# WORKSHEET 1 SQL

**Q1 and Q2 have one or more correct answer. Choose all the correct option to answer your question.**

1. Which of the following is/are DDL commands in SQL?
   A) Create B) Update
   C) Delete D) ALTER
2. Which of the following is/are DML commands in SQL?
   A) Update B) Delete
   C) Select D) Drop

**Q3 to Q10 have only one correct answer. Choose the correct option to answer your question.**

3. Full form of SQL is:
   A) Strut querying language B) Structured Query Language
   C) Simple Query Language D) None of them
4. Full form of DDL is:
   A) Descriptive Designed Language B) Data Definition Language
   C) Data Descriptive Language D) None of the above.
5. DML is:
   A) Data Manipulation Language B) Data Management Language
   C) Data Modeling Language D) None of these
6. Which of the following statements can be used to create a table with column B int type and C float type?
   A) Table A (B int, C float) B) Create A (b int, C float)
   C) Create Table A (B int,C float) D) All of them
7. Which of the following statements can be used to add a column D (float type) to the table A created above?
   A) Table A ( D float) B) Alter Table A ADD COLUMN D float
   C) Table A( B int, C float, D float) D) None of them
8. Which of the following statements can be used to drop the column added in the above question?
   A) Table A Drop D B) Alter Table A Drop Column D
   C) Delete D from A D) None of them
9. 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?
   A) Table A (D float int) B) Alter Table A Alter Column D int
   C) Alter Table A D float int D) Alter table A Column D float to int
10. 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?
    A) Alter Table A Add Constraint Primary Key B B) Alter table (B primary key)
    C) Alter Table A Add Primary key B D) None of them

**Q11 to Q15 are subjective answer type questions, Answer them briefly.**

11. **What is data-warehouse?**

    **Ans :-** Data warehouses serve as a central repository for storing and analyzing information to make better informed decisions. An organization's data warehouse receives data from a variety of sources, typically on a regular basis, including transactional systems, relational databases, and other sources.

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12. **What is the difference between OLTP VS OLAP?**

**Ans :-**

| Difference between OLTP and OLAP | | |
|---|---|---|
| **Parameters** | **OLTP** | **OLAP** |
| **Process** | It is an online transactional system. It manages database modification. | OLAP is an online analysis and data retrieving process. |
| **Characteristic** | It is characterized by large numbers of short online transactions. | It is characterized by a large volume of data. |
| **Functionality** | OLTP is an online database modifying system. | OLAP is an online database query management system. |
| **Method** | OLTP uses traditional DBMS. | OLAP uses the data warehouse. |
| **Query** | Insert, Update, and Delete information from the database. | Mostly select operations |
| **Table** | Tables in OLTP database are normalized. | Tables in OLAP database are not normalized. |
| **Source** | OLTP and its transactions are the sources of data. | Different OLTP databases become the source of data fo |
| **Data Integrity** | OLTP database must maintain data integrity constraint. | OLAP database does not get frequently modified. Henc an issue. |
| **Response time** | It's response time is in millisecond. | Response time in seconds to minutes. |
| **Data quality** | The data in the OLTP database is always detailed and organized. | The data in OLAP process might not be organized. |
| **Usefulness** | It helps to control and run fundamental business tasks. | It helps with planning, problem-solving, and decision su |
| **Operation** | Allow read/write operations. | Only read and rarely write. |
| **Audience** | It is a market orientated process. | It is a customer orientated process. |
| **Query Type** | Queries in this process are standardized and simple. | Complex queries involving aggregations. |
| **Back-up** | Complete backup of the data combined with incremental backups. | OLAP only need a backup from time to time. Backup is r compared to OLTP |
| **Design** | DB design is application oriented. Example: Database design changes with industry like Retail, Airline, Banking, etc. | DB design is subject oriented. Example: Database desig subjects like sales, marketing, purchasing, etc. |
| **User type** | It is used by Data critical users like clerk, DBA & Data Base professionals. | Used by Data knowledge users like workers, managers, |
| **Purpose** | Designed for real time business operations. | Designed for analysis of business measures by category |
| **Performance metric** | Transaction throughput is the performance metric | Query throughput is the performance metric. |
| **Number of users** | This kind of Database users allows thousands of users. | This kind of Database allows only hundreds of users. |
| **Productivity** | It helps to Increase user's self-service and productivity | Help to Increase productivity of the business analysts. |
| **Challenge** | Data Warehouses historically have been a development project which may prove costly to build. | An OLAP cube is not an open SQL server data warehous knowledge and experience is essential to manage the C |
| **Process** | It provides fast result for daily used data. | It ensures that response to the query is quicker consiste |
| **Characteristic** | It is easy to create and maintain. | It lets the user create a view with the help of a spreadsl |
| **Style** | OLTP is designed to have fast response time, low data redundancy and is normalized. | A data warehouse is created uniquely so that it can inte sources for building a consolidated database |

13. **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.

14. **What is Star-Schema??**

**Ans** :- What is a star schema

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. It is called a star schema because the fact table sits at the center of the logical diagram, and the small dimensional tables branch off to form the points of the star.

15. **What do you mean by SETL?**

**Ans : -** (SET Theory Language) A programming language developed by Jack Schwartz in the early 1970s. It is based on set theory and used for mathematical and telecommunications applications.