

## SQL WorkSheet-1

1-A &D

2-A, B, C

3-B

4-B

5-A

6-C

7-B

8-B

9-D

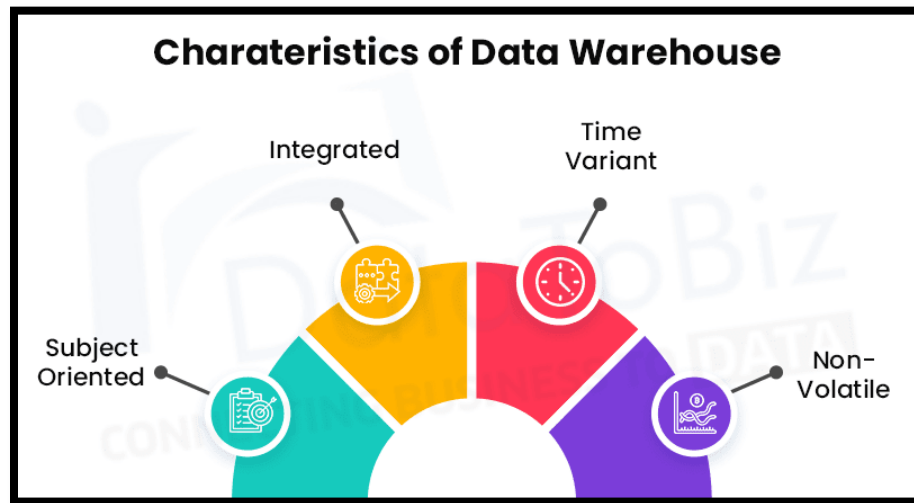
10-C

11- A Data Warehouse is process for collecting and managing data from varied sources to provide meaningful business insights. A Data warehouse is typically used to connect and analyze business data from heterogeneous sources. 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.

### 12-Difference between OLTP VS OLAP

OLTP- Online Transaction Processing,	OLAP- Online Analytical Processing,
It is an online transactional system. It manages database modification.	OLAP is an online analysis and data retrieving process.
It is characterized by large numbers of short online transactions.	It is characterized by a large volume of data.
OLTP is an online database modifying system.	OLAP is an online database query management system.
OLTP uses traditional DBMS.	OLAP uses the data warehouse.
Tables in OLTP database are normalized.	Tables in OLAP database are not normalized.
OLTP and its transactions are the sources of data.	Different OLTP databases become the source of data for OLAP.
OLTP database must maintain data integrity constraint.	OLAP database does not get frequently modified. Hence, data integrity is not an issue.
The data in the OLTP database is always detailed and organized.	The data in OLAP process might not be organized.
It is a market orientated process.	It is a customer orientated process.
Queries in this process are standardized and simple.	Complex queries involving aggregations.

13- Characteristics of data warehousing are as follows.



- **Subject Oriented-** A data warehouse is subject-oriented, as it provides information on a topic rather than the ongoing operations of organizations. Such issues may be inventory, promotion, storage, etc. Never does a data warehouse concentrate on the current processes. Instead, it emphasized modeling and analyzing decision-making data. It also provides a simple and succinct description of the particular subject by excluding details that would not be useful in helping the decision process.
- **Integrated**  
Integration in Data Warehouse means establishing a standard unit of measurement from the different databases for all the similar data. The data must also get stored in a simple and universally acceptable manner within the Data Warehouse. Through combining data from various sources such as a mainframe, relational databases, flat files, etc., a data warehouse is created. It must also keep the naming conventions, format, and coding consistent. Such an application assists in robust data analysis.
- **3. Time-variant**  
Compared to operating systems, the time horizon for the data warehouse is quite extensive. The data collected in a data warehouse is acknowledged over a given period and provides historical information. It contains a temporal element, either explicitly or implicitly. One such location in the record key system where Data Warehouse data shows time variation is. Each primary key contained with the DW should have an element of time either implicitly or explicitly. Just like the day, the month of the week, etc.
- **4. Non-volatile**  
Also, the data warehouse is non-volatile, meaning that prior data will not be erased when new data are entered into it. Data is read-only, only updated regularly. It also assists in analyzing historical data and in understanding what and when it happened. The transaction process, recovery, and competitiveness control mechanisms are not required. In the Data Warehouse environment, activities such as deleting, updating, and inserting that are performed in an operational application environment are omitted.

14- Star Schema in data warehouse, is a schema in which the center of the star can have one fact table and a number of associated dimension tables.

It is known as star schema as its structure resembles a star.

The Star Schema data model is the simplest type of Data Warehouse schema. It is also known as Star Join Schema and is optimized for querying large data sets.

star schemas are efficient at storing data, maintaining history, and updating data by reducing the duplication of repetitive business definitions, making it fast to aggregate and filter data in the data warehouse.

15-SETL- Stand for Set theory Language is a very high programmable language based on the theory of Sets.