognized as **Geographic Location** types.

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Q1: Dashboard 1

40 min

Create a Sales Overview Dashboard.

a. In **Sheet 1**, rename it to "**Quarterly Sales Trend**".
   i. Create a line chart to display the **average Order Amount** from **across all quarters**.
b. Create a new worksheet and rename it to " **Top 5 Products by Avg Sales**".
   i. Create a text table with the **Product Name** and **average Order Amount**, showing only the **Top 5 products** based on **average Order Amount**, sorted in **descending order**.
c. Create a new worksheet and rename it to "**Sales % by Product Category**".
   i. Create a pie chart to display **the proportion of total Order Amount (in percentage)** by **Product Category**.
   ii. Update the pie colours: Olive oil to yellow, Gift baskets to green and Bath products to blue.
d. Create a new worksheet and rename it to "**Total Sales by State**".
   i. Using the **Map** menu, edit the location from your Tableau default location (e.g. Singapore) to **USA**. (Hint: Look under Menu bar -> Map -> Edit Locations…)
   ii. Create a filled map to display **the total Order Amount** in each State, with the tooltip displaying the **State Code, State and Order Amount** when you mouse over a State.
   iii. Remove all legends on this sheet.
e. Create a "**Sales Overview Dashboard**" using all four of the above visualizations.

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Q2: Dashboard 2

35 min

Create a Product Sales Dashboard.

a. Create a new worksheet and rename it to "**Product Category Avg Sales by Region**".
   i. Create a vertical (clustered) bar chart to display the **average Order Amount** of each **Product Category** in each **Sales Region**.

b. Create a new worksheet and rename it to "**Top Products by Avg Sales**".
   i. Create a horizontal bar chart to display the **average Order Amount** of each **Product Name** in each **Product Category**. Keep only **the top 3 products** in each Product Category.
   ii. Update the colours of the bars based on **Product Category**.
   iii. Hide the "**Avg. Order Amount**" x-axis header.
   iv. Remove the Product Category legend.

c. Create a new worksheet and rename it to "**Olive Oil Sales by State**".
   i. Create a symbol map to display the total Order Amount of olive oil in each State.
   ii. The tooltip must display **State**, **Product Category** and **Order Amount** in the exact sequence.
   iii. Remove the SUM(Order Amount) legend.

d. Create a "**Product Sales Dashboard**" using all three of the above visualizations.
   i. Implement the Sales Region filter as a slicer across all visualizations in this dashboard.

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Q3: Dashboard Design Principles

5 min

Review your dashboards and ensure that good dashboard design principles have been applied across all of them.

a. Ensure appropriate titles, axis labels, and data labels are on/off all visuals where necessary.

b. Ensure appropriate positioning, sizing, and alignment of charts.

c. Ensure overall intuitiveness and ease of use of dashboards, and that all visuals can be used as filters for all other visuals in the same dashboard.

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End of Test Submission

1. If you have yet to do so, save and rename your Tableau packaged workbook as "**Tableau_test_<your full name>.twbx**".

   To save your file as a Tableau packaged workbook:
   1. Under File -> Save as
   2. Under Save as type -> Tableau Packaged Workbook (*.twbx)

2. Follow the instruction of the TA to submit your work. Submit only your Tableau packaged workbook (without the original dataset).

3. Congratulations! You have completed the Power BI to Tableau technical test!

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