Riara School of Computing
Nurturing business innovators

MAY- AUGUST 2025 TRIMESTER
Assignment 2- GROUP PROJECT
Total Marks- 25
DUE DATE: 11TH JULY 2025

In your groups, please use the next 2 weeks to complete below assignment

Project Title: Developing a BI Dashboard Using Power BI and Open-Source Data

1.1 Project Overview

This project provides hands-on experience in Business Intelligence (BI) by developing a BI report and dashboard using open-source data from Kaggle. Students will select a relevant dataset, analyze it, and create a Power BI dashboard to support decision-making for a hypothetical organization or context represented by the dataset. The project focuses on applying visualization techniques and Power BI skills to deliver actionable insights.

1.2 Objectives

1. Identify a relevant open-source dataset from Kaggle representing an organization or context (e.g., retail, healthcare, finance, or other sectors).
2. Analyze the dataset to uncover trends, patterns, and key performance indicators (KPIs).
3. Develop a BI dashboard using Power BI to address the business or operational needs of the chosen context.
4. Document the dashboard with a user manual for potential adoption.
5. Present the findings and Power BI dashboard to the class.

1.3 Project Steps

1.3.1 Dataset Selection

a) **Dataset Selection:** Choose an open-source dataset from Kaggle relevant to an organization or context (e.g., sales data, customer behavior, operational metrics, or public sector data).
b) **Business/Context Understanding:** Research the industry, sector, or context represented by the dataset, including its objectives, stakeholders, and operational processes. Use industry reports or web resources to supplement your understanding.

c) **Justification:** Provide a rationale for selecting the dataset, explaining its relevance to the chosen context.

1.3.2 Data Analysis and Visualization

a) **Data Identification:** Identify key data elements in the Kaggle dataset (e.g., transactional records, demographic data, or performance metrics).

b) **Data Analysis:** Analyze the dataset to uncover trends, patterns, and KPIs relevant to the organization or context's goals.

c) **Dashboard Design:** Develop a BI dashboard using Power BI, focusing on presenting KPIs in a clear, actionable, and visually appealing format.

1.3.3 Power BI Dashboard Development

a) Develop a Power BI dashboard that visualizes key findings and KPIs from the dataset.
b) Ensure the dashboard is user-friendly, with interactive elements and clear visualizations.
c) Design the dashboard with scalability in mind, ensuring it can adapt to evolving data needs.
d) Provide a user manual with clear instructions for using and interpreting the Power BI dashboard.

1.3.4 Presentation

a) Prepare a presentation summarizing the dataset selection, data analysis, and Power BI dashboard.
b) Demonstrate the Power BI dashboard to the class, highlighting key insights and visualization techniques.

1.4 Deliverables

a) Introduction to the project and the hypothetical organization or context based on the Kaggle dataset.
b) Project repository on GitHub, including code, dataset, and documentation.
c) Findings from the business/context understanding phase, including dataset justification.
d) Functional Power BI dashboard with considerations for implementation (scalability, user guides).
e) Project documentation/user manual
f) A PowerPoint presentation summarizing the project.
g) A live demonstration of the Power BI dashboard.

1.6 Evaluation Criteria

- **Quality of Data Analysis:** Depth of analysis and relevance of identified KPIs.
- **Effectiveness of Power BI Dashboard:** Relevance of KPIs, usability, visual appeal, and interactivity.
- **Documentation Quality:** Clarity and completeness of the user manual.
- **Presentation:** Clarity, engagement, and ability to convey key insights and visualization techniques effectively.