IT2383 DATA JOURNALISM
Assignment (35%)

AY2025 Semester 1

Assignment

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Introduction

By the end of this assignment, you will be able to:
- Detect and understand the stories within datasets and extract insights from the given dataset
- Effectively present data visually to enhance audience comprehension of findings and insights.
- Apply data visualisation best practices including choosing the right chart type for the situation and avoiding visualisation techniques that can mislead the audience.
- Act as a data-driven visual storyteller for optimal presentation of trends, patterns and insights.
- Effectively communicate insights about data in various formats, including oral presentations and interactive visualisations.

Business Scenario

Founded in 2015, Pedal&Co is a company specializing in bicycle sales. The business ceased operations in 2018 due to undisclosed reasons. Now, in 2025, Pedal&Co is preparing to relaunch its bicycle business and is even considering rehiring former staff as part of its revival strategy.

In this **individual** assignment, you are required to develop interactive and effective data visualisations, integrate the visualisations into dashboards and present a data story using Tableau. The dataset of this assignment will be a Microsoft Excel spreadsheet, Pedal&CoDataset.xlsx.

The base mark of this assignment is **35 marks**, and it constitutes **35%** of your total ICA marks for this competency unit.

Taking and using the whole or any part of ideas, words or works of others, including contents generated by AI tools and passing it off as one's own work without acknowledgement of the original source is considered as an act of plagiarism, and you will be subjected to disciplinary action.

You may also wish to note that your submission may be checked for plagiarism by POLITEMall. The allowable percentage for similarity should not exceed 25%.

Submission Format and Mode

The following are the required deliverables for this assignment.

1. A T**ableau Packaged Workbook (.twbx extension)** containing 5 story points. Refer to section *Step 3: Data Story using Tableau Story Point* to know more about the content that you should be including in your Tableau Packaged Workbook.

2. A **written report (not exceeding 2000 words)** that consists of the following sections (Refer to section *Annex B: Report Format* for the format of the report):

    - **Introduction**
        - Let the CEO understand what analyses your report is going to focus on.
    - **Data Visualizations & Insights**
        - You can elaborate on the purpose of each chart and what the chart means to Pedal&Co.
        - Tell the story of each of the dashboard.
    - **Key Findings & Recommendations**
        - Summarise key insights from the analysis
        - Link your findings to potential business outcomes or impacts to Pedal&Co.
        - Make recommendations for its upcoming business.

Please be reminded to submit all deliverables via POLITEMall by the end of Week 7, 8 June 2025 (Sunday) at 2359hrs. Any submission within 5 days after the deadline will result in your scores being capped at 50% of the base mark. Submissions from 14 June 2025 0000hrs onwards will be awarded 0 marks.

Please refer to **Annex A** for the detailed assessment rubrics of this assignment.

Project Background

As the company's Data Analyst, you have been tasked with analysing historical data to uncover insights into past sales performance and to provide strategic recommendations to the CEO—highlighting key actions to take and avoid for long-term success.

Your data story can fulfil any of the following 3 analyses:

    (1) Products Analysis
    (2) Manpower Analysis
    (3) Order Analysis
    (4) Inventory Analysis
    (5) Branding Analysis
    (6) Customers Analysis

There are 9 tables in the dataset. Below is the description of each table.

Table	Description
Categories	Describes the types of bike sold by Pedal&Co.
Products	Details the list of products in the inventory of Pedal&Co.
Stocks	Describes the number of stocks available for the products in each of the store.
Brand	Contains the list of brands that are carried by Pedal&Co.
Customers	Contains the list of customers that have made purchases at Pedal&Co before.
Orders	Details the order transactions made across all stores.
Order Items	Contains the list of order items under each order.
Stores	Describes the details of each outlet under Pedal&Co.
Staff	Contains the list of staff and the corresponding outlets they are working in Pedal&Co.

Step 1: Data Loading and Model Relationships in Tableau

Based on the given table structure, you are required to load the data into Tableau and create relationships among the tables. Please see the diagram below for example.
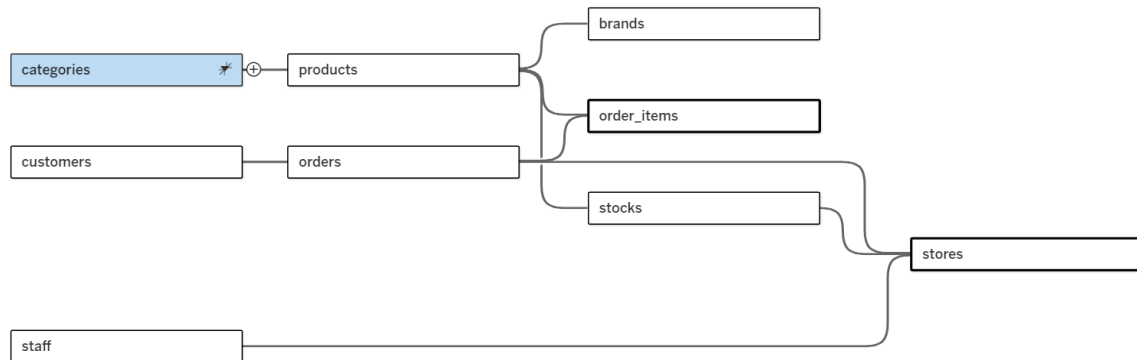
Step 2: Develop Interactive and Effective Dashboards using Tableau

You are tasked to develop **three dashboards** to show your analyses and include narratives to explain the business insights. **Each dashboard should contain 3 visualisations.** The first and the last dashboard need not necessarily contain any charts and is allowed to be in the forms of text or tables.

Step 3: Data Story using Tableau Story Point

You are required to articulate your data story and insights of your dashboards in the written report.

Your story should contain five story points. It should start with a background or introduction, followed by individual story points that showcase your dashboards, and end with a conclusion that includes your recommendations.

Please see below for an example of using story points in Tableau.
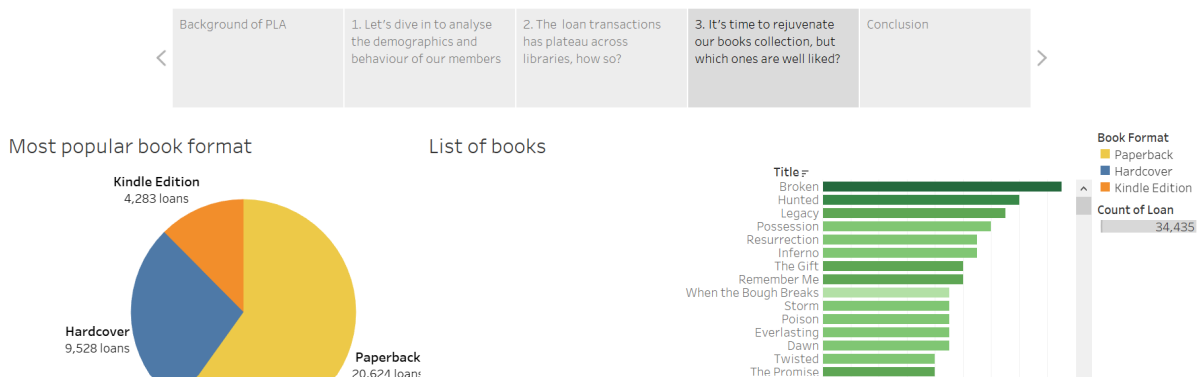
Annex A: Assessment Rubrics

Criteria	Advanced	Proficient	Functional	Developing	Not Competent
Marks	8m to 10m	7m to <8m	6m to <7m	5m to <6m	0m to <5m
Choice of Visual Representation **(10 marks)**	All the chart types addressed the required analysis concisely and clearly.	Most of the chart types addressed the required analysis concisely and clearly.	Some of the chart types addressed the required analysis concisely and clearly.	Few of the chart types addressed the required analysis concisely and clearly.	None of the chart types addressed the required analysis concisely and clearly.
Marks	4m to 5m	3.5m to <4m	3m to <3.5m	2.5m to <3m	0m to <2.5m
Dashboards **(5 marks)**	All the dashboards were interactive and well-designed with appropriate use of colour, symbolism, or text.	Most of the dashboards were interactive and well-designed with appropriate use of colour, symbolism, or text.	At least half of the dashboards were interactive and well-designed with appropriate use of colour, symbolism, or text.	Only a few dashboards were interactive and well-designed with appropriate use of colour, symbolism, or text.	None of the dashboards are interactive and did not use colour, symbolism, or text.
Marks	8m to 10m	7m to <8m	6m to <7m	5m to <6m	0m to <5m
Data story **(10 marks)**	Excellent connection between visuals and narrative. All parts of the story are cohesive, impactful, and engages the audience.	Good connection between visuals and narrative. Most parts of the story are cohesive, impactful, and engages the audience.	Weak connection between visuals and narrative. Some parts of the story are cohesive, impactful, and engages the audience.	Few connections between visuals and narrative. Few parts of the story are cohesive, impactful, and engages the audience.	No connections between visuals and narrative. The story is incohesive, unimpactful and unable to engage the audience.
Marks	8m to 10m	7m to <8m	6m to <7m	5m to <6m	0m to <5m
Insights / Conclusion **(10 marks)**	Presents at least 16 well-reasoned, actionable insights and recommendations, with detailed justifications.	Presents 11-15 well-reasoned, actionable insights and recommendation, with mostly detailed justifications.	Presents 6-10 well-reasoned, actionable insights and recommendations, with somewhat detailed justifications.	Presents 1-5 well-reasoned, actionable insights and recommendations, with brief justifications.	None of the insights and recommendations are actionable, with no justifications.

Annex B: Report Format

Name: _____

Admin Number: _____

Data Storytelling Report for Pedal&Co

Introduction

<Let the CEO understand what analyses your report is going to focus on>

Data Visualizations & Insights

<You can elaborate on the purpose of each chart and what the chart means to Pedal&Co.>

<Narrate the data story of your dashboards>

Key Findings & Recommendations

<Summarise key insights from your analyses>

<Link your findings to potential business outcomes or impacts to Pedal&Co>