

# CS3DV20 – Data Integration and Visualisation



## Practical 5 - Coursework Revision

# Lecture Objectives

- Review the coursework requirements.
- Provide guidelines of the evidence expected.
- Questions and Answers

# Outline

- Coursework Scenario
- Task 1 – Report
- Task 2 – Dashboards
- Task 3 – Presentation
- Marking Scheme
- Additional Considerations
- Q&A



# Coursework Scenario

- Lupita's Cafe is a coffee chain that has been in the market for the last years 10 years providing the best coffee to their affectionate clients. During this time, they have been successfully using a transactional platform that allows them to record and store the operational information of each store. They have managed to summarize the data per month and region for further analysis.
- The management have been analysing this data in Microsoft Excel, but they realised that the process is time consuming and the results are not totally satisfactory because the level of analysis is limited, and the visualisations are hard to understand. This situation has made the current decision-making process difficult and rigid. The management has decided to explore different alternatives to solve this problem. A senior user has suggested to implement a Business Intelligence solution and for this he has recommended you as an analyst.
- The company objective is to know the benefits of adding a BI solution to their internal portfolio of IT solutions and they have asked you to work on a prototype that shows the value of using an analytic tool. A member of the board, Mr Angel Razo, is sceptic about this proposal as he thinks that the Excel analysis is more than enough and there is no need for an external consultant to help them in the decision-making process.

# Your Task

- You need to provide a prototype that shows, in a first stage, the current situation and then, with a deeper analysis of the data, identify problems and opportunities in order to help them to define short- and long-term strategies.
  - To manage the scepticism of some stakeholders is important to demonstrate that you understand the nature of the business and the characteristics of the data. An initial exploratory analysis is a good tool to demonstrate your knowledge. Some elements that you can provide are (but not limited) number of dimensions, number of indexes, distributions and how this data is relevant to the business.
  - After you have stated the general context you can move to identify the business current state, trends and forecast. Some elements that you can provide (but not limited) are areas where the business is doing well or not so well, the performance of the different locations regarding achieving the goals established (cost, sales, profit, margin, or all), impact of different variables like “marketing”, what are the products more popular and how the variables change in time. Different drilldowns and calculated fields can help to clarify the analysis of the data. Provide some analysis and recommendations.

# Task 1 – Report

- As part of the case, a report that explains the decisions behind your dashboards is required. The report should contain (not limited):
  - Layout design, story telling reasoning, KPIs, assumptions, storyboard
  - General explanation of the elements present in the dashboard and reasoning for using these kind of elements (graph type and colour selection)
  - General findings/analysis, conclusions and lessons learned
  - Good structure (Format, completeness, readable, coherent)
- **Evidence:** Report. The report should be submitted in a PDF format and the max word count is 3000.

## Task 2 – Dashboards

- Create at least 2 dashboards (C and Managerial level) than answers or cover the points previously mentioned. The dashboards should have (not limited):
  - Multiple elements such as graphs, tables, filters etc.
  - Calculated field. Some examples are (not limited):
    - $\text{Margin} = \text{Sales} - \text{COGS}$
    - $\text{Profits} = \text{Sales} - \text{COGS} - \text{Total Expenses}$
- **Evidence:** Dashboards. The dashboards should be submitted in a .twbx format.

## Task 3 – Presentation

- The solution developed needs to be presented in a video format. The video should be an executive “live demo” of the dashboard. The agenda recommended for the video (not limited) is the following:
  - The objective of the project
  - Generals of the data
  - The elements of the dashboards, justification and storytelling behind them
  - Your findings, recommendations, and reasons why the business should consider using BI tools
  - Conclusions and lessons learned
- **Evidence:** Presentation. The presentation video should be provided in a MP4 format and the time range is 5-7 minutes.



# Marking Scheme



Task	Marks Available
Task 1 – Report <ul style="list-style-type: none"> <li>Layout design, story telling reasoning, KPIs, assumptions, storyboard</li> <li>Explanation of the elements present in the dashboard and reasoning</li> <li>Findings/analysis, conclusions and lessons learned</li> <li>Structure</li> </ul>	20
Task 2 - Tableau Dashboards <ul style="list-style-type: none"> <li>Implementation of different elements such as graphs, tables, filters, colour, calculated fields, etc.</li> <li>KPIs correctness of the calculation and implementation following best practices</li> <li>Structure and clarity of the dashboards (best practices, graph suitability and clearness)</li> </ul>	30
Task 3 – Presentation <ul style="list-style-type: none"> <li>Explanation of the project, data and solution provided</li> <li>Findings, analysis and justification</li> <li>Structure</li> </ul>	50
<ul style="list-style-type: none"> <li><b>Total</b></li> </ul>	<b>100</b>




# Marking Scheme




First Class ( $\geq 70\%$ )	Excellent knowledge and understanding of the concepts, evidence of independent research into methods used, and a thorough justification of methods.
Upper Second (60-69%)	Good knowledge of the core concepts, showing understanding, with few mistakes. Good explanations and justification of the methods used.
Lower Second (50-59%)	Demonstrates knowledge of core concepts but with some mistakes. Explanations and justifications of methods used are logical but limited in depth.
Third (40-49%)	Mistakes in application of knowledge, and shows some misunderstandings, explanation and justification of methods used is not clear or logical.
Pass (35-39%)	Gaps in knowledge and many mistakes, little evidence of understanding. Methods used are not explained or justified.
Fail (0-34%)	Large gaps in knowledge and significant mistakes, also showing limited understanding. Lack of logical explanations behind the methods used.




# Additional Considerations

- Review the lectures material and practical
- You can find a lot of additional references for your coursework in the lecture material of week 5 in Bb.




 **Reference Material - Graphs** 




Attached Files:  which\_chart\_or\_graph\_is\_right\_for\_youwp\_1.pdf   (3.142 MB)




 **Reference Material - Colour**  

Attached Files:  Affective Color CHI 2017.pdf   (1.013 MB)




<https://public.tableau.com/en-us/s/blog/2013/10/leveraging-color-improve-your-data-visualization>

 **Reference Material - Dashboard Best Practices**  

Attached Files:  10\_dashboards\_every\_retailer\_should\_use\_final\_0.pdf   (6.248 MB)

 10\_best\_practices\_for\_building\_effective\_dashboardswp.pdf   (2.483 MB)

<https://www.bigbookofdashboards.com/dashboards.html>

 **Reference Material - Calculated Fields Functions**  

[https://help.tableau.com/current/pro/desktop/en-us/functions\\_all\\_alphabetical.htm](https://help.tableau.com/current/pro/desktop/en-us/functions_all_alphabetical.htm)

# Questions

