Our boss has presented you with what seems an impossible task.

Take this raw, delimited, text data…

A picture containing holding, table, people

Description automatically generated

…and turn it into this **Filled Map** chart.

A close up of a map

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What makes this seem impossible are the following:

* There are well over 200K rows of data in the source data
* The City and State information is in the same column
* The sales need to be aggregated by State
* Color shading of the states is based on “high-to-low” sales
* The boss needs the finished chart in 5 minutes

This is easily accomplished with Power Query and Excel Map charts.

# Task 1: Bring the Data into Power Query

1. We open a blank workbook and launch Power Query to examine the contents of a text file.

**Data (tab) -> Get & Transform (group) -> From Text/CSV**.

1. Browse to the text file.
2. In the Power Query preview window, select **Transform Data**.
3. Rename the Query “**SalesByState**”.

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The only information we need to retain for our report is the **State** and **Sales**.

# Task 2: Determine the State for Each Record

1. Select the “**CityState**” column and extract the state portion by clicking **Transform (tab) -> Text Column (group) -> Extract -> Text Between Delimiters**.
2. The **Start Delimiter** will be “**(**“ [*open parentheses – no quotation marks*]
3. The **End Delimiter** will be “**)**“ [*close parentheses – no quotation marks*]

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1. Click **OK**.
2. Rename the “**CityState**” column to “**State**”.

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# Task 3: Group Records by State

1. Select **Home (tab) -> Transform (group) -> Group By**.
2. In the **Group By** dialog box, enter the following parameters and click **OK**.

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1. Not necessary for reporting but sort the results in **Ascending** order by **State**.

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# Task 4: Load the Results into an Excel Table

1. Select **Home (tab) -> Close (group) -> Close & Load**.

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The results are as follows.

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# Task 5: Create the Filled Map Chart

1. Select a cell in the results table and click **Insert (tab) -> Charts (group) -> Maps -> Filled Map**.

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The base results are as follows.

A close up of a map

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*NOTE: In the event the map does not detect your states properly, add a* ***Custom Column*** *in* ***Power Query*** *named “****Country****” that reads “****United States****”.*

# Task 6: Customizing the Filled Map Chart

1. By double-clicking anywhere on the Filled Map chart, you can gain access to the chart customization controls.

A screenshot of a map

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1. Experiment with the different options for **Map Projection**, **Map Area**, and **Map Labels**.
2. Experiment with changing the colors for the **Minimum** and **Maxi**
3. **mum** colors. These can be based on the extremes of the data, fixed values, or fixed percentages.

*NOTE: The labels will appear in states that have enough size to display the text. You may need to increase the size of the chart to read longer names. This is a prime reason for using 2-letter state codes in place of full state names.*

1. Right-click any state and select **Add Data Labels** to display the underlying values for **Sales**.
2. Select any state’s data label (sales value) and customize the number formatting as desired (*ex: comma style with no decimal place precision.*)

A close up of a map

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Mission accomplished.

Not a single formula was written; not a single function used.

Depending on the customization level, it’s possible you could have created this entire thing with barely any keyboard interaction.