**FLIP ROBO**

# 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
   ANS:A

2. Which of the following is/are DML commands in SQL?
   A) Update                                    B) Delete
   C) Select                                    D) Drop

**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 them

4. Full form of DDL is:
   A) Descriptive Designed Language             B) Data Definition Language
   C) Data Descriptive Language                 D) None of the above.

5. DML is:
   A) Data Manipulation Language                B) Data Management Language
   C) Data Modeling Language                    D) None of these

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

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

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

9. Which of the following statements can be used to change the data type (from float to int ) of the column Dof 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

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

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

11. What is data-warehouse?
12. What is the difference between OLTP VS OLAP?
13. What are the various characteristics of data-warehouse?
14. What is Star-Schema??
15. What do you mean by SETL?

## Q11. **DATA WARE HOUSE**:

data warehouse is a central repository of information that can be analyzed to make more informed decisions
Data ware house collects information from different sources (such as different databases, flat files,) and organizes the data and stores it.
The data collected from different sources are stored into data ware houses by a mechanism called ETL(Extract, Transform,Load)
The data is stored in data warehouse is useful for reporting, visualization and data analysis.
In data ware house,data is divided into 3 cateogeries 1)Meta data 2)aggregate data 3)Raw data.

### Q12 Difference between OLAP and OLTP

| OLAP | OLTP |
|---|---|
| 1) OLAP stands for On-Line Analytical Processing and it integrates multiple data sources to build a consolidated data base. | 1)OLTP stands for online transaction processing and is used to query traditional data bases. |
| 2)Tables are not normalized | 2)Tables are normalized |
| 3) Only read and rarely write operation. | 3) Both read and write operations. |
| 4)Uses complex queries | 4) Uses simple standardized queries |
| 5) The data is used in planning, problem solving and decision making. | 5) The data is used to perform day to day fundamental operations. |
| 6)While querying response will be usually slow compared to oltp as there is huge data and queries may take hours to execute. | 6)While querying ,response will be very fast |
| 7) Used for Data Mining, Analytics, Decision making | 7) Used for business tasks |
| 8)OLAP doesn't require regular back ups because in case of data loss,it can be retrieved from OLTP. | 8) Backup and recovery process are done regularly |
| 9) Designed for real time business operations | 9) Designed for analysis of business measures by category and attributes. |
| 10) DB design is application oriented. Example: Database design changes with industry like Retail, Airline, Banking, etc. | 10) DB design is subject oriented. Example: Database design changes with subjects like sales, marketing, purchasing, etc. |

### Q13:
### Characteristics of Data Ware house:

Data Ware house has 4 major characteristics:

1) Subject Oriented

2) Integrated

3) Time variant

4) Non-Volatile.

Subject Oriented:

A data ware house is subject oriented, which means data warehouse emphasizes on analyzing the data to make decisions. It provides description of useful information in regard to a topic in organization(like sales,inventory,expenditure,profits)
.It removes data which is not useful in decision making.

Integrated:
A data warehouse is built by integrating data from various data sources. Integration in Data Warehouse means establishing a standard unit of measurement from the different databases for similar data.
It must also keep the naming conventions, format, and coding consistent.

Time Variant:
The data is stored in data warehouse varies on time intervals like weekly, bi weekly, monthly, quarterly, yearly etc.
feature of time-variance is that once data is stored in the data warehouse then it cannot be modified, alter, or updated.

Non-Volatile:
The data present in data ware house is non volatile which means old data is not deleted when new data is inserted. In data ware house data is loaded and accessed.We can only perform read option.

### Q14:

### STAR SCHEMA:

Schemas are designed to model data warehouse systems. The schemas are designed to address the unique needs of very large databases designed for the analytical purpose (OLAP).

There are 3 types of data ware house schema:

- Star Schema
- Snowflake Schema
- Galaxy Schema

Star Schema has two kind of tables

1)Fact Table

2)Dimension Tables

A star schema has only one fact table and multiple dimension tables.

The fact table is at the center which contains keys to every dimension table.

The dimension tables are joined to the fact table through a foreign key. In general, dimension table are one dimensional tables containing set of attributes.

It is named as star schema because the structure resembles of a star. It is also known as Star Join Schema and is optimized for querying large data sets.

**Q15:**

**SETL:**

Current Extract-Transform-Load (ETL) tools are not suitable for this "open world scenario" because they do not consider semantic issues in the integration process.

Current ETL tools neither support processing semantic data nor create a semantic Data Warehouse (DW).

SETL builds on Semantic Web (SW) standards and tools and supports developers by offering a number of powerful modules, classes, and methods for data ware house tasks. Thus it supports semantic data sources in addition to traditional data sources, semantic integration, and creating or publishing a semantic (multidimensional) DW in terms of a knowledge base.

A comprehensive experimental evaluation comparing SETL to a solution made with traditional tools shows that SETL provides better programmer productivity, knowledge base quality, and performance.

## OBJECTIVE ANSWERS:
**Q1)A,D**

**Q2)A,B**

**Q3)B**

**Q4)B**

**Q5)A**

**Q6)C**

**Q7)B**

**Q8)B**

**Q9)B**

**Q10)A,C**