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
   Ans: A) Create D) ALTER

2. Which of the following is/are DML commands in SQL?
   A) Update
   B) Delete
   C) Select
   D) Drop
   Ans: A) Update B) Delete

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
   Ans: B) Structured Query Language

4. Full form of DDL is:
   A) Descriptive Designed Language
   B) Data Definition Language
   C) Data Descriptive Language
   D) None of the above.
   Ans: B) Data Definition Language

5. DML is:
   A) Data Manipulation Language
   B) Data Management Language
   C) Data Modeling Language
   D) None of these
   Ans: A) Data Manipulation Language

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
   Ans: C) Create Table A (B int,C float)

7. Which of the following statements can be used to add a column D (float type) to the table A createdabove?
   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
   Ans: B) Alter Table A ADD COLUMN D float

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
   Ans: B) Alter Table A Drop Column D

9. Which of the following statements can be used to change the data type (from float to int) of the columnD of 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

Ans: B) Alter Table A Alter Column D int

10. Suppose we want to make Column B of Table A as primary key of the table. By which of the followingstatements 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

Ans: A) Alter Table A Add Constraint Primary Key B

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

11. What is data-warehouse?

Ans: A Data Warehouse is a system used for reporting and data analysis, and is considered a core component of business intelligence. Data Warehouses are central repositories of integrated data from one or more disparate sources. They store current and historical data in one single place that are used for creating analytical reports for workers throughout the enterprise.

12. What is the difference between OLTP VS OLAP?

Ans: **Online Analytical Processing (OLAP):-**

- Online Analytical Processing consists of a type of software tools that are used for data analysis for business decisions. OLAP provides an environment to get insights from the database retrieved from multiple database systems at one time.
- Consists of historical data from various Databases.
- It is subject oriented. Used for Data Mining, Analytics, Decision making ,etc.
- Relatively slow as the amount of data involved is large. Queries may take hours and large amount of data is stored typically in TB, PB
- **Example: -** Netflix movie recommendation system.

Online transaction processing (OLTP) –

- Online transaction processing provides transaction-oriented applications in a 3-tier architecture. OLTP administers day to day transaction of an organization.
- Consists only operational current data.
- It is application oriented. Used for business tasks.
- Very Fast as the queries operate on 5% of the data and the size of the data is relatively small as the historical data is archived. For ex MB, GB
- **Examples : -** It's also used for Online banking, Online airline ticket booking, sending a text message, add a book to the shopping cart.

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

Ans: Characteristics of a data warehouse are:

A. Subject Oriented
B. Integrated
C. Non-volatile
D. Time Variant

- **Subject Oriented**
  - A data warehouse is subject oriented because it provides information around a subject rather than the organization's ongoing operations.
  - These subjects can be product, customers, suppliers, sales, revenue, etc. A data warehouse does not focus on the ongoing operations, rather it focuses on modelling and analysis of data for decision making.
- **Integrated**
  - A data warehouse is constructed by integrating data from heterogeneous sources such as relational databases, flat files, etc.
  - This integration enhances the effective analysis of data.
- **Time Variant**
  - The data collected in a data warehouse is identified with a particular time period.
  - The data in a data warehouse provides information from the historical point of view.
- **Non-volatile**
  - Non-volatile means the previous data is not erased when new data is added to it.

14. What is Star-Schema??

Ans: A Star Schema is a schema Architectural structure used for creation and implementation of the Data Warehouse systems, where there is only one fact table and multiple dimension tables connected to it. It is structured like a star in shape of appearance. This is one of the efficient data warehouse schema types, which can use simple querying for accessing the data from the system, in order to derive logical contents for analytical and report generation purposes.

15. What do you mean by SETL?

Ans: SETL (SET Language) is a very high-level programming language based on the mathematical theory of sets. SETL provides two basic aggregate data types: unordered sets, and sequences (the latter also called tuples). The elements of sets and tuples can be of any arbitrary type, including sets and tuples themselves. Maps are provided as sets of pairs (i.e., tuples of length 2) and can have arbitrary domain and range types. Primitive operations in SETL include set membership, union, intersection, and power set construction, among others.