Student Name: - Kiran Digambar Yadav.

Assignment Name: - SQL Worksheet_1

Internship: - 35

WORKSHEET 1 SQL

Question No	Answers
1	A) Create, D) Alter
2	A) Update, B) Delete
3	B) Structure Query language.
4	B) Data Definition language.
5	A) Data manipulation language.
6	C) Create Table A (B int, C float)
7	B) Alter Table A ADD column D float.
8	A) Table A Drop D
9	B) Alter Table A Alter Column D int
10	B) Alter table (B primary key)

Q11 Answer: -

Data warehousing is process used for collecting and managing data from varied source to provide meaningful business insights. It is database that stores information oriented to satisfy decision making requests. It is a group of decision support technologies, target to enabling the knowledge worker (executive, manager, and analyst) to make superior and higher decision. So, data warehousing support architectures and tool for business executives to systematically organize, understand and use their information to make strategic decisions.

Data warehousing environment contains an extraction, transportation, and loading (ETL) solution an online analytical preprocessing (OLAP) engine, customer analysis tools, and other applications that handle the process of gathering information and delivering it to business users. It is not used for daily operations and transactions processing but used for making decisions.

Q12 Answer: -

Sr.No.	Category	OLAP (Online analytical Preprocessing)	OLAP (Online Transaction processing.
1	Definition	It is well-known as an online database query management system.	It is well-known as an online database modifying system.
2	Data Sources	Consists of historical data from various Databases.	Consists of only of operational current data.
3	Method used	It makes use of a data warehouse.	It makes use of a standard database management system (DBMS).
4	Usage of data	The data is used in planning, problem-solving, and decision-making.	The data is used to perform day-to-day fundamental operations.
5	Purpose	It serves the purpose to extract information for analysis and decision-making.	It serves the purpose to Insert, Update, and Delete information from the database.
6	Processing time	The processing of complex queries can take a lengthy time.	It is comparatively fast in processing because of simple and straightforward queries.
7	Backup and Recovery	It only need backup from time to time as compared to OLTP.	Backup and recovery process is maintained rigorously
8	Productivity	Improves the efficiency of business analysts.	Enhances the user's productivity.
9	Types of users	This data is generally managed by CEO, MD, GM.	This data is managed by clerks, managers.

Q13 Answer: -

Characteristics of Data Warehouse is as below,

Subject Oriented: - A data warehouse target on the modelling and analysis of data for decision-makers. Therefore, data warehouses typically provide a concise and straightforward view around a particular subject, such as customer, product, or sales, instead of the global organization's ongoing operations. This is done by excluding data that are not useful concerning the subject and including all data needed by the users to understand the subject.

Integrated: - A data warehouse integrates various heterogeneous data sources like RDBMS, flat files, and online transaction records. It requires performing data cleaning and integration during data warehousing to ensure consistency in naming conventions, attributes types, etc., among different data sources.

Time Variant: - Historical information is kept in a data warehouse. For example, one can retrieve files from 3 months, 6 months, 12 months, or even previous data from a data warehouse. These variations with a transactions system, where often only the most current file is kept.

Non-Volatile: - The data warehouse is a physically separate data storage, which is transformed from the source operational RDBMS. The operational updates of data do not occur in the data warehouse, i.e., update, insert, and delete operations are not performed. It usually requires only two procedures in data accessing: Initial loading of data and access to data. Therefore, the DW does not require transaction processing, recovery, and concurrency capabilities, which allows for substantial speedup of data retrieval. Non-Volatile defines that once entered into the warehouse, and data should not change.

Q14 Answer: -

A star schema is a conference for constructing the data into dimension tables, fact tables, and materialized views. All data is saved in columns, and metadata is needed to identify the columns that function as multidimensional objects. A star schema is a relational schema where a relational schema whose design defines a multidimensional data model. The star schema is the explicit data warehouse schema. It is referred to as star schema because the entity-relationship diagram of this schemas reproduces a star, with points, diverge from the main table. The middle of the schema includes a high fact table, and the star is the dimension table.

Dimension Tables: - A star schema saves all of the data about a dimension in a single table. Each level of a hierarchy is defined by a column or column set in

the dimension table. A dimension object can be used to describe the hierarchical relationship between two columns (or column sets) that defines two levels of a hierarchy; without a dimension object, the hierarchical relationships are represented only in metadata. Attributes are saved in columns of the dimension tables.

Fact Tables: - Measures are saved in fact tables. Fact tables include a composite primary key, which is composed of multiple foreign keys (one for each dimension table) and a column for each measure that uses these dimensions.

Materialized Views: - Aggregate data is computed based on the hierarchical relationships represented in the dimension tables. These aggregates are saved in independent tables, known as summary tables or materialised views. Oracle offers extensive support for materialised views, containing automatic refresh and query rewrite.

Q15 Answer: -

SETL is a general-purpose, high-level programming language in which sets and first-order mappings are fundamental to the syntax and semantics of the language. This lends great conciseness and readability to a wide range of applications, from basic data filtering and transformation to the abstract presentation of complex algorithms. SETL is particularly good for software prototyping.