Data Modelling Techniques for Data Warehouses

Introduction:

A data warehouse provides the base for powerful data analysis techniques that are available today such as data mining and multidimensional analysis, as well as the more traditional query and reporting. Making use of these techniques along with data warehousing can result in easier access to the information you need for more Informed decision making. The question most asked now is, how do I build a data warehouse?

In this assignment you are expected to research and give a detailed coverage of the topic **data modeling techniques for data warehousing**, within the context of the overall data warehouse development process, including the steps required before and after the actual modeling step, is discussed.

Present the modeling techniques in an evolutionary way through a gradual, but well-managed, expansion of the content of the actual data model. Also give other important aspects of data warehousing that affect, or are affected by, the modeling processes. These should include architecting the warehouse and populating the data warehouse. What are the guidelines for selecting a data modeling tool that is appropriate for data warehousing?

Outline:

Please follow the outline provided below:

1. Evolution of the concept of data warehousing
2. Data marts and how they differ from data warehouses.
3. Data analysis in data warehousing
4. Data Warehousing Architecture and Implementation Choices
5. Approaches and techniques suitable for architecting the data in the data warehouse
6. Data Modeling for a Data Warehouse
7. Process model for data warehouse modeling
8. Core data modeling techniques for the data warehouse development process
9. Overview of the Functions that a data modeling tool must support for modeling the data warehouse
10. Populating the data warehouse or data mart

Content	Weight
Evolution of the concept of data warehousing	**5 marks**
Data marts and how they differ from data warehouses	**5 marks**
Data analysis in data warehousing	**5 marks**
Data Warehousing Architecture and Implementation Choices	**5 marks**
Approaches and techniques suitable for architecting the data in the data warehouse	**10 marks**
Data Modeling for a Data Warehouse	**15 marks**
Process model for data warehouse modeling	**15 marks**
Core data modeling techniques for the data warehouse development process	**20 marks**
Overview of the Functions that a data modeling tool must support for modeling the data warehouse	**10 marks**
Populating the data warehouse or data mart	**10 marks**
Total	**100 marks**

Additional Information

- The front page must contain your full name, course name, assignment number and date.
- All work must be done on your own.
- Plagiarism is a serious offence. Belgium Campus uses software that can **scan for plagiarism** and a student caught doing this will get 0 for this assignment.
- Include a bibliography or reference list at the end of the assignment.
- Submit your assignment in pdf format on Teams before the due date.
- No mark can be awarded if an assignment was not uploaded via Teams.
- Late assignments will not be accepted; missing the deadline is an automatic 0.