

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,C,D)

2. Which of the following is/are DML commands in SQL?

- A) Update
- B) Delete
- C) Select
- D) Drop

ANSWER>>(A,B,C)

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 these

ANSWER>>(B)

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)

5. DML is:

- A) Data Manipulation Language
- B) Data Management Language
- C) Data Modelling Language
- D) None of these

ANSWER>>(A)

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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>>(D)

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)

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)

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>>(B)

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)

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

11. What is data-warehouse?

ANSWER--- A Data Warehousing (DW) is process for collecting and managing data from varied sources to provide meaningful business insights. A Data warehouse is typically used to connect and analysed business data from heterogeneous sources. The data warehouse is the core of the BI system which is built for data analysis and reporting.

It is a blend of technologies and components which aids the strategic use of data. It is electronic storage of a large amount of information by a business which is designed for query and analysis instead of transaction processing.

It is a process of transforming data into information and making it available to users in a timely manner to make a difference.

Data warehouse system is also known by the following name:

- Decision Support System (DSS)
- Executive Information System
- Management Information System
- Business Intelligence Solution
- Analytic Application
- Data Warehouse



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12. What is the difference between OLTP VS OLAP?

ANSWER----

OLAP (Online Analytical Processing)

Online Analytical Processing, a category of software tools which provide analysis of data for business decisions. OLAP systems allow users to analysed database information from multiple database systems at one time.

The primary objective is data analysis and not data processing.

- OLTP (Online Transaction Processing)

Online transaction processing shortly known as OLTP supports transaction-oriented applications in a 3-tier architecture. OLTP administers day to day transaction of an organization.

The primary objective is data processing and not data analysis

Key Difference between OLTP and OLAP

Online Analytical Processing (OLAP) is a category of software tools that analysed data stored in a database, whereas Online transaction processing (OLTP) supports transaction-oriented applications in a 3-tier architecture.

OLAP creates a single platform for all types of business analysis needs which includes planning, budgeting, forecasting, and analysis, while OLTP is useful for administering day-to-day transactions of an organization.

OLAP is characterized by a large volume of data, while OLTP is characterized by large numbers of short online transactions.

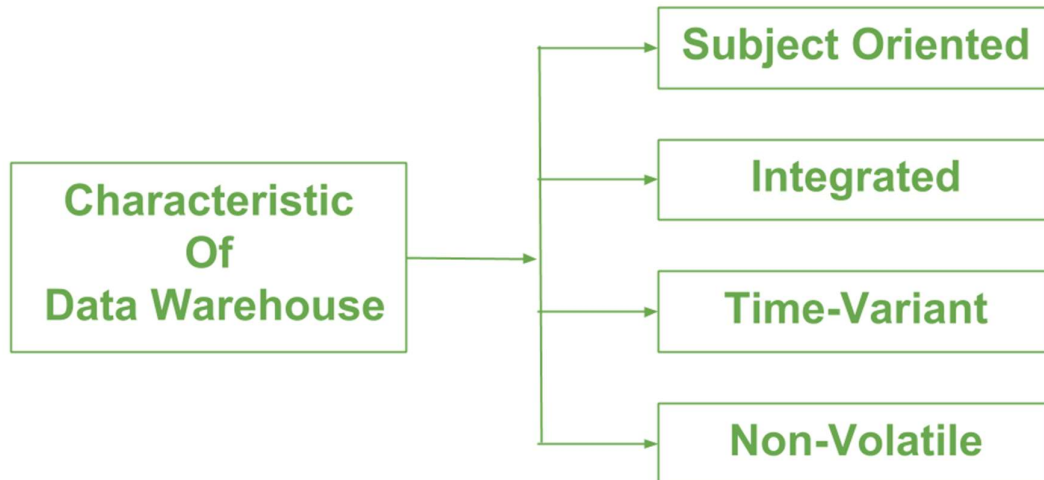
In OLAP, a data warehouse is created uniquely so that it can integrate different data sources for building a consolidated database, whereas OLTP uses traditional DBMS.

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

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Data warehouse can be controlled when the user has a shared way of explaining the trends that are introduced as specific subject.

Below are major characteristics of data warehouse:



Subject-oriented –

A data warehouse is always a subject oriented as it delivers information about a theme instead of organization's current operations. It can be achieved on specific theme. That means the data warehousing process is proposed to handle with a specific theme which is more defined. These themes can be sales, distributions, marketing etc.

Integrated –

It is somewhere same as subject orientation which is made in a reliable format. Integration means founding a shared entity to scale the all-similar data from the different databases. The data also required to be resided into various data warehouse in shared and generally granted manner.

A data warehouse is built by integrating data from various sources of data such that a mainframe and a relational database. In addition, it must have reliable naming conventions, format and codes. Integration of data warehouse benefits in effective analysis of data. Reliability in naming conventions, column scaling, encoding structure etc. should be confirmed. Integration of data warehouse handles various subject related warehouse.

Time-Variant –

In this data is maintained via different intervals of time such as weekly,

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monthly, or annually etc. It finds various time limit which are structured between the large datasets and are held in online transaction process (OLTP). The time limits for data warehouse is wide-ranged than that of operational systems. The data resided in data warehouse is predictable with a specific interval of time and delivers information from the historical perspective. It comprises elements of time explicitly or implicitly. Another feature of time-variance is that once data is stored in the data warehouse then it cannot be modified, alter, or updated.

Non-Volatile –

As the name defines the data resided in data warehouse is permanent. It also means that data is not erased or deleted when new data is inserted. It includes the mammoth quantity of data that is inserted into modification between the selected quantity on logical business. It evaluates the analysis within the technologies of warehouse.

14. What is Star-Schema?

- A star schema is a data warehousing architecture model where one fact table references multiple dimension tables, which, when viewed as a diagram, looks like a star with the fact table in the centre and the dimension tables radiating from it. It is the simplest among the data warehousing schemas and is currently in wide use.
- The star schema is the simplest form of a dimensional model used in business intelligence and data warehousing wherein data is arranged in dimensions and facts. In the star schema, there is a single fact table, which is usually expressed in the third normal form (3NF), and multiple de-normalized dimension tables connected to it, radiating out like the points of a star. The star schema has been optimized for querying large data sets and is generally used in data marts and warehouses in order to support OLAP cubes, ad hoc queries, analytic applications and business intelligence.

The fact tables in a star schema usually have two columns: the first is for the foreign keys pointing to the dimension tables, and the second is for the measures that contain numeric facts, hence, the name fact table.

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The dimension tables are actually structures that are usually composed of multiple hierarchies that categorize data.

15. What do you mean by SETL?

- structures, based on the mathematical notion of set. It was designed in the very early 1970s by J. Schwartz – a renowned 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 SETL is a very-high level language with dynamic typing and dynamic data, 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.
- SETL programs are much more declarative than procedural.