**WORKSHEET**

**SQL**

**SOLUTIONS**

1. **a,c**
2. **a,b**
3. **b**
4. **b**
5. **a**
6. **c**
7. **d**
8. **b**
9. **c**
10. **d**

**Data Warehousing is a process of collecting and managing data from various sources for finding patterns in data which could lead to meaningful business insights. All the data from the user, edge systems and other devices are collected in a data lake. This data is then filtered and stored in this warehouse and then the required data is transferred to the BI team of the company.**

**OLTP is online transactions processing. OLTP captures, stores as well as processes data from the transactions in real time. Whereas OLAP (Online analytical processing) uses queries to analyze historical data gathered by the OLTP systems.**

**Response time of OLAP is slower than OLAP. OLAP stores data in data warehouses whereas OLTP uses DBMS system to store data as quicker response is required during processing a transaction.**

**Characteristics of data warehouse are as follows:**

* **Subject Oriented: A data warehouse is subject oriented because it provides information around a subject rather than the organization's ongoing operations. These subjects can be product, customers, suppliers, sales, revenue, etc. A data warehouse does not focus on the ongoing operations, rather it focuses on modelling and analysis of data for decision making.**
* **Integrated : A data warehouse is constructed by integrating data from heterogeneous sources such as relational databases, flat files, etc. This integration enhances the effective analysis of data.**
* **Time Variant: The data collected in a data warehouse is identified with a particular time period. The data in a data warehouse provides information from the historical point of view.**
* **Non-volatile: Non-volatile means the previous data is not erased when new data is added to it.**

**Star Schema in data warehouse, 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. Star Schema is optimized for querying large data sets.**



**SETL (SET Language) is a high-level programming language based on the mathematical theory of sets. Basic operations in SETL include set membership, union, intersection, and power set construction.** **The primitive datatypes of SETL include integer, floating-point, Boolean, atom, and string.**