MELBOURNE POLYTECHNIC
Higher Education,
School of Business, Innovation and Entrepreneurship.

Major Assignment

YEAR:	**2018**
SEMESTER:	**2**
COURSE(S):	Bachelor of Accounting **HEBSBACC** Associate Degree of Accounting **HEBSACC11**
SUBJECT:	Quantitative Methods BAC115
CONTRIBUTION TO OVERALL ASSESSMENT:	This assignment is worth **40%** of the overall assessment. 10% will be allocated to the Oral presentation and 30% to the written component.
DUE DATE:	This assignment is due in on **Friday, 12th October, 2018 at** 5pm via Moodle.
PARTICIPATION AND SUBMISSION REQUIREMENTS:	This is a group assignment (of 2 students per group). The written report must be a typed self-contained report and professionally presented. A draft may be submitted up to week 10. The written component of this assessment must be a maximum of **1800 words.**
PLAGIARISM AND OTHER COMPLIANCE ISSUES:	This report must comply with Melbourne Polytechnic policies and academic conventions for report writing, plagiarism and referencing. Your teacher will discuss these policies with you and further information is available on the Melbourne Polytechnic Student Intranet.
ASSESSOR(S):	Mei Leng Rankin

Assignment Brief

This major assignment is a group project. Students are required to demonstrate the following:

- Ability to retrieve relevant data from trusted sources (eg. Use of ABS database or RBA databases, etc) and understand the nature of the data retrieved. This includes being able to identify the appropriate graphical/visual tools of representing the data
- Ability to use a standard statistical package (eg. SAS or Microsoft EXCEL) to analyse and summarise the data.
- Ability to use inferential tools to test possible hypotheses and conduct basic inferences.
- Ability to undertake statistical analysis to establish relationships or patterns in the data collected.
- Ability to present a 10 minute oral presentation on key findings and recommendations
- Ability to produce a business report describing and interpreting the analyses conducted.
- Ability to write an analytical report of your findings. (In your written report, you must provide the following information: A research statement; a project summary, any underlying theory behind the study, methodology of analysis, results and conclusions. It is also important that contributors to each section of the written report is noted.) While your written report should be self-contained, it is important that EXCEL sheets demonstrating your analyses should be included as part of the Appendix.

- **Note: It is important that you do take some time to read Chapters 1 – 5 of your prescribed text before you start work on this project. The insight gained from reading these chapters will assist you in planning your project well.**

Project Time Line:

- Formation of group and allocation of tasks – by Week 3

- Examine Databases to retrieve relevant data – by Week 4

- Discussion of possible analyses to be undertaken and draft out a research plan. This Research plan will be the first Oral presentation – by Week 7

- Undertake analyses – by Week 10

- Collation of results and discussion of presentation of findings. The presentation will be the second Oral presentation. – by Week 12

- Complete written report. – by Week 13

- Note: While this is a group project, students will also be allocated marks for individual contribution. For example, each group member will have to make an individual oral presentation plus writing a section of the Overall Report.

PROJECT BRIEF:	The data analytical part of the project (75% of total project mark) is divided into 3 parts. Each part tests you on different statistical tools that you have learned in this course. As a group, you need to demonstrate that you have participated in all parts of this project. Work allocation should not be divided according to the parts shown here. The instructions that follow refer to the Data analysis component of your overall project. The other 25 marks will be allocated to the Introduction and Conclusion sections. Please refer to the marking rubrics to see how marks are allocated to the entire project. An additional 10 marks will be assigned for proper sourcing and referencing and another 10 marks for verbal presentation. Total Project will be worth **120 marks.** **PART A (40 marks)** Gourmet Delight is a fictitious five star restaurant in the Central Business District (CBD) of Melbourne. The restaurant has the capacity to sit 100 customers. The restaurant is open for lunch (12pm – 3pm) and for dinner (6 -11pm) seven days a week. The owner of Gourmet Delight has been concern that the clientele at the restaurant has been declining in the last six

Assignment Brief

months due to poor service times for their meals. The owner decided to put all staff through an extensive training program in the hope of uplifting the standard of their performance. The owner of Gourmet Delight strongly believes that a serving time of no more than 20 minutes equates to efficient service.

File: **Serving Times Project Sem 2 2018.xls, Sheet 1**, gives the serving times (in minutes) of the restaurant prior to training and after training. Using EXCEL, obtain the following summary measures and write a report of your findings:

    (a) Summary statistics

    (b) Box- whiskers plots

    (c) Histograms (If you need help, see Computer Exercise 3)

Six months after the training, several staff left the employment at Gourmet Delight. This caused concerns to the owner of Gourmet delight. A further random sample of service times was recorded and stored in the same file (**Sheet 2**). Use this information to determine if the owner of Gourmet Delight should be concern.

(**Note**: In your discussion, you must use the measures of central tendency, variability and relative standing that you have learned from this course. Your report must be written in such a way that a non-technical or non- statistical minded person can easily understand your report.)

PART B (15 marks)

To increase patronage to Gourmet Delight, the owner decided to advertise in the local press, offering special discounts and other promotions such as "two for the price of one" deals. Advertising expenditure and monthly revenue for Gourmet Delight for a period of 18 months are given in **Sheet 3** of the **Serving Times Project** file. Using regression analysis, obtain the necessary outputs, and write a report to determine if advertising expenditure has an impact on the restaurant's revenue.

PART C (20 marks)

    (a) Restaurant patronage is often measured by what is termed "turns" per table (successive seatings per day) and by "covers" (seated dining per night). **Sheet 4** of the **Serving Time Project** file gives the patronage for Gourmet Delight for successive days in August. The patronage recorded refers to all paying customers over the entire trading day. Write a brief report of the pattern of patronage. Provide explanation for the pattern observed. Obtain a simple exponentially smoothed series of the data. (You need to plot both series – original series and the smoothed series. **(5 marks)**

    (b) Gourmet Delight's quarterly takings for the past few years are given in **Sheet 5** of the **Serving Time Project** file. Using trend analysis, obtain a forecast for the four quarters of 2018. Write a brief report of your findings. In your report, you need to explain how you have used trend analysis to obtain the forecasts. **(15 marks)**

(75 marks)

Assignment Brief

The entire project assessment is made up of 10% for introduction; 75% for data analysis and 15% for summary and conclusion for the written report. An addition 10% is allocated for oral presentation of 10 minutes. TOTAL PROJECT Mark = 40% of total assessment.

The recommended length of this Project is 1800 words (excluding diagrams, tables and Appendices). As a guide: the rubrics will show you the number of words you need to write per section.

INTRODUCTION (20%)

A brief introduction to what this project is all. An explanation of how your sample was obtained. A brief description of the type of data information you will use in your report and how you will apply appropriate tools to summarise and analyse the information. (300 words)

Total Marks = 20 | Mark Received out of 20

Band	Descriptor
0 - 8	No introduction and or sloppy discussion based on a "cut and paste" job
10 - 12	Disjointed, lengthy, objectives not specific
14 - 20	Concise, clear and well written, with aim(s) specified and data collection discussed)

Summary description of data, proper graphical representation of summary data. Discussion entails examining some of the issues as highlighted in your Project Brief (800 words)

Total Marks = 20 | Mark Received out of 20

Band	Descriptor
0 - 6	No summary, no description, relevant graphical representations are not embedded as part of main report. Or summary data presented but not discussed efefctively
7 - 19	Description is sloppy and relevant representations are not properly displayed and labelled.
20 - 30	Summary data well presented in either graphical ot tabulated form, well labelled. Summary description is clear and relevant

DATA ANALYSIS (60%)

Use of inferential tools to analyse your data set (350 words)

Total Marks = 10 | Mark Received out of 10

Band	Descriptor
0 - 4	No evidence of inferential statistics used, sloppy discussion or evidence of "cut and paste" job
5 - 7	Evidence of inferential tools used but key findings not addressed or disjointed
8 - 10	Concise, well discussed and clear. Major findings of inferential anaysis well presented.

Examining relationships between variables. Students need to estimate at least two relationships and discuss the findings in the report (800 words)

Total Marks = 30 | Mark Received out of 30

Band	Descriptor
0 - 6	No evidence of relationships analysed and discussed, sloppy discussion or evidence of "cut and paste" job
7 - 19	Evidence of relationships anlaysed but key findings not addressed or disjointed
20 - 30	Concise, well discussed and clear. Major findings of relationships established and presented

SUMMARY AND CONCLUSION (20%)

A short summary of the MAIN results from your analysis of data; what conclusions can you draw from the results, how valid are your results; suggestions for improvements.3000 words)

Total Marks = 20 | Mark Received out of 20

Band	Descriptor
0 - 6	No evidence of summary of main results and conclusions, sloppy discussion, cut and paste from various sources
7 - 19	Mediocre discussion of findings, disjointed, no proper structure of written report evidenced
20 - 30	Report is well structured and intelligently written with results of findings reported and clear conclusions given

Oral Presentation (10%)

Mark Received out of 20

Marks	Descriptor
4	Aim of project clearly conveyed to audience (includes how data was collected, and purpose of study). Visual displays of presentation.
4	Coherent discussion of findings and conclusions
2	Overall presentation - ability to capture audience's attention and interest and answer questions

Total Marks /10

Group Members:

Name:		Student ID
Name:		Student ID
Name:		Student ID
Project Report / 100		
Referencing / 5		
Total Mark		

Created by Mei-Leng Rankin

This document is subject to change

Assignment Brief