Fariz khanzada

Task 2

DATA MARTS:

A data mart is a subset of an organization’s data warehouse that is designed to serve a specific business unit or department. It is a smaller, more focused version of a data warehouse that is created to meet the specific needs of a particular group of users.

Data marts are typically created by extracting data from the larger data warehouse and reorganizing it to better suit the needs of a particular department or business unit. This can include selecting only the relevant data, aggregating it in a way that is useful to the users, and summarizing it to provide insights into specific areas of the business.

Data marts are often used in situations where a large, centralized data warehouse is too complex or too expensive to manage, or where different business units have unique reporting requirements that cannot be met by a single, centralized data warehouse. By creating separate data marts, organizations can provide business units with faster access to the data they need, without having to navigate the complexity of a larger data warehouse.

DATA LAKES:

A data lakehouse is a modern data architecture that combines the best features of a data warehouse and a data lake. It aims to provide the benefits of both centralized and decentralized data storage and processing to meet the needs of modern data analytics.

DATA MESH:

Data mesh is a modern data architecture approach that aims to improve data management and governance by decentralizing data ownership and distribution. It is a way to organize and manage data in a more flexible and scalable way that aligns with modern business needs and development practices.

DWH VS DATA LAKE:

Data Warehouse is designed for structured data that is ready for analysis, while a Data Lake is designed for raw and unstructured data that requires exploration and analysis. Both systems have their own strengths and weaknesses and are used for different purposes in data management and analysis.

OLTP VS OLAP:

OLTP systems are designed for day-to-day transactional operations, while OLAP systems are designed for data analysis and reporting. Both types of systems have their own strengths and weaknesses and are used for different purposes in data management and analysis.