WORKSHEET 1 SQL

Which of the following is/are DDL commands in SQL?

Ans.- (A) Create and (D) ALTER

1. Which of the following is/are DML commands in SQL?

Ans- (A) Update and (B) Delete

2. Full form of SQL is:

Ans.- (B) Structured Query Language

3. Full form of DDL is:

Ans.- (B) Data Definition Language

4. DML is:

Ans.- (A) Data Manipulation Language

5. Which of the following statements can be used to create a table with column B int type and C floattype?

Ans.- (A) Data Manipulation Language

6. Which of the following statements can be used to add a column D (float type) to the table A created above?

Ans.- (C) Create Table A (B int,C float)

7. Which of the following statements can be used to drop the column added in the above question?

Ans.- (B) Alter Table A ADD COLUMN D float

8. Which of the following statements can be used to change the data type (from float to int) of the column Dof table A created in above questions?

Ans.- (B) Alter Table A Drop Column D

9. Suppose we want to make Column B of Table A as primary key of the table. By which of the following statements we can do it?

Ans.- (B) Alter Table A Alter Column D int

10. What is data-warehouse?

Ans.- A data warehouse is a central repository of information that can be analyzed to make more informed decisions. Data flows into a data warehouse from transactional systems, relational databases, and other sources, typically on a regular cadence. Business analysts, data engineers, data scientists, and decision makers access the data through business intelligence (BI) tools, SQL clients, and other analytics applications.

Data and analytics have become indispensable to businesses to stay competitive. Business users rely on reports, dashboards, and analytics tools to extract insights from their data, monitor business performance, and support decision making. Data warehouses power these reports, dashboards, and analytics tools by storing data efficiently to minimize the input and output (I/O) of data and deliver query results quickly to hundreds and thousands of users concurrently.

11. What is the difference between OLTP VS OLAP?

- Ans.- Online Analytical Processing (OLAP) is a category of software tools that analyze data stored in a database, whereas Online transaction processing (OLTP) supports transaction-oriented applications in a 3-tier architecture.
- OLAP creates a single platform for all types of business analysis needs which includes planning, budgeting, forecasting, and analysis, while OLTP is useful for administering day-to-day transactions of an organization.
- OLAP is characterized by a large volume of data, while OLTP is characterized by large numbers of short online transactions.
- In OLAP, a data warehouse is created uniquely so that it can integrate different data sources for building a consolidated database, whereas OLTP uses traditional DBMS

12. What are the various characteristics of data-warehouse?

Ans.- Data warehouses are characterized by being:

Subject-oriented: A data warehouse typically provides information on a topic (such as a sales inventory or supply chain) rather than company operations.

Time-variant: Time variant keys (e.g., for the date, month, time) are typically present.

Integrated: A data warehouse combines data from various sources. These may include a cloud, relational databases, flat files, structured and semi-structured data, metadata, and master data. The sources are combined in a manner that's consistent, relatable, and ideally certifiable, providing a business with confidence in the data's quality.

Persistent and non-volatile: Prior data isn't deleted when new data is added. Historical data is preserved for comparisons, trends, and analytics.

Data warehouse components are engineered for speed. When results are accessible quickly, they can be analyzed on the fly.

13. What is Star-Schema?

Ans.- A star schema is a multi-dimensional data model used to organize data in a database so that it is easy to understand and analyze. Star schemas can be applied to data warehouses,

databases, data marts, and other tools. The star schema design is optimized for querying large data sets.

Introduced by Ralph Kimball in the 1990s, star schemas are efficient at storing data, maintaining history, and updating data by reducing the duplication of repetitive business definitions, making it fast to aggregate and filter data in the data warehouse.

14. What do you mean by SETL?

Ans.- SETL (SET Language) is a very high-level programming language based on the mathematical theory of sets. It was originally developed by (Jack) Jacob T. Schwartz at the New York University (NYU) Courant Institute of Mathematical Sciences in the late 1960s.