

ByteWise Fellowship – Week 1

Module: DE Basics

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1. What is Data Mart?

Data mart is an isolated part or a subset of a larger enterprise data Warehouse which usually uses a data warehouse as its data source and contains clean data. It usually deals with one specific department or part of businesses. It also Stores History which helps in trend analysis.

Data Marts can have three types:

- **Dependent Data Mart:** Derived Data from Enterprise Warehouse
- **Independent Data Mart:** Derived Data from other Sources
- **Hybrid Data Mart:** Derived Data from Other sources and Data warehouse

2. What is Data Lakehouse?

Data Lakehouse is new Big data architecture that combines the characteristics of both data lake and data Warehouse as it combines Flexible storage of unstructured data from Data lake and management features and tools from Data Warehouse. It can deal with structured, semi-structured and unstructured data with analytical properties of Data Warehouse.

3. What is Data Mesh?

Data mesh is not a tool or a technology but an approach or strategy that organises data to specific business domains.

The idea is to make data more accessible and available to business users by directly connecting Data owners, Data producers and data consumers.

4. Data Warehouse Vs Data Lake

Data WareHouse	Data Lake
<ul style="list-style-type: none">• Structured Data• Data has been processed prior to loading• Schema Design is a must prior to loading• Mostly used by data analyst• ETL process is used	<ul style="list-style-type: none">• Every type of data can be handled• Data is loaded in its Raw format• No Schema Before Loading• Data Scientists, Data developers and business analyst mostly uses curated data for different purposes• ELT process is used

5. OLAP vs OLTP

OLAP	OLTP
<ul style="list-style-type: none">• Online Analytical Processing• Type of system that is designed to handle Information processes for analysis of large volumes of historical data.• Helps in decision making	<ul style="list-style-type: none">• Online Transaction Processing• Type of system that is designed to handle transactional processes.• Help In operational activities