Logo, company name

Description automatically generated

Database

Lab Guide

**Short Answer**

1. **what is Data?**

-Data is a row fact about something which can be structured fact and it can flow in the network.

**2. what is Information?**

-Information is processed, organized, and structured data that are meaningful.

**3. what is Database (DB)?**

-It is a container or a place which contain a related data to be modified.

**4. What is the Relation Database Management System (RDBMS)?**

-It is a software tool used to work or manage(create, retrieve, update) the data in the database.

**5. Define the importance of Relation Database Management System(RDBMS)?**

These are the main advantages of RDBMS

-Data consistency across applications and database copies

-Increased usability without complex structure or queries

-Data that's enterprise accessible and AI ready

-Allows multi-user to access multiple databases simultaneously

-Provide access to the database through a server

-Has high sequrity

**6. As we all know that there are Two types of Database. Relational** Database(SQL) AND Non-Relational DB(NO sql). what is the difference between them.

-Relational databases store data in rows and columns like a spreadsheet while non-relational databases store data in non-table which is JSON format.

**7. List examples of Relation Database Management System(RDBMS)?**

-MySQL

-IBM DB2

-Microsoft SQL server DB

-Oracle

**8. List examples of Non-Relational DB(Nosql)?**

-Mongo DB

**9. Define and Describe is Structured Query Language(SQL)?**

-It is a standardized programming language that is used to manage relational databases and perform various operations on the data in them.

**10. List and Describe each of the different subsets of SQL(Mean DDL, DML,** DCL, TCL)?

**DDL (Data Definition Language)**

* These commands define the database schema.
* Used to create and modify the structure of database objects
* The commands are auto-commited.
* The commands are:- **CREATE, DROP, ALTER, TRUNCATE, COMMENT, RENAME**

**DML(Data Manipulation Language)**

* Used for manipulation the data stored in the database.
* They are not auto-commited.
* The commands are:- **INSERT, UPDATE, DELETE, LOCK**

**DCL(Data Control Language)**

* The commands are used to grant and take back authority from any database users.
* The commands are:- **GRANT, REVOKE**

TCL(Transaction Control Language)

* **The commands are used to manage the changes made to the data in table by** DML statements.
* They allow statements to be grouped together into logical transactions.
* The commands are:- **commit, rollback, save point, set-transaction**

11. what is table in Database(DB)?

* A table is a collection of related data held in a table format within a database. It consists of columns and rows.

12. what is column and Row(tuples) in table?

* A single entry in a table is called a Tuple or Record or Row. A tuple in a table represents a set of related data

**To Be Continued…**