ASSESSMENT GUIDE

ICT701
Business Intelligence

Semester 2, 2024

Victorian Institute of Technology www.vit.edu.au CRICOS Provider No. 02044E, RTO No: 20829

Assessment Overview

Assessment tasks				Learning Outcome Mapping	
Assessment ID	**Assessment Item**	**When due**	**Weighting**	**ULO#**	**CLO# for MITS**
1	Case Study analysis: Investigation of business intelligence, decision making and decision support systems (Individual) (1500 Words)	Session 4	20%	1	1
2	Report - Design business intelligence system and data warehouse (Individual) (2000 Words)	Session 8	30%	2	1, 2
3	Design, implementation and evaluation of a business intelligence solution (Group) Part A – Report (4000 Words) Part B - Presentation	Part A - Session 13 Part B – Session 14	Part A – 40% Part B – 10% Total - 50%	1, 3, 4	1, 2 ,4

Note: * denotes 'Hurdle
Assessment Item' that students must achieve at least 40% in this item to pass the unit.

Referencing guides

You must reference all the sources of information you have used in your assessments. Please use the IEEE referencing style when referencing in your assessments in this unit. Refer to the library's referencing guides for more information.

- https://elearning.vit.edu.au/pluginfile.php/473840/block_html/content/VIT%20Library%20Referencing%20-%20IEEE%20-%2007042020.pdf

Academic misconduct

VIT enforces that the integrity of its students' academic studies follows an acceptable level of excellence. VIT will adhere to its **VIT Policies, Procedures and Forms** where it explains the importance of staff and student honesty in relation to academic work. It outlines the kinds of behaviours that are "academic misconduct", including plagiarism.

Late submissions

In cases where there are no accepted mitigating circumstances as determined through **VIT Policies, Procedures and Forms**, late submission of assessments will lead automatically to the imposition of a penalty. Penalties will be applied as soon as the deadline is reached.

Short extensions and special consideration

Special Consideration is a request for:

- Extensions of the due date for an assessment, other than an examination (e.g. assignment extension).
- Special Consideration (Special Consideration in relation to a Completed assessment, including an end-of-unit Examination).

Students wishing to request Special Consideration in relation to an assessment the due date of which has not yet passed must engage in written emails to the teaching team to Request for Special Consideration as early as possible and prior to start time of the assessment due date, along with any accompanying documents, such as medical certificates.

For more information, visit **VIT Policies, Procedures and Forms**.

Inclusive and equitable assessment

Reasonable adjustment in assessment methods will be made to accommodate students with a documented disability or impairment. Contact the unit teaching team for more information.

Contract Cheating

Contract cheating usually involves the purchase of an assignment or piece of research from another party. This may be facilitated by a fellow student, friend or purchased on a website. Other forms of contract cheating include paying another person to sit an exam in the student's place.

Contract cheating warning:

- By paying someone else to complete your academic work, you don't learn as much as you could have if you did the work yourself.
- You are not prepared for the demands of your future employment.
- You could be found guilty of academic misconduct.
- Many of for pay contract cheating companies recycle assignments despite guarantees of "original, plagiarism-free work" so similarity is easily detected by TurnitIn.
- Penalties for academic misconduct include suspension and exclusion.
- Students in some disciplines are required to disclose any findings of guilt for academic misconduct before being accepted into certain professions (e.g., law).

- You might disclose your personal and financial information in an unsafe way, leaving yourself open to many risks including possible identity theft.
- You also leave yourself open to blackmail - if you pay someone else to do an assignment for you, they know you have engaged in fraudulent behaviour and can always blackmail you.

Grades

We determine your grades to the following Grading Scheme:

Grade	**Percentage**
A	80% – 100%
B	70% – 79%
C	60% – 69%
D	50% – 59%
F	0% – 49%

Assessment Details for Assessment Item 1: Case Study analysis: Investigation of business intelligence, decision making and decision support systems

Assessment tasks				Learning Outcome Mapping	
Assessment ID	**Assessment Item**	**When due**	**Weighting**	**ULO#**	**CLO# for MITS**
1	Case Study analysis: Investigation of business intelligence, decision making and decision support systems (Individual) (1500 Words)	Session 4	20%	1	1

Introduction

This assignment necessitates the analysis of a dataset, the interpretation of findings, and the presentation of conclusions through a written report. It is imperative that you complete this assignment on an individual basis and submit it electronically via the Learning Management System (LMS) before the specified due date. Ensure that you follow the LMS instructions to verify the correct submission of your work. Please note that we do not accept hard copies or assignments submitted via email. The assignment relies on the dataset found in the file Assignment1_RetailStore_Dataset.xlsx, which can be downloaded from LMS.

Case Study: Retail Store Data Set:

Supermarkets are on the rise in densely populated urban areas, leading to heightened market competition. This data set represents historical sales data from a supermarket company with records from three different branches over a three-month period. Utilizing predictive data analytics techniques with this dataset is highly accessible and straightforward.

Data Description:

The “Data Description” sheet describes all the variables used in the “Retail Store Dataset” and is copied below for your convenience.
Invoice id: Computer generated sales slip invoice identification number
Branch: Branch of supercenter (3 branches are available identified by X, Y and Z).
City: Location of supercenters
Customer type: Type of customers, recorded by Members for customers using member card and Normal for without member card.
Gender: Gender type of customer
Product line: General item categorization groups - Electronic accessories, Fashion accessories, Food and beverages, Health and beauty, Home and lifestyle, Sports, and travel
Unit price: Price of each product in $
Quantity: Number of products purchased by customer
Tax: 5% tax fee for customer buying
Total: Total price including tax
Date: Date of purchase (Record available from January 2022 to March 2022)
Time: Purchase time (10am to 9pm)
Payment: Payment used by customer for purchase (3 methods are available – Cash, Credit card and Ewallet)
COGS: Cost of goods sold
Gross margin percentage: Gross margin percentage
Gross income: Gross income
Rating: Customer stratification rating on their overall shopping experience (On a scale of 1 to 10)

Task:

The task of designing a comprehensive Decision Support System (DSS) for a retail business based on the retail score dataset is a multifaceted assignment that requires students to apply their knowledge and skills in the domain of business intelligence and data analysis.
Let's elaborate on this assignment:
Designing a Comprehensive DSS:
Understanding the Retail Score Dataset: To begin with, students should thoroughly understand the given retail score dataset. This entails examining the dataset's structure, variables, and the kind of information it contains. They should also consider the specific objectives and needs of the retail business in question.

Defining DSS Components: Next, students need to design the components of the Decision Support System. A DSS typically includes various elements, such as a database, user interface, analytical tools, and reporting capabilities. Students should explain how each of these components will be integrated into the system.

Data Integration and Transformation: The retail score dataset might not be in the ideal format for decision support. Students should describe how they will integrate the dataset into the DSS and what preprocessing steps, like data cleansing and transformation, will be necessary to make the data suitable for analysis.

Analytical Tools and Algorithms: The heart of the DSS lies in its analytical capabilities. Students should select and justify the specific analytical tools, algorithms, and

models they will use to extract insights from the data. For example, they might opt for clustering algorithms to segment customers or time series forecasting to predict sales trends.

User-Friendly Interface: Designing a user-friendly interface is critical. Students should discuss how they plan to present the data and insights to end-users, which may include retail managers and executives. This interface should be intuitive and facilitate data exploration and decision-making.

Aiding in Strategic Decision-Making:

Identifying Key Business Objectives: Students should define the strategic objectives of the retail business. These objectives could include enhancing customer experience or increasing sales. They need to explain how the DSS will align with and contribute to achieving these goals.

Data-Driven Insights: The core function of the DSS is to provide data-driven insights that support decision-making. Students should illustrate how the DSS will generate actionable insights from the retail score dataset. This could involve identifying customer preferences, forecasting demand, or detecting sales trends.

Scenarios and "What-If" Analysis: A robust DSS allows for scenario analysis. Students should describe how their system will enable users to conduct "what-if" analyses, helping decision-makers explore the potential impact of different strategies or market conditions.

Visualization and Reporting: Effective communication of insights is crucial. Students should outline how the DSS will present findings through visualization tools, dashboards, and reports. Visualizations can make complex data more understandable and actionable.

Monitoring and Adaptation: A good DSS should not be static. Students should discuss how the system will monitor the retail environment, collect real-time data, and adapt its recommendations based on changing conditions.

Overall, this assignment challenges students to think holistically about designing a DSS that leverages the retail score dataset to aid in strategic decision-making. It also highlights the importance of aligning the DSS with the specific needs and objectives of the retail business.

The report's length should be approximately 1500 words (excluding references). Utilize 1.5 line spacing and a 12-point Times New Roman font. Employ both numerical and graphical statistical summaries, as sometimes insights can be gained from one that are not apparent in the other.
Once you have drafted your report, it can be valuable to set it aside for a day and then revisit it with fresh eyes. Read it as if you were unfamiliar with the analysis. Does it flow smoothly? Is it comprehensible? Can someone without prior knowledge understand your conclusions from the written material? This review process often reveals opportunities to edit the report for greater clarity and directness.

Note: Students can use any of the softwares such as Excel, PowerBI, Python, Statistica, Data Miner, Weka, RapidMiner, KNIME and MATLAB etc.

Your submission should consist of two separate files:

1. Ensure the inclusion of the results produced by the software that was employed.
2. Provide a Microsoft Word document containing your comprehensive report.

Submission Instructions

All submissions are to be submitted through the assignment 1 Drop-boxes that will be set up in the Moodle account for this Unit of Study. Assignments not submitted through these drop boxes will not be considered. Submissions must be made by the due date and time (which will be in the session detailed above) and determined by your Unit coordinator

Note: All work is due by the due date and time. Late submissions will be penalized at 20% of the assessment final grade per day, including weekends.

Marking Criteria/Rubric

You will be assessed on the following marking criteria/Rubric:

Total Marks: 20

Assessment criteria	Exceptional >=80%	Admirable 70% – 79%	Creditable 60% - 69%	Acceptable 50% - 59%	Unsatisfactory <=49
Understanding the Retail Score Dataset: **2 points**	The student's understanding of the dataset is exceptional, with a deep and nuanced exploration of its structure, variables, and an outstanding alignment with the retail business's objectives.	The student demonstrates an excellent understanding of the dataset, comprehensively exploring its structure, variables, and effectively aligning it with the retail business's specific objectives.	The student's understanding of the dataset is good, with a thorough examination of its structure, variables, and a clear connection to the retail business objectives.	The student has a basic understanding of the dataset, exploring some aspects of its structure, variables, and relevance to the retail business.	The student's understanding of the dataset is limited, with minimal exploration of its structure, variables, or relevance to the retail business.
Defining DSS Components **3 points**	The student's description of DSS components is exceptional, with a comprehensive and highly detailed integration plan.	The student's description of DSS components is excellent, with a well-thought-out integration plan covering the database, user interface, analytical tools, and reporting.	The student's explanation of DSS components is good, with a reasonable integration plan.	The student provides a basic description of DSS components with limited integration details.	The student's description of DSS components is inadequate, with no clear integration plan.
Data Integration and Transformation **5 points**	The student's description of data integration and preprocessing is exceptional, with a highly detailed and well-justified plan.	The student provides an excellent description of data integration and comprehensive preprocessing steps.	The student's description of data integration and preprocessing steps is good and clear.	The student provides a basic explanation of data integration with minimal preprocessing steps.	The student's description of data integration and transformation is incomplete, with no preprocessing steps.

Analytical Tools and Algorithms **5 points**	The student's selection and justification of analytical tools and algorithms are exceptional, with comprehensive reasoning and exceptional depth.	The student demonstrates excellent selection and thorough justification of analytical tools, algorithms, and models.	The student's selection and justification of analytical tools and algorithms are good and clear.	The student makes a basic selection with partial justification of analytical tools and algorithms.	The student's selection and justification of analytical tools and algorithms are limited or absent.
User-Friendly Interface and Strategic Alignment **5 points**	The student's discussion is exceptional, with a deep alignment between the user-friendly interface and strategic objectives, showcasing outstanding clarity and depth.	The student's discussion is excellent, demonstrating a strong alignment between the user-friendly interface and strategic objectives, including its facilitation of decision-making.	The student's discussion of the user-friendly interface and alignment with strategic objectives is good and reasonably clear.	The student provides a basic discussion with limited considerations for alignment with strategic objectives.	The student's discussion of the user-friendly interface and alignment with strategic objectives is inadequate or missing.

Assessment Details for Assessment Item 2: Report - Design business intelligence system and data warehouse

Overview

Assessment tasks				Learning Outcome Mapping	
Assessment ID	**Assessment Item**	**When due**	**Weighting**	**ULO#**	**CLO# for MITS**
2	Report - Design business intelligence system and data warehouse (Individual) (2000 Words)	Session 8	30%	2	1, 2

Introduction

In this independent assessment, you will leverage the case study presented in Assessment Item 1 as a foundation for your tasks.

A) Develop the architecture for a business intelligence system and formulate a data warehouse framework.

B) Employ visual analytics to convey your discoveries. Your work will be presented in the format of a report.

The assignment relies on the dataset found in the file Assignment1_RetailStore_Dataset.xlsx, which can be downloaded from LMS.

Case Study: Retail Store Data Set:

The proliferation of supermarkets in densely populated urban regions has intensified market rivalry. This dataset contains historical sales information from a supermarket enterprise, encompassing records from three distinct branches during a three-month timeframe. Employing predictive data analytics methods with this dataset is easily accessible and uncomplicated.

Data Description:

The “Data Description” sheet describes all the variables used in the “Retail Store Dataset” and is copied below for your convenience.

Invoice id: Computer generated sales slip invoice identification number

Branch: Branch of supercenter (3 branches are available identified by X, Y and Z).

City: Location of supercenters

Customer type: Type of customers, recorded by Members for customers using member card and Normal for without member card.

Gender: Gender type of customer

Product line: General item categorization groups - Electronic accessories, Fashion accessories, Food and beverages, Health and beauty, Home and lifestyle, Sports and travel

Unit price: Price of each product in $

Quantity: Number of products purchased by customer

Tax: 5% tax fee for customer buying

Total: Total price including tax

Date: Date of purchase (Record available from January 2022 to March 2022)

Time: Purchase time (10am to 9pm)

Payment: Payment used by customer for purchase (3 methods are available – Cash, Credit card and Ewallet)

COGS: Cost of goods sold

Gross margin percentage: Gross margin percentage

Gross income: Gross income

Rating: Customer stratification rating on their overall shopping experience (On a scale of 1 to 10)

Tasks:

Let's break down the key components of this assessment:

you have access to a dataset that contains information related to a retail store. This dataset likely includes data on sales, customer information, inventory, and other relevant aspects of the retail business.

1. Designing Business Intelligence (BI) System and Data Warehouse Framework:

Your first task is to design the architecture of a Business Intelligence (BI) system and a data warehouse framework.

a. Business Intelligence System: A BI system is a set of tools and technologies that help in gathering, processing, storing, and analyzing data to provide valuable insights to support business decision-making. Your role in this assessment is to plan and design the structure and components of this system. You'll need to decide how data will be collected, processed, and presented to the end-users.

b. Data Warehouse Framework: A data warehouse is a central repository of data that is specifically designed for querying and reporting. You'll need to define how data from the retail store dataset will be stored in the data warehouse. This involves decisions regarding data modeling, ETL (Extract, Transform, Load) processes, data storage technologies, and overall architecture.

B. Utilizing Visual Analytics: Visual analytics is a process of analyzing data through interactive and visual methods such as charts, graphs, and dashboards. In this assessment, you are expected to use visual analytics techniques to analyze the retail store dataset. This means you'll be creating visual representations of data to uncover insights, trends, and patterns. Your findings should help us to understand the retail business better.

Submission as a Report: Finally, you are required to present your work in the form of a report. This report should document the following:

a. Your design of the BI system and data warehouse framework, explaining the rationale behind your choices.

b. Visualizations and insights obtained from the retail store dataset using visual analytics techniques.

c. Any recommendations or conclusions drawn from your analysis.

d. The report should be well-structured, clearly written, and include visual aids like charts or graphs to support your findings.

Following the successful completion of these tasks using the appropriate tools, produce an analytical report that leverages visual analytics to convey the insights uncovered to the Retail Store Directors.

The report should span roughly 2000 words (excluding references), adhere to 1.5 line spacing, and employ a 12-point Times New Roman font. Make use of both numerical and graphical statistical summaries, as certain insights may become apparent through one form of representation that might not be evident in the other.

Note: Students can use software such as Excel, PowerBI, Python, Statistica Data Miner, Weka, RapidMiner, KNIME and MATLAB etc.

Your submission should consist of two separate files:

1. Ensure the inclusion of the results produced by the open-source software that was employed.
2. Present a Microsoft Word document that includes your in-depth Strategic Advancement report, encompassing the insights derived from the completion of the tasks.

Submission Instructions

All submissions are to be submitted through turn-it-in. Drop-boxes linked to turn-it-in will be set up in the Unit of Study Moodle account. Assignments not submitted through these drop-boxes will not be considered.

Submissions must be made by the due date and time (which will be in the session detailed above) and determined by your Unit coordinator. Submissions made after the due date and time will be penalized at the rate of 20% per day (including weekend days).

The turn-it-in similarity score will be used in determining the level if any of plagiarism. Turn-it-in will check conference websites, Journal articles, the Web and your own class member submissions for plagiarism. You can see your turn-it-in similarity score when you submit your assignment to the appropriate drop-box. If this is a concern you will have a chance to change your assignment and re-submit. However, re-submission is only allowed prior to the submission due date and time. After the due date and time have elapsed you cannot make re-submissions and you will have to live with the similarity score as there will be no chance for changing. Thus, plan early and submit early to take advantage of this feature. You can make multiple submissions, but please remember we only see the last submission, and the date and time you submitted will be taken from that submission.

Your document should be a single word or pdf document containing your report

Note: All work is due by the due date and time. Late submissions will be penalized at 20% of the assessment final grade per day, including weekends.

Marking Criteria/Rubric

You will be assessed on the following marking criteria/Rubric:

Total Marks: 30

Assessment criteria	Exceptional >=80%	Admirable 70% – 79%	Creditable 60% - 69%	Acceptable 50% - 59%	Unsatisfactory <=49
Business Intelligence System **5 points**	Demonstrates an outstanding BI system design, with advanced techniques and a compelling rationale, showcasing an exceptional understanding of BI principles.	Designs an advanced BI system with a comprehensive rationale, addressing data collection, processing, and presentation effectively.	Offers a well-structured and detailed design of the BI system with clear rationale.	Provides a basic outline of the BI system structure with limited rationale.	Does not provide any design for a BI system.
Data Warehouse Framework **5 points**	Demonstrates an outstanding data warehouse framework design, with advanced techniques and a compelling rationale, showcasing an exceptional understanding of data warehousing principles.	Designs an advanced data warehouse framework with a comprehensive rationale, demonstrating an excellent understanding of data warehousing concepts.	Offers a well-structured and detailed design of the data warehouse framework with clear rationale, addressing data modeling, ETL processes, data storage technologies, and overall architecture.	Provides a basic outline of the data warehouse framework with limited rationale.	Does not provide any design for a data warehouse framework.
Utilizing Visual Analytics	Utilizes visual analytics techniques	Demonstrates advanced proficiency in visual	Effectively utilizes visual analytics to	Uses basic visual analytics techniques to	Does not utilize visual analytics techniques for

10 points	exceptionally well, presenting a wide range of advanced visualizations that reveal deep and meaningful insights, going beyond expectations.	analytics, providing a rich and detailed set of visual representations that uncover complex insights.	create clear and insightful data representations that uncover relevant insights, trends, and patterns.	represent data but lacks depth and insight.	data analysis.
Recommendations and Conclusions **5 points**	Offers outstanding recommendations and conclusions, going beyond expectations, and showcasing a profound understanding of the dataset.	Provides comprehensive recommendations and conclusions that demonstrate a deep understanding of the data and its implications.	Offers well-considered recommendations and conclusions based on the analysis.	Provides basic recommendations and conclusions, but they lack depth.	Does not provide any recommendations or conclusions.
Overall Quality **5 points**	The overall assessment is of exceptional quality, demonstrating an exceptional understanding and effort.	The overall assessment is of high quality and exceeds expectations.	The overall assessment is of good quality, meeting most expectations.	The overall assessment is basic and meets minimum requirements.	The overall assessment demonstrates a lack of understanding and effort.

Assessment 3: Design, implementation, and evaluation of a business intelligence solution

Overview

Assessment tasks				Learning Outcome Mapping	
Assessment ID	**Assessment Item**	**When due**	**Weighting**	**ULO#**	**CLO# for MITS**
3*	Design, implementation and evaluation of a business intelligence solution (Group) Part A – Report (4000 Words) Part B - Presentation	Part A - Session 13 Part B – Session 14	Part A – 40% Part B – 10% Total - 50%	1, 3, 4	1, 2 ,4

*This is a Hurdle task

Introduction

In the context of this group evaluation, you will:

1. Analyze the methods applicable for predictive and prescriptive analytics using provided datasets.
2. Create and put into action a business intelligence solution.
3. Construct components of the proposed solution.

As a team, you will be responsible for delivering a written report and delivering a presentation.

The assignment relies on the dataset found in the file Assignment3_Question_Dataset.xlsx, which can be downloaded from LMS.

Case Study: Loan Prediction Dataset:

Data Description:

Loan_ID: This is a unique identifier or reference number for each loan application. It is used to distinguish one loan application from another.

Gender: This column likely records the gender of the loan applicant, indicating whether they are male or female.

Married: This column may indicate the marital status of the applicant, specifying whether the applicant is married or not.

Dependents: This column typically records the number of dependents or family members financially reliant on the applicant.

Education: This column indicates the educational background of the applicant, specifying whether they are educated or not.

Self Employed: This column may show whether the applicant is self-employed or works for someone else.

Monthly Applicant Income ($): This column likely records the monthly income of the primary applicant in dollars.

Monthly Coapplicant Income ($): This column probably records the monthly income of any coapplicants, like a spouse or partner, in dollars.

Loan Amount ($): This column typically indicates the amount of the loan applied for, usually in dollars.

Loan Amount Term: This column is likely used to specify the term or duration of the loan, such as the number of months for repayment.

Credit History: This column may contain information about the credit history of the applicant, often indicating whether it is good or bad.

Property Area: This column likely represents the geographical area or location of the property for which the loan is sought.

Loan Status: This column usually indicates the status or outcome of the loan application, such as whether it was approved or denied.

Task:

Tasks – PART A

The major assessment task is a comprehensive project involving predictive and prescriptive analytics on loan prediction datasets, which will ultimately result in the design and implementation of a business intelligence solution.

Let's break down the task and elaborate on each component:

Examination of Techniques for Predictive and Prescriptive Analytics:
In this phase, your group will explore and analyze various data analytics techniques and methods used for loan prediction. This typically involves studying statistical, machine learning, and data mining techniques that can be applied to historical loan data to make predictions about future loans. Predictive analytics aims to

forecast future events, while prescriptive analytics goes a step further to provide recommendations on what actions to take based on the predictions. Your group will need to research and understand these techniques, including the data preprocessing steps, model selection, and evaluation metrics.

Design and Implementation of a Business Intelligence Solution:
After gaining a deep understanding of the techniques, your group will be tasked with designing a business intelligence (BI) solution. A BI solution involves creating a system or platform that integrates and analyzes data to provide valuable insights for decision-making. In this context, it means creating a system that can handle loan data and provide insights into whether a loan applicant is likely to be approved or denied. The design phase involves planning how the system will be structured, what data sources will be used, and how the analytics will be applied.

The implementation phase is about actually building the BI solution. This may involve developing software applications, setting up databases, and integrating various tools and technologies. You'll also need to implement the predictive and prescriptive analytics models that were examined in the first phase. This might include using programming languages like Python or R, and machine learning libraries such as Scikit-Learn or TensorFlow.

Development of Elements of the Proposed Solution:
This component refers to the practical work of creating different components of the BI solution. This could include data collection and cleaning, model training and testing, integration with visualization tools, and the creation of a user interface if necessary. It's the hands-on work that transforms your design into a functional system.

Report and Presentation:
Once the design and implementation phases are complete, your group will need to compile a report that documents the entire process. The report should detail the techniques examined, the design of the BI solution, the steps taken in the development phase, and the results obtained. It should also include insights gained from the analytics, any challenges faced, and recommendations for improving the solution or addressing potential issues.

The presentation component involves summarizing the report's key findings and presenting them to an audience, such as your peers or instructors. This is an opportunity to showcase your work, explain your methodology, and share the insights your solution has generated. Effective communication and visualization of your results are crucial during this phase.

In summary, this assessment task encompasses a full cycle of data analytics and business intelligence development, from research and analysis to the practical implementation and reporting. It's a comprehensive project that allows your group to apply theoretical knowledge to a real-world problem, demonstrating your ability to harness data for decision-making in the context of loan prediction.

Tasks – PART B

Each member of the group will deliver a concise 5-minute oral presentation on the submitted business report and the accompanied visual dashboard.

Submission:

Your submission should be divided into two distinct files:

1. Submit a Microsoft Word document containing your comprehensive business report, detailing the insights obtained from the completion of Part A.
2. Provide a separate Microsoft PowerPoint presentation containing the slides used for your presentation.

Submission Guidelines:

- The Analysis report of 1500 words must be submitted digitally, either in PDF or Word document format. The report should include an appendix at the end containing screenshots of the Python code along with its corresponding output
- The oral presentation can be delivered using presentation software (e.g., PowerPoint, Google Slides).
- Ensure proper citation and referencing for any external sources or datasets used.
- Please submit two files, the Report and the Oral Presentation, through the link provided in the LMS before the specified deadline.

Note: Collaboration within the group is encouraged, but each group member must contribute substantially to the analysis, report writing, and presentation. Plagiarism or unauthorized use of external sources will result in penalties.

Marking Criteria/Rubric

You will be assessed on the following marking criteria/Rubric:

Total Marks: 50

Assessment criteria	**Exceptional >=80%**	**Admirable 70% – 79%**	**Creditable 60% - 69%**	**Acceptable 50% - 59%**	**Unsatisfactory <=49**
Examination of Techniques for Predictive and Prescriptive Analytics **10 points**	Exceptional exploration with comprehensive explanations. Deep understanding of predictive and prescriptive analytics methods and provides	In-depth exploration with detailed explanations. Extensive understanding of predictive and prescriptive analytics methods.	Thorough examination of techniques with clear explanations. Demonstrates a good understanding of predictive and	Superficial exploration with limited details on techniques. Basic understanding of predictive and prescriptive analytics	Little to no exploration of techniques. Lack of understanding of predictive and prescriptive analytics methods.

	innovative insights.		prescriptive analytics methods.	methods.	
Design and Implementation of a Business Intelligence Solution **10 points**	Exceptional design plan, innovative and comprehensive in all aspects. Demonstrates a deep understanding of BI solution design.	Detailed and comprehensive design plan. Demonstrates a sophisticated approach to BI solution design.	Well-thought-out design plan with clarity on structure, data sources, and analytics application.	Basic design plan with limited details. Clear but simplistic approach to BI solution design.	Lack of planning for BI solution design. No clarity on the structure, data sources, or analytics application.
Development of Elements of the Proposed Solution **10 points**	Exceptional practical work with innovative and comprehensive components. Demonstrates a deep understanding and mastery of development.	Comprehensive practical work with well-developed components. Shows sophistication in data collection, model training, and integration.	Most components are developed but lacks depth or sophistication. Adequate evidence of data collection, model training, and integration.	Basic practical work with minimal components developed. Limited evidence of data collection and model integration.	Incomplete or missing practical work. No evidence of data collection, model training, integration, or user interface development.
Report **10 points**	Exceptional report with comprehensive insights, challenges, and innovative recommendations.	Detailed and well-organized report with valuable insights, challenges, and recommendations.	Well-structured report with clear insights, challenges, and recommendations.	Basic report structure with some insights but lacks depth and clarity.	Poorly structured or incomplete report. Limited or no insights, challenges, or recommendations
Overall Assessment **10 points**	An outstanding performance that is innovative, comprehensive, and demonstrates a	An impressive performance that goes beyond expectations, showing a high level of understanding and	A good performance that meets expectations and demonstrates a solid	Meets minimum requirements but lacks depth and sophistication.	Fails to meet basic requirements and expectations.

	profound mastery of the subject matter.	competence.	understanding.		
Oral Presentation **10 points**	The presentation is exceptional and leaves a strong, lasting impression.	The presentation is very good and effectively conveys the message.	The presentation is good but could benefit from improvements.	The presentation is Satisfactory and does not convey the results.	The presentation is inadequate and fails to convey the message effectively.