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
Answer: A) Create, D) ALTER

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

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
Answer: 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.
Answer: B) Data Definition Language

5. DML is:
A) Data Manipulation Language B) Data Management Language
C) Data Modelling Language D) None of these
Answer: 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
Answer: 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 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
Answer: 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
Answer: 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 column D 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
Answer: 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
Answer: C) Alter Table A Add Primary key B

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

11. What is data-warehouse?

Answer: A relational database known as a data warehouse is made for query and analysis rather than transaction processing. It contains historical information that was extracted from transactional information from both single and many sources. A data warehouse specialises in supporting decision-makers with data modelling and analysis by offering integrated, historical data from throughout the whole organisation. In other words, a data warehouse is a collection of information that is specific to the entire organisation, not just to a certain user group. It is utilised for decision-making rather than routine tasks like processing transactions and daily activities.

12. What is the difference between OLTP VS OLAP?

Answer:

Sr. No.	Category	OLAP (Online analytical processing)	OLTP (Online transaction processing)
1.	Definition	It is well-known as an online database query management system.	It is well-known as an online database modifying system.
2.	Data source	Consists of historical data from various Databases.	Consists of only of operational current data.
3.	Method used	It makes use of a data warehouse.	It makes use of a standard database management system (DBMS).
4.	Application	It is subject-oriented. Used for Data Mining, Analytics, Decisions making, etc.	It is application-oriented. Used for business tasks.
5.	Normalized	In an OLAP database, tables are not normalized.	In an OLTP database, tables are normalized (3NF).
6.	Usage of data	The data is used in planning, problem-solving, and decision-making.	The data is used to perform day-to-day fundamental operations.
7.	Task	It provides a multi-dimensional view of different business tasks.	It reveals a snapshot of present business tasks.
8.	Purpose	It serves the purpose to extract information for analysis and decision-making.	It serves the purpose to Insert, Update, and Delete information from the database.

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

Answer: 1**.** Data warehouses that focus on data modelling and analysis for decision-makers are subject-oriented. Data warehouses often offer a clear and succinct perspective on a specific topic, such as a customer, a product, or sales, as opposed to the ongoing operations of the entire firm. This is accomplished by leaving out information about the subject that is not helpful and including all information required by users to comprehend the subject.

2. Integrated: A data warehouse combines several heterogeneous data sources, including online transaction records, flat files, and RDBMS. To maintain uniformity in name standards, attribute types, etc. across many data sources, data integration and cleansing must be performed during data warehousing.

3. A data warehouse houses old information. For instance, a data warehouse can be used to access files from the past three, six, twelve, or even longer periods of time. These variances exist in a transactional system, where the most recent file is frequently the only one preserved.

4. The source operational RDBMS is changed into the data warehouse, which is a physically independent data store. The data warehouse does not perform update, insert, or delete operations on data, i.e., operational updates of data do not take place there. Data accessing often only needs two steps: initial data loading and data access. As a result, the data warehouse does not need capabilities for transaction processing, recovery, and concurrency, which significantly speeds up data retrieval. Non-volatile refers to the idea that data shouldn't alter after being stored in a warehouse.

14. What is Star-Schema??

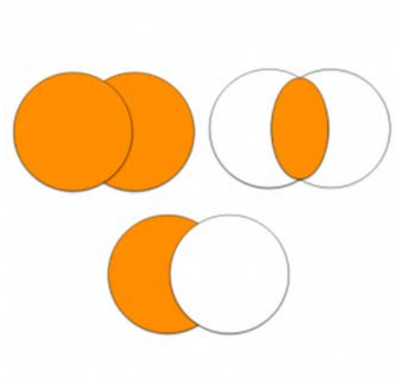
Answer: The simplest kind of a dimensional model, in which data are arranged into facts and dimensions, is known as a star schema. A fact is an occurrence that can be measured or quantified, such a purchase or sign-in. A dimension contains reference information about the fact, such as the date, the thing, or the person.

A relational schema called a star schema is one whose design corresponds to a multidimensional data model. The explicit data warehouse schema is the star schema. Because the entity-relationship diagram of these schemas replicates a star with points that diverge from a central table, it is known as a star schema. A sizable fact table serves as the schema's central component, and the dimension tables serve as its points.

15. What do you mean by SETL?

Answer: The SQL set operator is a term that enables you to combine the answers of two queries into one. You may occasionally need to query data from two more tables while using SQL. However, you must list the results from both tables in a single result or in different rows rather than merging these two tables. Set operators work in this manner.

There are a few different set operators that can be used, depending on your needs, and which database.



The different set operators are:

- UNION
- UNION ALL
- MINUS
- INTERSECT
- EXCEPT