

Name :-> Maqsood Ali Shah

ID No :-> 6946

Paper :-> Data Warehousing

Q1 ; Differentiate between OLTP VS OLAP ?

Ans : OLTP and OLAP both are the online processing system . OLTP is a transaction system while OLAP is an analytical processing system. OLTP is a system that manages transaction oriented applications on the internet for example, ATM. OLAP is an online system that reports to multidimensional analytical queries like financial reporting forecasting etc.

OLTP

OLAP

(1) It is an online transactional system and manages database modification.

(1) it is an online data retrieving and data analysis System.

(2) insert , update, delete information from the database.

(2) Extract data for analyzing that helps in Decision making.

(3)OLTP and its transactions are the original source of data.

(3) Different OLTPs database becomes the Source of data for OLAP.

(4) OLTP has short transaction.

(4) OLAP has long transaction.

(5) OLTP has simpler queries.

(5) OLAP has complex queries.

Q2 :-> Differentiate between Expert system and DSS?

ANS :-> A Expert system is a problem solving computer program that achieves good performance in a specialized problem domain that is considered difficult and requires specialized knowledge and skill.

A decision support system is an interactive system that helps decision makers utilize data and models to solve unstructured or semi-structured problem.

EXPERT SYSTEM

- (1) Expert system is a mathematics of computing.
- (2) Expert system is a Discrete mathematics.
- (3) An expert system is a computer system that decision making ability of a human Expert.

DECISION SUPPORT SYSTEM

- (1) DSS are the applied computing.
- (2) DSS are the operation research.
- (3) A DSS is an information system that Supports business or organizational decision making activities.

Q3 :- what is relation between datamining and data warehousing ?

ANS Datamining

- (1) A data mining is the process of analyzing data patterns.
- (2) Data is analyzed regularly.
- (3) Data mining is the use of pattern recognition logic to identify patterns.
- (4) Data mining is carried by business users with the help of engineers.
- (5) Data mining is considered as a process of extracting data from large data sets.

Datawarehousing

- (1) a data warehousing is data base system Which is designed for analytical analysis instead of transaction work.
- (2) Data is stored.
- (3) Data warehousing is the process of Extracting and storing data to allow easier reporting.
- (4) Data warehousing is solely carried out by Engineers.
- (5) Data warehousing is the pooling all relevant Data together.

Q4 ;> Explain ETL process?

ANS > ETL is a process in data warehousing and it stands for Extract Transform Load. It is a process in which an ETL tool extracts the data from various data source system, transforms it in the staging area and then finally , loads it into the data warehouse system.

ETL covers a process of how the data are loaded from the source system to the data warehouse. At its most basic the ETL process encompasses data extraction , transformation, and loading. While the abbreviation implies a neat,

There are three steps of ETL process,

- (1) Extraction
- (2) Transformation
- (3) Loading.

The process of extracting data from source system and bringing it into the data warehouse is commonly called ETL.

After data is extracted it has to be physically transported to the target system or to an intermediate system for further processing.

The final step in the ETL process involves loading the transformed data into the destination target . this target may be a database or data warehouse.

ETL process can also use the pipelining concept i.e as soon as some data is extracted, it can be transformed and during that period some new data can be extracted. And while the transformed data is being loaded into the data warehouse, the already extracted data can be transformed.