Assignment-2

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Q.1-What is RDBMS?

Ans - RDBMS stands for Relational Database Management System. It is a type of database management system that organizes data into tables, which are structured collections of records.
Popular RDBMS system are-

- MYSQL
- Postgre SQL
- Oracle database
- Microsoft SQL Server

Q.2-What is Data warehousing?

Ans- Data warehousing is a process of collecting, storing, managing, and analyzing data from various sources within an organization to support business decision-making.
It involves the use of a data warehouse, which is a centralized repository for storing large volumes of structured and sometimes unstructured data.

Features of Data warehousing-

- Subject-oriented
- Integrated
- Time-variant
- Non-volatile

Q.3- OLTP and OLAP

Ans- OLTP stands for Online Transaction Processing. It refers to a class of systems and applications designed to efficiently manage and process transactions in real-time typically for data entry and retrieval transaction processing.

Benefits of OLTP-

- Simple and efficient
- Data integrity
- Fast query processing

OLAP stands for Online Analytical Processing. It refers to a category of computer systems and applications designed to facilitate complex and advanced analysis of multidimensional data for decision support and business intelligence purposes.
Data is organized into cubes, which represent multidimensional data sets. Each cell in the cube contains a data value, and users can analyze data by slicing, dicing, and pivoting through various dimensions.

Types of OLAP System-

- ROLAP(Relational OLAP)
- MOLAP(Multidimensional OLAP)

- ROLAP(Relational OLAP)- It uses relational databases to store and manage multidimensional data. In ROLAP data is organised into tables and normalized structures.

- MOLAP(Multi-dimensional OLAP)- It stores data in a multidimensional database, data is organized in cubes or hypercubes with dimensions and measures.

Q.4- SQL and its features

Ans- SQL is a domain-specific language used for managing and manipulating relational databases. It provides a standardized way to interact with relational database management systems (RDBMS) and is widely used for tasks such as querying, updating, and managing data.
MySQL is RDBMS which runs a server, providing multi-user access to a number of databases.

Features of MySQL-

- MySQL is an open-source relational database management system.
- It has a vibrant and active community that contributes to its development and provides support through forums.
- It supports various operating systems like Windows, Linux, macOS, etc.
- It is scalable and portable.
- MySQL is well-suited for database-enabled websites.