

The purpose of this assignment is to introduce accounting students to the tools available in

Microsoft Excel to perform data analytics in accounting. There are two parts to the assignment.

In Part I you will be using Excel to work with data. In Part II you will use the data from the

Excel worksheet to answer questions.

You must submit in two separate files for this project:

- Part I: an Excel file with worksheet 1-5
- Part II: a Word document with your answers to questions 1-10.

Introduction:

- Data analytics can broadly be defined as the process of examining sets of data with the goal of discovering useful information from patterns found in the data.

- Data analytics can be categorized into four types: descriptive, diagnostic, predictive, and prescriptive. Many accountants are already performing descriptive data analytics.

- Accountants can add much more value by performing predictive and prescriptive data analytics.

- The large accounting firms have devoted large resources to data analytics.

- Being well trained in data analytics is important for future accountants.

Type of Data Analytics	Purpose	Example
Descriptive	To explain what happened	Sales trends for last year
Diagnostic	To understand why it happened	Did the new advertising campaign cause sales to increase last quarter?
Predictive	To predict what will happen	Predicting fraudulent charges based on past behaviors
Prescriptive	To determine what should happen	Expand business to optimize sales based on predicted championship

Part 1:

In this assignment, you will use the Excel files called “Acc 304-AR-2020fall” to evaluate a company’s Accounts Receivables and the related Allowance for Uncollectible Accounts. . The Excel file consists of Cambridge Corporation’s sales and accounts receivable data for 2019. Cambridge sells restaurant equipment and operates in 10 different locations (Location 1, 2.....10)in the United States. Each location tracks its own sales and accounts receivables.

The spreadsheet has 8 different columns:

COLUMN	DESCRIPTION
TRANSACTION_NO	Sale transaction
LOCATION_ID	Branch location
CUSTOMER_ID	Specific customer
CURRENT_SALES	Sales made in 2019
SALES_DATE	Date of sale
AR_PRIOR_BALANCE	Accounts receivable 2018 ending balance
AR_CURRENT_BALANCE	Accounts receivable 2019 ending balance
CURRENT_YEAR_END	Fiscal year ending date

Cambridge sets up an aging schedule with five different time categories 0-30 days, 31-60 days, 61-90 days, 91 to 120 days, and over 120 days. Based on past experience, Cambridge applies percentages below to different time categories to estimate the required balance in the Allowance for Doubtful Accounts.

Time Category	Estimated % of AR as Uncollectible
under 30 days	0.80%
31-60 days	4%
61–90 days	15%
91–120 days	20%
over 120 days	25%

Part I: Using Excel : Use “Acc 304-AR-2020fall”

1) Open the Excel file and note the worksheet titled “Data”. All of your analysis will be on additional worksheets you will create.

2) Create Sheet 1 in the Excel file and create Pivot Tables to do the following:

a. Summarize totals for the following columns by location: (i.e. you will have a total for each location of their current sales, AR Prior Balance and AR Current Balance):

Current Sales

AR Prior Balance

AR Current Balance

b. In Sheet I add three columns and calculate AR as a percentage of sales (AR %),

AR turnover and AR collection period (AR Days)

c. Provide graphics (i.e., bar chart, line, etc.) to compare these three ratios across locations

3) Create Sheet 2 in the Excel file, and calculate the number of days between the sale date and the fiscal year end date for each transaction. Using the AR aging table above use the number of days to create different time categories. You must assign one time category to each transaction based on the number of dates. (Hint: you need to create a column to calculate the age of A/R, which is the time between the sales date and the year end 12/31/2019. Then you need to group them in each time category.) Apply the appropriate % uncollectible for each age group. (You may use the VLOOKUP feature to do this)

4) Create Sheet 3 in Excel file, and provide the balance of allowance of doubtful account by each time category. You must use a Pivot Table for this step

5) Create Sheet 4 in Excel file, and provide the balance of allowance for doubtful account by each location for each time category. You must use a Pivot Table for this step (in other words this will be similar for Sheet 3 but instead of being a summary for the Company it will list each location/aging category)

6) Create Sheet 5, and provide the balance of allowance for doubtful account by each customer. You must use a Pivot Table for this step. (if you are familiar with VLOOKUPfunction you may also use this feature)

Part II: Using the Excel file to answer the following questions

1.How many locations does Cambridge Corporation have in 2019?

2.How many total customers does Cambridge Corporation have in 2019?

3.Which location has the highest AR as a percentage of sales? How much is it?

4. Which location has the lowest AR turnover? How much is it?
5. Which location has the longest AR collection period? How long is it?
6. What is the dollar balance for each aging category as of December 31, 2019?
7. What is the aging schedule for Location (s) 1, 3 and 7?
8. What is the aging schedule for Customer(s) 2, 9 and 10?
9. What is the required ending balance in the Allowance for Uncollectible Accounts for Cambridge at the end of 2019 (this is based upon your analysis)?
10. Assuming the balance of Cambridge's Allowance for Doubtful Account is \$540,250 as of January 1, 2019, what is the amount of Bad Debt Expense that needs to be recorded as of December 31, 2019?