

## **ASSIGNMENT 1- SQL**

1. D) Alter
2. B) Delete
3. B) Structured Query Language
4. B) Data Definition Language
5. A) Data Manipulation Language
6. B) Create A (b int, C float)
7. B) Alter Table A ADD COLUMN D float
8. A) Table A Drop D
9. B) Alter Table A Alter Column D int
10. B) Alter table (B primary key)
11. 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.
12. OLTP (Online Transaction Processing) is a system that manages and processes data from transaction-oriented applications, which facilitate and manage transaction-oriented applications, generally for data entry and retrieval transaction processing. OLTP systems are used to manage large amounts of data and transactions. OLAP (Online Analytical Processing) is a system that is used to analyze and process data from a variety of sources, such as data warehouses and data marts. OLAP systems are used to analyze large amounts of data and provide insights and trends in the data.
13. 4 Key Characteristics of Data Warehouse are :
  1. Subject-oriented: A data warehouse typically provides information on a topic (such as a sales inventory or supply chain) rather than company operations.
  2. Time-variant: Time variant keys (e.g., for the date, month, time) are typically present.
  3. 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.
  4. Persistent and non-volatile: Prior data isn't deleted when new data is added. Historical data is preserved for comparisons, trends, and analytics.
14. A star schema is a database organizational structure optimized for use in a data warehouse or business intelligence that uses a single large fact table to store transactional or measured data, and one or more smaller dimensional tables that store attributes about the data.
15. SETL is a very-high level language with dynamic typing and dynamic data structures, based on the mathematical notion of set. It was designed in the very early 1970s by J. Schwartz – a renown mathematician, with the help of R. Dewar and others. The language introduced a fundamentally new paradigm in programming in which sets, ordered sets and maps are the principal data structures and the programs are expressed in terms of set constructors, set operations, and predicates on sets. The very name SETL is an abbreviation of 'SET Language'.

The set-oriented paradigm is based on the assumption that sets are as essential constructions in programming as they are in mathematics. SETL not only has extensive provision for programming with sets but also takes advantage of the syntactic tradition of abstract mathematics, the language's notation being very close to the one of set theory, thus making it possible to express many algorithms in a familiar, natural, and concise manner.