Lab 1: Defining Tables

Part 1: Loading a CSV

You can download the course materials from here:

https://drive.google.com/drive/folders/1SrBSN2Ly4QuKQaDDiliz-2KakZ_zIN8T?usp=sharing

Download Power BI Desktop from here:

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

- Open Power BI if it isn't already open.
- Import `manufacturing_data.csv` from the `Datasets` folder on the Desktop, making sure to select "Transform Data" instead of "Load".

Remove the first row, as this includes short names for columns.

Promote the new first row to become headers.

Change the data type of the `Year` column to become a Date.

What is the value for the first row of the Year column?

Part 2: Rounding, replacement, and sorting

If Power Query isn't open anymore, right-click on the `manufacturing_data` table in the *fields* section of the *Data View* and select "Edit Query".

Due to a database error the sales value accidentally multiplied its value by itself. Your task is to revert it back to its original value by taking the square root. Navigate to the `Sales, value of shipments, or revenue ($1,000)` column and use the *Transform* menu to take the square root of this value.

- The United States Census Bureau informed us that a data loading error occurred in `Annual payroll ($1,000)`. It seems that the value "13356360" needs to be "1335636" instead. Replace the appropriate values.
- Confirm and save your data modeling changes and return to Power BI.

Go to the *Data* view. You are asked to investigate "Aerospace product and parts manufacturing", which can be found in the `Meaning of NAICS code` column. Sort the `2017 NAICS Code` column by `Meaning of NAICS code`, and then sort it in ascending order.

By doing so, data for "Aerospace product and parts manufacturing" will be shown in the top rows, which will help you answer the final question of this exercise.

Change the number of decimal places of the `Sales, value of shipments, or revenue ($1,000)` column to one decimal place.

What is the first value of the "Sales, value of shipments, or revenue ($1,000)" column for "Aerospace product and parts manufacturing" ?

Part 3: Data categorization and visibility

If you're not already in the the *Data* view, go there and change the data category for the `Geographic Area Name` to "State or Province".

Select the (empty) `2017 NAICS Footnote` column and hide it from the report view.

- Navigate to the *Report* view and add a *Map* visual to the current page. Add `Geographic Area Name` as the *Location* and `Number of employees` as the *Size*.
- Change the aggregation of `Number of employees` to "Average".

How many employees were there on average over all NAICS codes for the state of Alabama?

- 7,074.56
- 4,310.83
- 1,499,807

Part 4: Working with string columns

Return to *Power Query* and change the casing of the `Meaning of NAICS Code` column to "Capitalize Each Word". Then change the casing of the `Geographic Area Name` column to "UPPERCASE".

On the `2017 NAICS code` column, add a prefix of "MANU-" before each value.

Apply the changes and return to the *Report* view.

Add a slicer and use `2017 NAICS code` as the *Field*.

On average, how many employees worked in the manufacturing industry code MANU-3121 in Alaska?