Project Deliverables and Solution Requirements:

Intermediate Delivery – 5 points (out of 20):

Your group must deliver the chosen **source datasets** and a **.pdf report** containing the following points:

i. Introduction.

ii. Presentation of Business/Organization (making use of statistical data and descriptive aspects).

iii. Identification of Business Needs and Problem (including the context behind the informational problem that the DW/BI system is going to solve).

iv. Description of the source data and discovery process. **Consider at least 2 external sources of information.**

v. Definition of, at least, **2 perspectives of analysis**. (ex: operational, market, competitive analysis).

vi. A **draft design** of the **dimensional model** (star schema is recommended) and in-depth description of the model. The model must feature:
   a. At least **5 dimensions**, one of which must be a Time / Date dimension.
   b. At least **3 hierarchies**, with **average depth of three levels**.
   c. At least **one Fact table**, featuring at least **1 measure for each perspective**.

The PDF report should have a **maximum of 15 pages** describing the previous points. Exceeding this number **will incur a 0.5 point penalty for each extra page**.

Final Delivery – 15 points (out of 20):

For the final version of the project, each group must deliver:

i. A **Power BI Report (.pbix file)** containing:
   a. All data sources integrated in **a single Dimensional Model** (following the requirements of the intermediate delivery).
   b. All defined **hierarchies correctly configured**, as well as **modelling requirements** (column data types, sort, etc.).
   c. Definition of a **Date dimension**.
   d. At least **one Calculated Column** using DAX.
   e. At least **two DAX Measures** for each perspective of analysis.
   f. At least **two DAX Time Intelligence Measures** (YTD, YoY, Same Period Last Year, etc.).
   g. At least **one KPI visual** for each perspective.
   h. At least **one Advanced visual/scenario** using machine learning and /or predictive analytics.
   i. At least one report page for each perspective of analysis.
   j. Implementation of some sort of **storytelling technique** (tooltips, bookmarks, etc.)

ii. A **Power BI Dashboard** compiling the most important aspects of the report.

iii. Intermediate Delivery **.pdf report,** additionally containing the description of the following points:
   a. **Data Integration, transformation and modelling**, explaining main transformation on data and Power BI tools used (Power Query, Model view, etc.).
   b. **Description of PBI Report** for each perspective - explain the calculated columns, measures, and most important technical aspects of PBI report pages.
   c. **Analysis and Discussion** of the PBI report and data (what does the data say?).
   d. **Critical Assessment** of the project.
   e. **Conclusion**.

The development, implementation and description of **extra work** is recommended and will account for **1 point** of you project final delivery (**0.25 points** each extra work development). We consider extra work any Power BI techniques not covered during class, such as M or DAX functions, new visuals from the market place, etc.

Consider key data visualization best practices when building reports and dashboards.

The PDF report should have a **maximum of 30 pages** describing the previous points. Exceeding this number **will incur a 0.5 point penalty for each extra page**.

Final Notice:

- **failure to deliver on time will incur a 0.5 point penalty for each late day** (for example, 4 late days will accrue a 2.0 point penalty).
- **Failure to comply with the delivery guide** (no proper naming of objects, duplicated or unclear files, improper folder configuration, etc.) will meet with a **once-only 0.5 point penalty**.

Questions and Clarifications

Should it be necessary, we will provide further clarifications and answers to questions from students, updating the respective Moodle project forum as appropriate.

Good luck with your project!