

# SQL

1. Which of the following is/are DDL commands in SQL?  
A) Create  
D) ALTER
2. Which of the following is/are DML commands in SQL?  
A) Update  
B) Delete  
C) Select
3. Full form of SQL is:  
B) Structured Query Language
4. Full form of DDL is:  
B) Data Definition Language
5. DML is:  
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?  
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?  
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?  
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?  
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?  
C) Alter Table A Add Primary Key B
11. What is data-warehouse?  
A data warehouse is a type of data management system that is designed to enable and support business intelligence (BI) activities, especially analytics. Data warehouses are solely intended to perform queries and analysis and often contain large amounts of historical data.
12. What is the difference between OLTP VS OLAP?  
OLTD :
  - 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.

OLAP :

- 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.

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

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.
- Time-Variant - In this data is maintained via different intervals of time such as weekly, monthly, or annually etc. It founds 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.

In this, data is read-only and refreshed at particular intervals. This is beneficial in analysing historical data and in comprehension the functionality. It does not need transaction process, recapture and concurrency control mechanism. Functionalities such as delete, update, and insert that are done in an operational application are lost in data warehouse environment. Two types of data operations done in the data warehouse are:

- Data Loading

- Data Access

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

Star schema is a simplest form of dimensional data model where the data is organized into facts and dimensions. One fact table connects to several dimensions.

Fact table:

A fact table is a highly normalized table which contains measures (measures are facts about your business process. ex: \$GrossBookingAmt, Qty etc), keys (reference keys aka foreign keys to the dimensional tables), primary key (which could be formed using a combination of FKs aka composite key or unique key if present) and degenerate dimensions ( a dimension at it's atomic form but needed for analysis. ex: booking ID or Itinerary Number)

Dimension Table:

Dimensions contains data about the data.Can act as a conforming dimension by being a common dimension to fact tables, that way connecting the facts.

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

SETL stands for Semantic-Extract-Transform-Load.For better business analytics organization uses data from various sources. The data so obtained may be unstructured, semi structured or structured. So, there is a process called ETL or Extract\_Transform\_Load. Its work is to extract data from various source process them and load the clean and aggregated from into the warehouse. This process is the backbone of data warehouse.