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Q 1

Three tier data warehouse architecture

(1) Bottom tier: (a) The bottom tier of the architecture is the data warehouse database server.

(b) It is the relational database system

(c) Back-end tools and utilities perform the extract clean load and report fun.

2. Middle tier: In the middle tier we have the OLAP server that can be implemented in either of the following ways: by Relational OLAP (ROLAP) and by multidimensional OLAP (MOLAP) model

3. Top tier:

(a) Top tier is the front end client layer

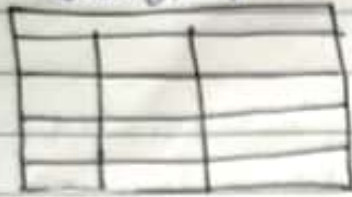
(b) This layer holds the query tools and supporting tools analysis tools and data mining.

[P.T.O]

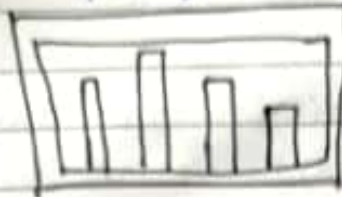
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Q-2 I

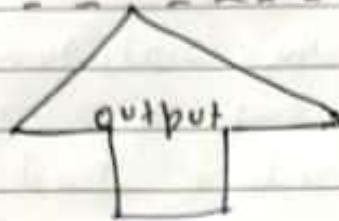
Query/Report



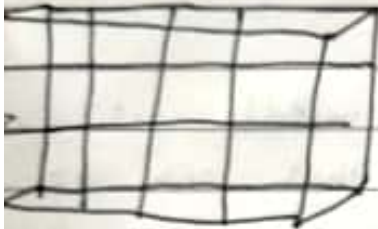
Analysis



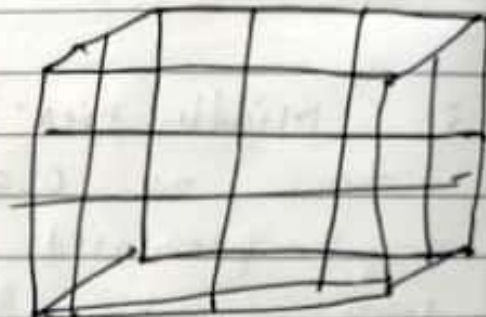
Data mining



olap server



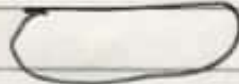
olap server.



monitoring



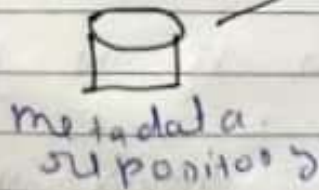
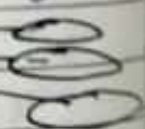
Administration



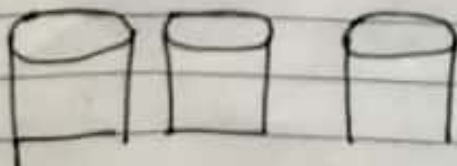
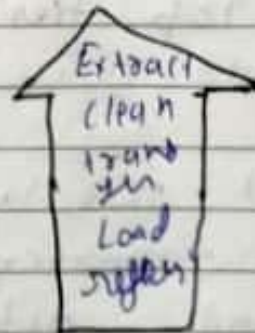
data warehouse



Data m...



metadata repository



operational database



External database

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0-1

ETL Process. ⇒ (i) ETL process stands for extract transform load and it is a process of how data is loaded from the source system of the data warehouse.

1. Extract = relevant data

2. Transform ⇒ data to data warehouse format.

3. Load ⇒ (i) Build keys (ii) - cleaning of data.

3. Load ⇒ (i) Load data into data warehouse.

(ii) Build aggregates.

Data warehouse ⇒ (i) A data warehouse is a collection of corporate information and data, derived from operational system external data.

(ii) A data warehouse is designed to support business decision by allowing data

consolidation analysis and reporting at different aggregate levels.