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Data warehousing

• Data warehousing

An efficient way of analysing the data.

Features of D.W

D.W is a subject oriented, integrated, time-variant, non-volatile collection of

data in support of management system
W H I N M O N

* Subject-oriented

⇒ Data are org. acc. to the subject instead of application

⇒ * mainly focuses on modeling & analysis of data for decision-making.

• Integrated

Constructed by integrating multiple heterogeneous data sources like relational databases, flat files, on-line transaction records.

• Ensures consistency in naming convention, encoding structures, attributes measures, etc. among different data sources.

• Time Variant

The time horizon for the data warehouse is significantly longer than that of operational system i.e. provide info. from a historical perspective (eg last 5-10 years)

Non-volatile

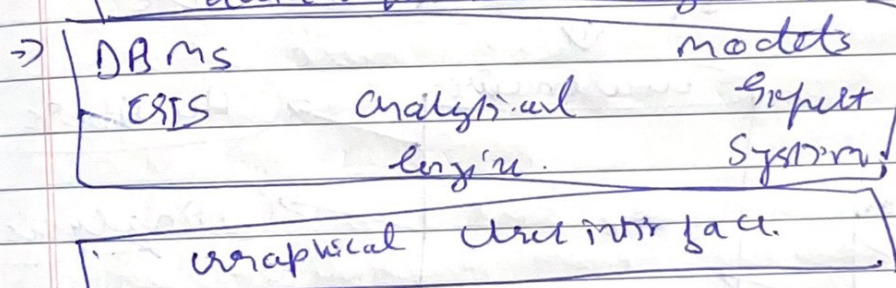
- No updates allowed.
- Once the data entered into the data warehouse they are never removed.

- Need for DSS (Decision Support System)

company needs information system for
our's company particular growth.

Hence the Business needs managers with great decision making.

- ⇒ DSS - Helps us to answer and resolve everyday business questions.
[data acquisition layer]



- It creates By compiling useful information from a conc. of Raw data, Accⁿ, Personal
- stru & Un stru comp of DSS Knowledge & Business model

DSS architectural styles cond by GBRS

every app uses. \rightarrow \cdot OHP (online Transaction Processing)

- ODAFC online Analytical Processing) ~~unably~~ data in arrears

• OLAP

Online Analytical Processing is an approach to answer multi-Dimensional analytical queries which also encompasses Relational Reporting & data mining.

An OLAP cube is an array of data that is understood in terms of its one or more dimensions which enables the user to gain insights into their data in a fast, interactive, easy-to-use manner.

→ The data in the data warehouses is arranged in a form of Hierarchical groups often called dimensions & into Fact Tables & aggregate Facts.

★ OLAP data is typically stored in Star Schema.

which is a combination of dimensions & Fact Tables.

• OLAP Server

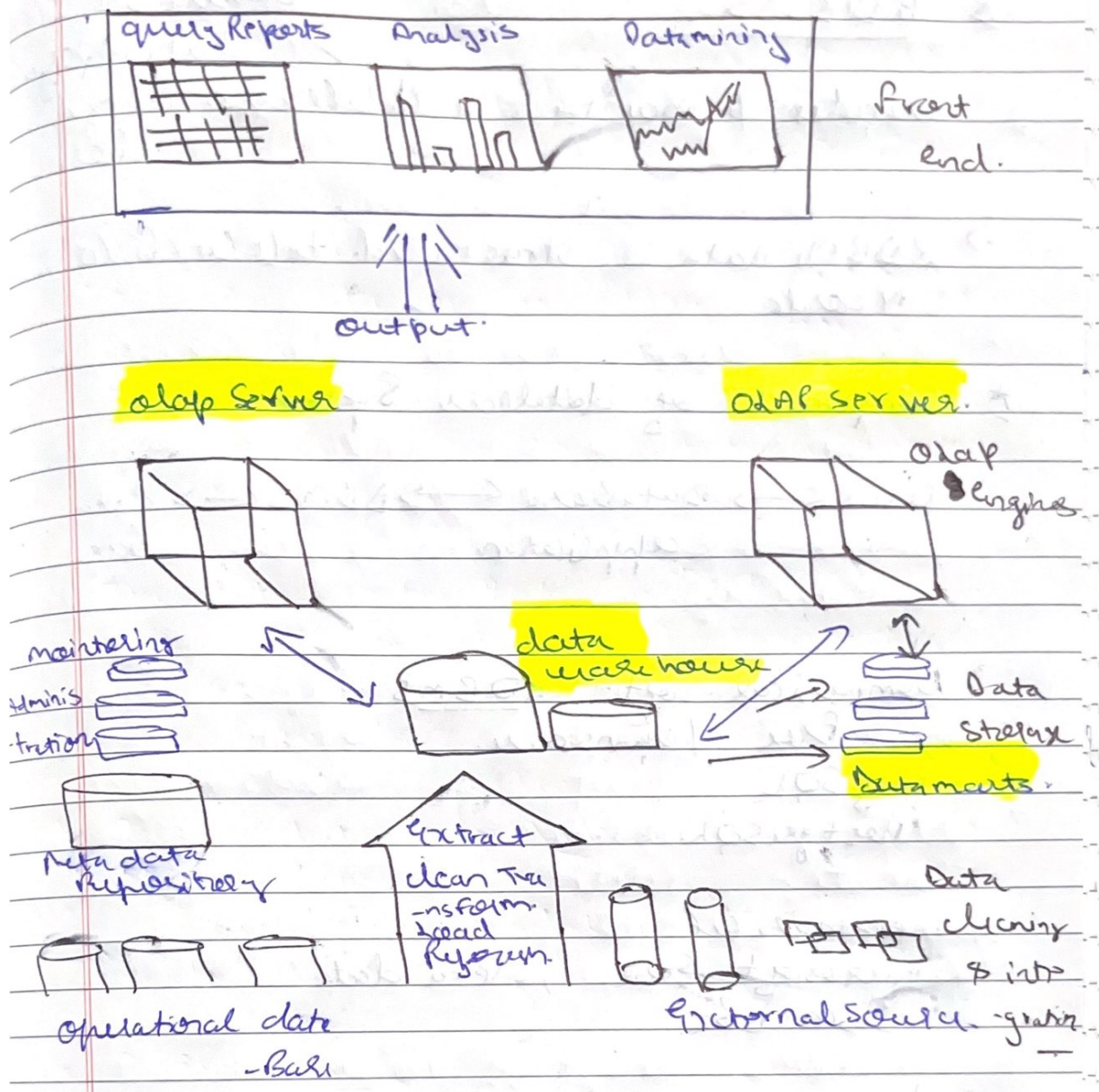
OLAP server receives data from the data warehouses by which it represents data in a user understandable format which usually supply analytically functionality for the OSS system.

OLAP server generally perform data analysis in 2 forms:-

ROLAP (Relational OLAP)

MOLAP (Multi-dimensional OLAP)

OLAP Architecture



* RDBMS

creates & maintains a database.

where store
data in organized
form

→ RDBM data is structured. tables, field & records

* Components of database System

User ↔ Database application ↔ DBMS ↔ data base

Commercial soft. RDBMS

→ Free / open source

MySQL

PostgreSQL

→ Commercial

microsoft SQL, Tera data

IBM DB2

Low - medium level server ⇒ Oracle is the leader in the market share.

Different Type of Database

Relational d.B

operational " "

Database warehouse

distributed d.B

end-user " "

why mysql

MySQL

→ MySQL is Relational database management system

→ It gives multi-user access

→ 100 million copies is downloaded.

• Uses of MySQL

Higher TPTT
Transfer Protocol
↓

* LAMP (Linux, O.S) Apache HTTP server,
MySQL (O.B Software) and PHP, Perl or
Python

* Software stack

• Data storage & data login → Facebook

• Features of MySQL

→ MySQL is written in C/C++
& its SQL parser is written in
Yacc C/C++ another compiler comp

→ MySQL runs only just under 1MB of RAM.

→ MySQL is portable.

→ MySQL default port is 3306

→ MySQL is great for database enabled
website while Oracle is for enterprises.

• Storage engine

(ACID Property)

MySQL is S.E.

Software.

A S.E is a Storage module that a DBMS
uses to create, read update data from a
database.