

Setting up Data Models with DAX Lab

Part 1: Creating a date table

You can download the course materials from here:

<https://github.com/fenago/cts245X/tree/main/dax>

Download Power BI Desktop from here:

<https://www.microsoft.com/en-us/download/details.aspx?id=58494>

Open the Power BI File `1_1_calculated_table.pbix` and navigate to *Table tools* in the *Data* view.

- Create a new date table called `Dim_DeliveryDate` of the shipping dates using the `CALENDAR()` function.
- Take the minimum and maximum from the `Delivery Date Key` field from the fact table as arguments.

Rename the column in `Dim_DeliveryDate` table to match that of the `Fact_Sales` table: "Delivery Date Key".

Establish a relationship between the `Delivery Date Key` of this dimensional table and the fact table. You can use the "Manage Relationships" button to create a new relationship. Alternatively you can drag the `Delivery Date Key` fields on top of each other in the *modeling* view.

- Visualize the quantity of orders delivered over time by creating an *Area chart*.
- Use the `Delivery Date Key` from the new table and `Quantity` from the `Fact_Sales` table.
- Drill down to quarterly level using *Expand all down one level in the hierarchy* button.

What was the quantity sold in Q3 2015?

Part 2: Calculated column for costs

Navigate to `Fact_Sales` in the *Data* view and familiarize yourself with the contents of the table. Change the currency of `Unit Price`, `Total Excluding Tax`, `Tax Amount`, `Profit` and `Total Including Tax` to Dollar.

Create a calculated column `Costs` that subtracts `Profit` from `Total Excluding Tax` and convert it to Dollar.

Create an *Area chart* visualizing `Profit` and `Costs` over time using the date field from the `Dim_DeliveryDate` table you created in the previous exercise.

In which quarter did World Wide Importers make the most profit? (Answer format: YYYY QQ)

Part 3: Data cleaning with DAX

Investigate the `Recommended Retail Price` column from the `Dim_StockItem` table.

Create a new column and name it `Retail Price Clean`. Replace the "?" with " " (a blank) by using the `SUBSTITUTE()` function.

Sort the `Retail Price Clean` column in ascending order. Which non-numeric character is present in the first row?

Part 4: Connecting data from different tables

Create a new column `Retail Price` in the `Fact_Sales` table to pull in the `Retail Price Clean` using the `RELATED()` function. Power BI will know what to do because the relationship between both tables is already established.

- Sort the `Retail Price` in ascending order. You will notice that the "-" value disappeared. This happened because the "-" value was related to an empty row.
- We don't have to clean this column anymore, so let's reformat it in the next step.

Change the *Data Type* of `Retail Price` to a "Decimal Number" and the *Format* to a "Currency".

What Is the highest Retail Price In the Fact Sales table?