

EBUS3030 Assignment 1

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Business Intelligence - EBUS3030

Assignment 1

Due: Assignment One TurnItIn drop folder by 12 noon on Thursday 6th September
Paper copy at the beginning of week 6 workshop.

Assignment Outcomes

This assignment requires multiple outputs to be created to exhibit your understanding of business intelligence/data analysis through an example ‘real world’ question that is comparable to what you may be asked of you as you become an IT professional.

Key outcomes to be delivered are: Data Modelling of the provided dataset, Extract Transform Load (ETL) processing undertaken to make the data usable, the Output of your analysis, a Report summarising your findings and a presentation to the class of your work. The presentation is expected to concentrate more on your findings/recommendations as if it were a situation where you are presenting the response to the head sales executive’s question.

Assignment Question

The head Sales Executive of ‘BIA Inc’ comes to you as the lead Business/Data Analyst and asks you to help with a problem they have.

“I’ve heard that people aren’t motivated at the moment and sales aren’t as good as we had hoped. To try and provide incentives for staff, I want to provide an award (and probably associated cash prize) to my best performer for sales from this Office, I need you to tell me who that is?”

“As part of your response I want you to provide the justification as to why the particular sales officer was selected because we need governance over things like this.

.... By the way, we don’t currently have any of this information stored centrally in a database thingy, but I have gotten the Office Business Manager to collate a summary of the recent sales into a rough excel file that can be used as a starting basis. As part of the processes of getting me an answer on my best salesperson, can you also create a database as part of the preparation of the answer. We will then use that as the base of further reporting into the future. We haven’t ever had people with your skills working with us before so I expect there will be lots of questions that will come up as we utilise your expertise.”

Assignment Deliverables

Using the data file provided in Excel and associated notes about the data, (*AssOneData.xlsx* and *Datamart Business Notes*) you are required to complete the following elements as part of the assignment.

- Data Model
 - Using the information made available to you and your understanding of concepts around data mart design in the labs, design a “Sales” DataMart to store the information in a format that will allow the information to be expanded and one that would enable analysis to occur.
- Data Load Process undertaken
 - Provide an overview of the ETL/ELT process completed and what (if any) Quality Assurance processes you undertook as part of this.
 - Ensure you record any assumptions you have made as part of this component and your reasoning behind the assumption.
- Output of Analysis (including SQL used)
 - Once the data loaded and is available and ready for use, you need to create a set of sql scripts to be used to generate the results to the business question provided to you from the Head Sales Executive
 - Provide a snapshot of the raw results of your analysis that provides the basis of your recommendations
 - Ensure you record any assumptions you have made as part of this analysis component and your reasoning behind the assumption.

- Executive Summary in response to business question.
 - Provide a short Executive brief/summary that presents a clear concise response back to the Sales Executive's question about possible incentives to the best salesperson. This should clearly detail the recommendation and any key assumptions/restrictions the executive need to be aware of.
- Team Presentation
 - All members of the team need to participate in a (10-15 minute) presentation to be delivered as part of the lab in Week 6. This needs to be presented in a format as if you were summoned to the board room with the Head Sales Executive to provide a formal response to their question.
 - Please be aware that the Head Sales Executive may ask any of the team members questions as you present your analysis.

NB: As part of your responses, you should also specifically include any assumptions you have made throughout the process.

Breakup of assignment Marks (total course mark for assignment = Assignment Part A submission (20% + Presentation One (5%) = 25%).

Assignment Component	Percentage Allocation
Data Model	30%
ETL	10%
Base Analysis	30%
Executive Summary	10%
Team Presentation	20%
Assumptions	100%

Key Documents Required & Format

You are required to upload all files in a single zip file (including any presentation items for the team delivery within the lab) via blackboard to the Assignment One TurnItIn drop folder by 12 noon on Thursday 6th September. You will also be required to submit a paper copy of your deliverables at the workshop (make sure this is printed well before the workshop).

NB: Only 1 load per team only but it should contain all of the deliverable items in a .zip file.

1 Datamart Business Notes

The following business rules were provided to be used in the context of this assignment:

- * At BIA all customers interacts are in an online environment, there are no orders outside of electronic.
- * Returning customers can provide POI information via the web interface and look up their record and that will flow with the sale.
- * The sales associate can complete the order form/sale for the client.
- * Each sale will have a receipt number/id.
- * A receipt can have many line items.
- * Each line item can only be for a single item, but the customer can purchase multiples of the same item.
- * Where a customer has multiple line items, any sale with more than 5 row items (containing at least 5 different items) is provided a 15% discount.
- * The system automatically handles the total for the sale by looking up the item, then multiplying the costs per item by number purchased, and then should store this final field total as a record in the system (but should also be able to see clearly sales that were provided a discount.
- * Item prices can change at any point, and the price the customer pays is the amount listed for the item on the sale date. We need to keep a record of all item prices historically.
- * Only 1 BIA sales assistant can be attributed to any receipt.

2 Data Model

3 Data Load Process (ETL/ELT)

3.1 Quality Assurance Processes

3.2 Assumptions and Reasoning

4 Base Analysis

4.1 Raw Results

5 Executive Summary

6 Assumptions

References

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7 Appendix