

## 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  |

Ans1: A) Create  
D) ALTER

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

Ans2: 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              |

Ans3: 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.       |

Ans4: B) Data definition Language

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

Ans5: 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               |

Ans6: 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                     |

Ans7: 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                |

Ans8: 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

Ans9: 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 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

Ans10: 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?

12. What is the difference between OLTP VS OLAP?

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

14. What is Star-Schema??

15. What do you mean by SETL?

Ans 11: Data warehousing is the electronic storage of a large amount of information by a business or organization. A data warehouse is designed to run query and analysis on historical data derived from transactional sources for business intelligence and data mining purposes.

Ans12: Comparisons of OLAP vs OLTP –

OLAP (Online analytical processing)

- Consists of historical data from various Databases.

It is subject oriented. Used for Data Mining, Analytics, Decision making, etc.

The data is used in planning, problem solving and decision making.

It reveals a snapshot of present business tasks.

Large amount of data is stored typically in TB, PB

Relatively slow as the amount of data involved is large. Queries may take hours.

It only need backup from time to time as compared to OLTP.

This data is generally managed by CEO, MD, GM.

Only read and rarely write operation.

OLTP (Online transaction processing)

Consists only operational current data.

It is application oriented. Used for business tasks.

The data is used to perform day to day fundamental operations.

It provides a multi-dimensional view of different business tasks.

The size of the data is relatively small as the historical data is archived. For ex MB, GB

Very Fast as the queries operate on 5% of the data.

Backup and recovery process is maintained religiously

This data is managed by clerks, managers.

Both read and write operations.

Ans13: The Key Characteristics of a Data Warehouse

- Some data is denormalized for simplification and to improve performance.

- Large amounts of historical data are used.
- Queries often retrieve large amounts of data.
- Both planned and ad hoc queries are common.
- The data load is controlled.

Ans14: In computing, the star schema is the simplest style of data mart schema and is the approach most widely used to develop data warehouses and dimensional data marts. The star schema consists of one or more fact tables referencing any number of dimension tables. The star schema is an important special case of the snowflake schema, and is more effective for handling simpler queries.

The star schema gets its name from the physical model's resemblance to a star shape with a fact table at its center and the dimension tables surrounding it representing the star's points.

The star schema separates business process data into facts, which hold the measurable, quantitative data about a business, and dimensions which are descriptive attributes related to fact data. Examples of fact data include sales price, sale quantity, and time, distance, speed and weight measurements. Related dimension attribute examples include product models, product colors, product sizes, geographic locations, and salesperson names.

A star schema that has many dimensions is sometimes called a *centipede schema*. Having dimensions of only a few attributes, while simpler to maintain, results in queries with many table joins and makes the star schema less easy to use.

Ans15: Short for Set Theory as a Language (or Set Language), SETL is a high-level programming language that's based on the mathematical theory of sets. It was developed in the early 1970's by mathematician Professor J. Schwartz. SETL is an interpreted language with a syntax that resembles C and in many cases similar to Perl. In SETL every statement is terminated by a semicolon. Variable names are case-insensitive and are automatically determined by their last assignment.

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