

Excel Assignment Instructions

MIS303 Spring 2019

(Individual Assignment)

Introduction and Objectives:

You have been hired as a consultant to a retail store. The total revenue for the store comes from the sales of a mixture of 3 different products (Products A, B and C). You are provided with historical sales data for three products. You must first make some conclusions regarding sales for the past year (2018). Then, you need to decide how much of each product to order this year (2019). Lastly, you will make a recommendation on the appropriate mixture and pricing of products to stock for the coming year.

Spreadsheets are one of the most commonly used software tools in corporations because they are so easy to work with and so adaptable to a regular work task. This assignment is intended to use a spreadsheet application such as Microsoft Excel as a reporting, data analysis and decision support system in a retail operation. You are to follow the instructions to complete and submit the assignment as **individuals**. No collaboration or co-working is allowed.

Tasks:

Simply put, you must do the following:

1. (1 pt) Download the file **Excel Assignment.xlsx** from the Blackboard assignment link. Make sure you use right click on the link, save target / link as, so you can rename the file. Name it with your **FirstName_LastName.xlsx**. For instance, a student named John Doe should have the Excel file saved as John_Doe.xlsx for his assignment.
2. Follow the instructions below and complete the data reporting and analysis tasks in each of six worksheet tabs. Answer the questions in some sections and place the answers in the associated Excel worksheets.
3. Submit the Excel file back to the Blackboard Excel HW link.

Detailed instructions for each section / worksheet tab are provided below.

A. Sales Records (12 pts)

1. Format the sales records dataset as a table. Make sure the table columns are wide enough to fit the column contents.
2. Sort the sales records by **Region** first in a custom order of Midwest, East, West, South. In the same **Region** group, sort the records then by **ProdID** in alphabetical order.
3. Add a new column behind **ProdID**, and name it **Price**. Use vLookUp function in the Price column. For each sales record, use the ProdID as lookup value to find and return the product price. The product prices are provided in the **B. Summary** worksheet. You can use the data range of B8:E10 from the **B. Summary** worksheet as the table array in making the vLookUp function.
4. Add a new column behind **UnitsSold**, and name it **SubTotal**. The subtotal of each sales record should be the produce of price and units sold (**Price * UnitsSold**).
5. Add a new column behind **SubTotal**, and name it **Discount**. This company provides 8% of the subtotal amount as discount to all sales made in the *West* region. In the other

regions, the company offers 10% of the subtotal mount as discount to Holiday sales in *December*. The other sales records that are not in West and not in December receive \$0 discount. The two discounts cannot be stacked. Use a nested IF function for the Discount column to show the correct discount for each sales record. (Note: you can make separate IF function for the two conditions, and then apply one into the other as value if false.)

6. Add a new column behind **Discount**, and name it **OrderTotal**. The order total of each sales record will be the difference between subtotal and the discount (**SubTotal – Discount**).

B. Summary (8 pts)

1. Enter your name, last 3 digits of student ID, and section number in the cells provided in this worksheet.

Your name:	Your name here!
Last 3 digits of Student Id:	xxx
Section:	02

2. The total number of units sold in 2018 for the three products can be found on your worksheet (C8:C10). You need to fill out all the yellow or green boxed cells according to the requirements below:
 - Calculate estimated number of units to be sold for all three products in 2019 as a percentage increase from the 2018 numbers (in D8:D10). We will assume that the 2019 sales will keep the same increase rate as that of 2018, which is 14% in as specified in Cell D3.
 - Calculate the revenues (G8:G10) and costs of goods sold (H8:H10) for each products based on 2019 data (D8:D10). Where **Revenue** is Units Sold * Unit Price and **COGS** is Units Sold * Unit Cost.
 - Total Revenue is the sum of the revenues for all three products for 2019
 - Total COGS is the sum of the COGS for all three products for 2019.
 - Gross Profit = Total Revenue – Total COGS
 - Salaries is 12% of Total Revenue
 - Advertising is 4% of Total Revenue
 - Miscellaneous expense are 1% of Total Revenue
 - Total Operating Expense = Salaries + Advertising + Miscellaneous
 - Earning Before Taxes = Gross Profit – Total Operating Expense
 - Calculate Taxes based on tax rate of 25% of Earning Before Taxes
 - Net Profit = Earnings Before Taxes - Taxes

C. Pivot Table worksheet. (11 pts)

1. Use all the sale records in the **A. Sales Records** worksheet to create a pivot table. When “Choose where to place the pivot table”, select the option of existing worksheet. Use the Table / Range box below, browse to the worksheet **C. Pivot Table**, and select the cell A11 to place your pivot table.

2. Using your pivot table, perform an analysis of the data. Your goal will be to make some conclusions regarding factors such as products, salespeople, months, and/or regions. There is no need to include all these factors to your pivot table, and you can use 2-3 of them by your choice. You can create a two-dimensional pivot table. You can also use a filter. **DO NOT** use more than two summary dimensions in the table or use more than one filter, or the pivot table results will be too complicate to view. The summary values must include count of orders, sum of units sold, and average of subtotal (formatted as currency). The three summary values should take separate rows.
3. Add a title/caption at the top of your pivot table (A8) to describe the table content.
4. What are your major findings from this pivot table? Enter 3 major findings from your pivot table to the Question and Answer area. Sample findings could be which product is the best sold; which salesperson is the best sales; which month has the highest or lowest sales; which region has the best or lowest sales, etc.

D. Business Graph worksheet. (7 pts)

In this worksheet, create a 3-D Pie Chart showing the percentage of each product's contributing to the total profitability (based on Gross Profit, not Revenue).

You need to calculate the forecasted individual profits (Revenue - COGS) generated by selling product A, B, and C for 2019 based on the data in the B. Summary worksheet. In the cells with Yellow background color, use formulas that refer to the B. Summary worksheet. **DO NOT SIMPLY ENTER THE VALUES**. The Business Graph should have a meaningful **Chart Title**. It should display **percentages** for each products' profit contributing to the total company profit on each pie section. There should be a proper **legend** below the chart.

E. Goal Seeking worksheet. (4 pts)

Use this worksheet for the following Goal Seek analysis. The Target Units Sold for products A and C are given on your spreadsheet and they cannot be changed.

Use Goal Seeking feature to find out how many units of Product B you need to sell (B6) to reach the \$150,000 Total Gross Profit goal. **Copy and put your answer in H14 in this worksheet.**

Use Goal Seeking feature to find out how many units of Product B you need to sell to reach the \$200,000 Total Gross Profit goal. **Copy and put your answer in H15 in this worksheet.**

F. Scenario Question worksheet. (17 pts)

1. Name the following cells.

Cells	Suggested Names	Cells	Suggested Names	Cells	Suggested Names
B7	ATargetUnitSold	C7	APrice	F11	TRevenue
B8	BTargetUnitSold	C8	BPrice	F12	TCOGS
B9	CTargetUnitSold	C9	CPrice	F13	TGrossProfit

2. Create a scenario using the data and formulas given in the gray area.

Use the scenario manager to create the scenarios and the required **scenario summary** (in a separate worksheet). You will create 3 different scenarios (with unique and meaningful scenario names) by changing the product pricing mix in order to determine their impacts to Total Gross Profit.

- The First Scenario is to raise the price of Product B by \$6.00. However, this would cause sales of Product B to fall by 600 units and sales of Product C to increase by 500 units
- The Second Scenario is to raise the price of Product C by \$4.00. However, this would cause sales of Product C to fall by 350 units and sales of Product B to increase by 200 units
- The Third Scenario is to raise the price of both Product B and Product C by \$3.00. This would cause sales for Products B and C to both decrease by 150 each

Your goal is to create a Scenario summary report as a separate worksheet to compare the three scenarios. Make sure your summary show Revenue, COGS and GrossProfit for the comparison.

3. Question: Which scenario will you take for 2019? Elaborate your product pricing mix of the selected scenario, and why do you choose this scenario?

Submission

When you are done with all the worksheet tabs. Save the Excel file again, and close it as well as the Excel program on your computer. Go to the Blackboard, upload and submit the completed file back to the Excel assignment link.