**17/7/2025**

**Introduction to data warehouse**

Data Warehouse is a collection of data designed to support management decision making by presenting a coherent picture of business condition at a single point of time.

It is a subject oriented, integrated, time variant, non-volatile collection of data in support of management system

It is a database used for data reporting and analysis

**Purpose of data warehouse**

The purpose is to store and manage historical data from various sources, enabling business users to perform reporting, analysis, and decision-making efficiently.

**Operational data source**

The data that arrived at the data warehouse are first passed to operational data store. It acts as a staging area for collecting and lightly processing operational data.

**OLTP Vs Data Warehouse** **Application**

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| --- | --- |
| OLTP | Data Warehouse Appilcation |
| Online Transaction Processing | Online Analytical Processing |
| It is technique that is used for detailed day to day transaction data which keep chaining on everyday | It is technique that gathers or collect data from different sources into central repository |
| Access the data in the form of operations like – insert, delete and update | Read (mostly select queries) |
| It holds current data | It stores large amount of data or historical data |
| It is application-oriented | It is subject-oriented |
| It used for running the business | It used for running the business |
| It is designed for business transaction process | It is designed for decision making process |

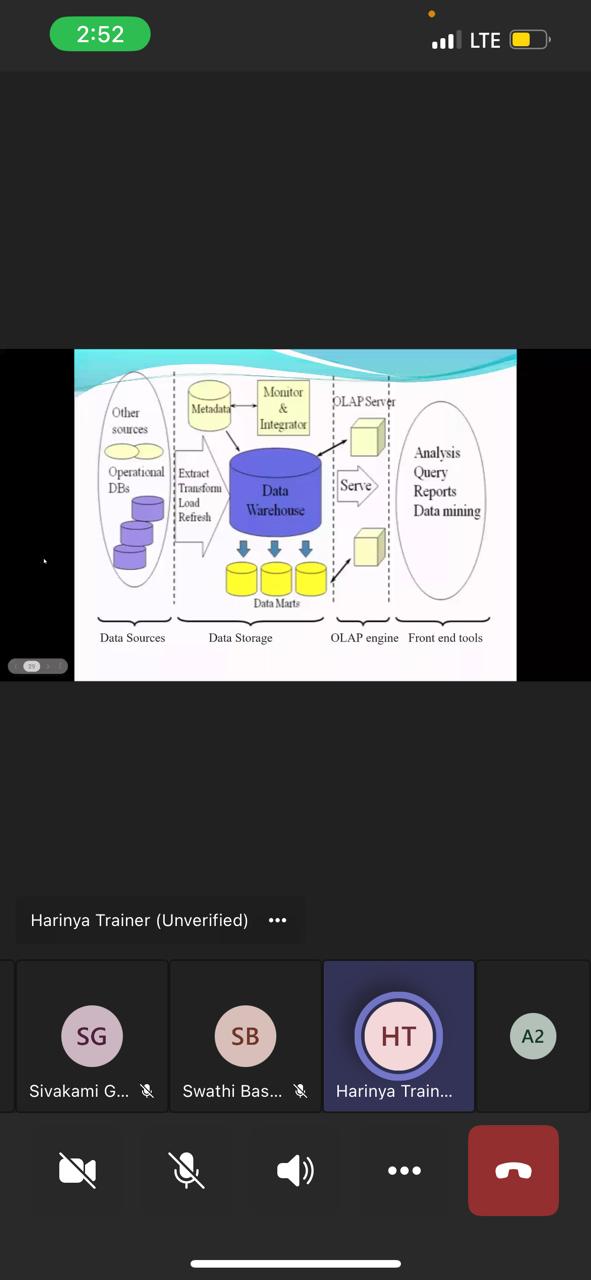
**Data Marts**

The Data Marts is a subset of the data warehouse that is usually oriented to a specific business team. The data in the data warehouse is stored in the form of Data Marts.

**Data Marts Vs Data warehouse**

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| --- | --- |
| Data Marts | Data warehouse |
| While it is a decentralised system | Data warehouse is a Centralised system |
| While to build a mart is easy | To built a warehouse is difficult |
| While it is the project-oriented in nature | Data Warehouse is the data-oriented in nature |
| It generally stores data from a data warehouse | It collects data from various data sources |
| While it is a bottom-up model | Data warehouse is top-down model |

**Data warehouse life cycle**

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