*This template is just a guide for your Big Data and Business Intelligence report.*

Feel free to personalise it, but make sure you include all the relevant sections and appendixes, including the self-assessment form at the end.

**Please use the text below for guidance only.**

**Delete this page and all the blue text below before submitting your report**

1. **Title page** This page will include the title of your report, the module details and your details.

Add the University logo and personalise this page to present your report.

You should use the whole page for your title page.

1. **Executive Summary** This is a condensed version of your report. To help busy people understand what the problem is, the executive summary includes the key findings and your recommendations. It is common practice to include one or two charts from the full report.

**You should work on this section at the end since it summarises your report and it will be based on the results of your analysis**

1. **Body**
   * **Introduction** This will illustrate the questions you are addressing in your report and will give some information about the data collected. This section can be shorter than usual considering that you might be working with sample data. However, try your best to “pretend” that your data comes from a real business and introduce the challenges that the business would like to address through your analysis.

Your introduction must contain the two sub-sections below

1. **Data Source:** What are the sources of the data or where does the data originate from? A description of the dataset selected. This includes the data source, provided as a link, database name, tables name and column name.
2. **BI Requirements\Questions:** The BI Questions will help determine the Key Performance Indicator (KPI) for analytics and visuals. This is intended as a high-level scope of the initial discovery in order to present an understanding of the following:

* What business processes are most critical to measure - KPI?
* What kinds of business questions/problems are you trying to answer/solve?
* Who are the key user groups of this data/report?
* Why is this information needed? (Think about the broader process)

1. **Finding based on analysis and evaluation** This section will cover the key findings based on analysis and evaluation: this is the most important section of your ICA. This section must include:

(1) your Power BI visuals with the description of the type of data\charts you are using and why you are using such metrics. Screenshots and descriptions of each Power BI visuals must be included.

(2) the key findings from the charts must be discussed.

1. **Conclusions and Recommendations** Summarise your report and provide some recommendations based on your findings.

# ICA – Appendix: BI Design

**Your written report must have an appendix with the following sections.**

1. **Data Pre-Processing or Data Cleansing**

* A description of the data pre-processing steps. This will include any steps performed to cleanse your data, such as removing NAs, renaming columns, changing data types, removing errors, removing columns, merging tables etc. This must be provided as a bullet list.
* You should include screenshots of your Power BI project in your presentation to illustrate the final effects of each pre-processing step. Only a screenshot of the results of the preprocessing steps is required. There is no need to add screenshots of the process (you do not need to include the steps of right-clicking on a column or clicking a specific button).

1. **BI Data Modelling via Star Schema - Facts and Dimensions.**

* Using your BI questions, identify a suitable data model from your dataset and present it as Star or Snowflake Schema using Fact and Dimension Tables.
* You should include screenshots of the final Star Schema data model with facts and dimensions from your Power BI project to illustrate the effect of the data modelling process. Only a before and after screenshot must be included. The keys connecting the tables must be highlighted or explained.

1. **DAX and M Language**

* Describe any Measures and/or Calculated Columns added using DAX.
* Explain where M Language has been used in your report and how.

1. **Dashboard**

* Describe the Power BI dashboard (full collection of visuals) and how the content of the Power BI pages is organised.
* A screenshot of all the pages of the Dashboard must be provided.

1. Use the table below to **self-assess** your work. This will help reflect on your work. You must keep this table in your report.

|  |  |  |
| --- | --- | --- |
| **Report Section** | **Description** | **Grade your work from 0 to 100** |
| Report Structure | The report is well-written, and it contains all the relevant sections |  |
| Data Pre-processing and Data Modelling | Many pre-processing steps have been applied. The data model is well-structured |  |
| Dax and M language | Both DAX and M Language have been **extensively** used in the report |  |
| Dashboard Design | The dashboard contains a variety of charts, including advanced ones not covered in the module. |  |
| **Average** |  | **Add below the average of the four cells above:** |