ASSIGNMENT 4

The following assignment assumes you have worked through Chapters 1-5 in the textbook.

Open a blank Excel workbook and use the **Get & Transform** function to import the data for **Assignment 4**. You will download one file.

- Assignment 4 Data.xlsx

The data provided is for a fictitious superstore. Items are listed by location and are sold online or in-store. Items are discounted if purchases are made by team members or corporate customers. In this week's example, the data for each region is located on a different worksheet in the file.

SALES

Field	Description
City	Location of store
Item Type	Classification of item
Sales Channel	In-Store or Online
Discount	Type of Discount
Order Date	Date of Order
OrderID	Unique identifier of the sales transaction
Units Sold	Quantity of items sold
Unit Price	Price of item sold
Unit Cost	Cost of item sold

CONVERSION TABLE

Field	Description
Source	Field name found in the file
Target	Field name to replace the source

POWER QUERY STEPS

STEP ONE – Create a new Excel workbook
- Save your workbook as **A### Assignment 4.xlsx**, where ### is your student ID.

STEP TWO – Use the "robust approach" from Chapter 5 exercise 5.4 to combine the sheets in the workbook while adding a Region column
- Get data > From File > From Workbook to load the **Assignment 4 Data.xlsx** workbook
- Rename the query to Sales
- Load the data as a **Connection Only**
- Add the data to the data model

STEP THREE – Shape and format the Sales query
- Change the field types to the appropriate formats
- Rename the **Ordered** field to **Order Date;** reference this field to add a new column with the Year > rename the new column to **Order Year**
- Create a new column named **Payment Days** by subtracting **Order Date** from **Payment Date** and formatting it as **Duration in Days**
- Add a new Conditional Column called **Discount Rate** that returns the following based on the Discount column values. Ensure your new field is formatted appropriately.
    - **None = 0%**
    - **Team = 10%**
    - **Corporate = 15%**
- Add a **Unit Profit** column by subtracting **Unit Cost** from **Unit Price**
- Add a **Total Sales** column by multiplying **Units Sold** x **Unit Price**
- Add a **Total Cost** column by multiplying **Units Sold** x **Unit Cost**
- Add a **Total Sales After Disc** column by applying the **Discount Rate** to the **Total Sales**
- Add a **Total Profit** column by subtracting **Total Cost** from **Total Sales After Disc**
- Ensure all fields types are formatted appropriately

ASSIGNMENT QUESTIONS

1. How many rows are in the Sales query?
2. How many columns are in the Sales query?
3. On Sheet1 of your workbook, create a pivot table that illustrates which region has the city with the most units sold. Your pivot table must:
   o Show appropriate fields
   o Have a descriptive name for the value field
   o Use conditional formatting to highlight the city with the highest total units sold
   o Show subtotals at the top of each group
4. Referencing this pivot table, which region had the most units sold?
5. Continuing in Sheet1 of your workbook, create a single pivot table that shows the average number of payment days by sales channel and the average discount rate percentage for the order year 2020. Your pivot table must:
   o Show appropriate fields
   o Be filtered appropriately
   o Show payment days as an integer
   o Show discount rate as a percentage with two decimal places
6. Referencing this pivot table, what is the average discount rate for the online channel?
7. Referencing this pivot table, which sales channel has the lowest average payment days?
8. Continuing in Sheet1 of your workbook, create a pivot table that shows the total profit by city and sales channel. Format your values to show as a percent of the grand total and apply data bar conditional formatting to your pivot table. Your pivot table must:
   o Show city as row, sales channel as column
   o Show values as a percent of grand total rounded to two decimal places
   o Apply data bar conditional formatting to all cells showing sum of total profit values for city and sales channel
   o Sort descending by grand total
9. Which city contributes the least to total profit?
10. Which of the following statements is NOT true?
    o Langley's profits represent more than 10% of total profits.
    o Langley has the highest profits in both sales channels.
    o Most of the company's profits are generated in Langley.
    o Most of the company's profits are generated online.
11. Continuing in Sheet1 of your workbook, create a pivot table that allows you to answer the following question > What were the total sales by region in 2021 for each item type. Your pivot table must:
    o Show the correct level of granularity
    o Not include any extraneous information
12. What is the value of fruit sales in the Okanagan in 2021?
13. Continuing in Sheet1 of your workbook, create a pivot table that allows you to answer the following question > How many Total Orders were discounted by Discount Type for each Order Year? Your pivot table must:
    o Show the correct level of granularity
    o Not include any extraneous information
14. How many orders received a Team discount in 2020?
15. Which discount type was applied to the most orders?

INSTRUCTIONS:

For your assignment to be graded, you must do both of these steps:

1. Upload your Assignment 4 Excel file to the Learning Hub Assignment 4 folder
2. Complete the Assignment 4 Quiz in the Learning Hub