

ITECH1005: Business Information Systems

1. Aims

To analyse a set of data (in Microsoft Excel), and write a brief report (in Microsoft Word), identifying and explaining your insights into the operation of ABC Superstore Victoria.

2. Learning Objectives

In the process of this assessment task you will:

- Plan, schedule and execute project tasks with a view to improve your personal productivity;
- Gain awareness of some typical issues related to the operation of a small-to-medium size business;
- Use the functionality of Microsoft Excel 2007/2010 to manipulate data, analyse it and visualise it in tabular and chart form; and
- Use the functionality of Microsoft Word to write a brief report of your business observations and recommendations.

Due date:	Refer to the course description Submit the individual work via Moodle before the due date.
Cutoff date:	One week after the due date. Any submission after the due date will receive a deduction of 10% per day , this includes weekends.
Marks:	This assignment is worth 30% of the total assessment.
Extensions:	An extension will only be considered with supporting documentation from a health professional and if the problem/illness occurred within the week prior to the due date . If an extension is granted the extension will then equal the number of days specified on the doctor's certificate, with a maximum limit of one week.
Authorship:	This assignment is an individual assignment and it shall be completed by the individual student only. The final submission must be identifiable the work of the individual. Breaches of this requirement will result in an assignment not being accepted for assessment and may result in the offending student or students being required to present before the Disciplinary Committee.

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ABC Superstore Victoria: Analysing Sales Data

3. Introduction

ABC Superstore Victoria is a medium-sized retailer of furniture, technology and office supplies. It is selling its products to consumers, smaller businesses and corporate houses through its three stores around Melbourne and Geelong. The company's founder, Mr David Scott, like all business owners, is always interested in finding ways to increase revenues and decrease expenses.

Mr Scott has recently hired you as a business analyst and poses some operational-level questions about the performance of his business. He is also eager to hear your thoughts and ideas on how to improve the business and requires you to make **recommendations** on how to improve the company's performance, especially in relation to the following business objectives:

- Improving the sales strategy;
- Improving internal efficiencies and effectiveness; and
- Building strong lasting relationships with its customers

Mr. Scott has provided you with last year's sales information in the "ITECH1005-Assignment-data-S1-2017.xlsx" file. The data needs to be analysed and visualised to help observations related to the business operation and its shortcomings.

The data worksheet "Sales" contains collected information of the ABC Superstore's sales in 2016. These details include:

- Order ID
- Customer Name
- Customer Segment
- Product Name
- Product Category
- Order Quantity
- Unit Cost Price
- Unit Selling Price

Note the followings:

- Order ID is the identification of each order - an order includes one or many products.
- Customer Segment is either Corporate, Small Business or Consumer – three types of customers
- Product Category is either Office Supplies, Technology, Furniture – three categories of products
- Unit Cost Price is the price that ABC Superstore paid for each item of a product to its manufacturer or supplier
- Unit Selling Price is the price that ABC Superstore charges customers for each item of a product

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ABC Superstores offers a **discount** to its customers on products under **Technology** and **Furniture** categories (there is **no discount** on products under **Office Supplies** category). On **Technology** and **Furniture** products, **corporate** customers receive **15% discount** and **other customers (Small Business and Consumer)** receive **10% discount** on the total sale amount. The discount policy is summarized in Table 1.

	Corporate	Small Business	Consumer
Office Supplies	0%	0%	0%
Technology	15%	10%	10%
Furniture	15%	10%	10%

Table 1: ABC Superstore's discount policy

ABC Superstore offers commission to its sales representatives. Sales representatives receive a **commission** of **5%** of the total amount charged to customer on **Technology** and **Furniture** products only (i.e., no commission is offered on **Office Supplies**).

4. Assignment tasks:

4.1 Calculations:

Using excel formula, calculate the followings in excel worksheet.

- Total sale amount* [based on the Unit selling price (without deducting any discount) and quantity]
- Discount* [based on the Total sale amount calculated on (a) using discount rule in Table 1]
- Total amount charged to customer* [based on total sale amount (a) and discount (b)]
- Total cost price* [based on the Unit cost price and quantity]
- Commission paid to sales representative* [based on the Total amount charged to customer (c) and product category]
- Total cost amount* [based on the Total cost price (d) and Sales rep. commission (e)]
- Total profit* [based on Total amount charged to customer (c) and Total cost amount (f)]

4.2 Analysis and observations:

Mr Scott requires you to analyze the data and help him with the following questions. Use Pivot Table(s) and/or appropriate graph(s)/chart(s) to summarize, visualize and present your observations.

- Total profit, sub-totalled by each (a) Product category, and (b) Customer type. Use Pivot Table(s) and appropriate graph(s)/chart(s) to summarise these calculations.*
- Who are ABC Superstore's five best and five worst customers by profit? Use appropriate table(s) and/or graph(s)/chart(s) to summarise these observations.*

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4.3 Recommendations:

Mr Scott also requires you to make recommendations concerning the following business-level questions.

- a. *Should ABC Superstore focus on any particular (a) customer segment(s) and (b) Product categories in future, and why?*
- b. *What are your recommendation regarding what other data should be collected to improve decision making for ABC Superstore?*

5. Assignment requirements:

Mr Scott has asked you to provide him with the details of how you have accomplished these tasks. Therefore, you **must** include the functions and the formulae you've used in your analyses, and not simply report the answers.

As a paid consultant, your submission **must** be professionally presented; all analyses, calculations and summaries in the Excel file **must** have headings and supported with explanatory notes; and the formal business report **must** be preceded by a 'covering letter' (i.e. incorporate a letter as first page of your Word document with your report on following pages).

Note: All recommendations in your report must be clearly justified (e.g. include charts/graphs and/or refer to specific analyses/summaries from the Excel spreadsheet).

6. Some Hints

The business options are linked to a number of questions posed by Mr Scott. Your role is to answer these specific questions and to support your answers with your data analysis as presented in the appropriate tables and/or charts. Ensure that your recommendations address the company's objectives, and that they are clearly linked to your observations.

There is no 'ideal' or 'best' way of doing this project. You'll be assessed on your insight of the data, on your ability to make observations by analysing (with formulas) and visualising (with charts) data, and your ability to link your observations to business issues.

There are numerous Microsoft Excel facilities and functions that may be useful in this project. While planning your workbook, you may wish to review the lab exercises on the related topics (e.g. Excel functions, absolute and relative cell referencing, formatting, chartings and managing large worksheets, as well as on the analysis of Excel data and drawing recommendations).

The Excel workbook contains all the necessary data for your assignment. Columns headings required for calculations (Task 4.1) are provided in the Excel workbook. You may have to add (or insert) more columns (for some intermediate calculations) and/or worksheets for the rest of the calculations and observations.

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You will very likely need to analyse beyond the assessable tasks to gain sufficient insight into the business operations to provide recommendations to Mr Scott.

Make sure you review the marking guide (attached at the end of this assignment specification), to ensure you complete all required tasks before submission.

7. Assignment Assessment

The questions posed to you in this assignment range from easy, through medium to challenging. However, it is expected that all students will succeed in all the tasks. Some of the tasks are very similar to those covered in tutorials and the associated exercises. Some of the challenging tasks may rely on insight that requires self-directed study (e.g. using help facilities in Excel to explore in depth some of the topics covered in the tutorials).

This assignment is worth 30% of total marks for this course and will be marked on:

- Your demonstrated understanding of the problems;
- Completeness of the tasks;
- Exploration of the features in Microsoft Office; and
- Quality of the submission (Excel workbook & Word document).

8. Submission

All students are required to submit two (2) files – (a) Excel workbook with all calculations, graphs and charts, and (b) well-formatted report on word, for this assignment, via Moodle, prior to the due date as specified in the course description.

Assignment

School Engineering and Information Technology

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Marking Guide

Student Name: _____

Student ID: _____

Marker: _____

Tasks	Max Mark	Mark
Calculations:	18	
a. Total sale amount	2	
b. Discount	4	
c. Total amount charged to customers	2	
d. Total cost price	2	
e. Commission paid to sales representative	4	
f. Total cost amount	2	
g. Total profit	2	
Analysis and observations:	15	
a. Total profit, sub-totalled by each (a) Product category, and (b) Customer type	4+4	
b. What are ABC Superstore's five best and five worst products by profit?	7	
Recommendations:	10	
a. Should ABC Superstore focus on any particular (a) customer segment(s) and (b) Product categories in future, and why?	5	
b. What are your recommendation regarding what other data should be collected to improve decision making for ABC Superstore?	5	
Report Presentation:	17	
Report is well presented and well-written, containing:		
a. Title page	2	
b. Executive Summary (outlining scope of report, key findings and recommendations)	3	
c. Table of Contents	1	
d. Appropriate use of headings within report	2	
e. Appropriate discussion and justification of observations and recommendations using Table(s), graph(s) and/or chart(s). Simply copying table(s) and/or graphs from Excel is not enough.	9	
Deductions:		
<ul style="list-style-type: none">Late submission (deduction - 10% per day)Formula not used in calculations as required (deduct up to 10 marks)Pivot Tables and Graphs/Charts not used in analyses as required (deduct up to 10 marks)		
Total marks:	60	
Contribution to total assessment (out of 30)	30	

Comments: