Logo, company name

Description automatically generated

1. What is Data?

Data is a collection of information about something and can be a source for executing different analysis.

1. What is Information?

Information is knowledge of something. Information can be true/false but used as baseline data.

1. What is Database (DB)?

Database is a set of data are stored systematically. Database can be simply said storage of data of different things that could be a source for further analysis.

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

RDBMS is a databased managing system arranging data in “column” and “rows” and can be related with each other within the table itself and with other tables in the database systems. It uses structured query language (SQL) E.g., MsSQL.

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

RDBMS is as mentioned above is sorted in columns and rows, so easily accessible for identifying entities. This system allows to share one table data to another. Generally, RDBMS are simple to look and easy to access, data are accurate and integrated, flexible and data are secured.

1. 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 Database (SQL)** is a database system that structured data into a table form and easily accessible for usage. So, these database systems can be related/shared with other tabulated data for different purposes.

**Non-Relational DB(No sql)** but the NoSQL sort their data in a non-tabulated format like structured documents. These systems are handling unstructured data, agility (no need to follow structure language so data quickly updated), readable (no need to share multiple tables for data).

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

MySQL, Oracle, PostgreSQL, Microsoft SQL server, IBM DB2, MariaDB, SQLite, SQL server Express.

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

Oracle Berketley DB, Neo4j, Amazon ElastiCache, BigTable, MongoDB, Adabas, Teradata Aster Database, amazon DocumentDB, IBM IMS Apache Cassandra, Redis, Couchbase, Apache HBase.

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

Is a language that is used to communicate with Databases. It uses its own structured language (syntaxes) to create, retrieve or delete data from/to the database. This database uses table for data creation.

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

**DDL** is a language used to create, alter, drop database entities. This is a statement help to communicate in the SQL to manipulate (*data can entered, removed, updated etc.*) the stored data in the form of table.

**DML** is a statement used to retrieve (take one data entity from one table and put into another table), insert (add one or more rows in a table), remove (delete one or more rows from a table) and update (change existing data in a table) data within the database entities.

**DCL** is a data controlling statement for accessing the data stored in database and provide data security. It is Under the control of Database administrator (DBA). The DBA give permission to access the database via DCL.

**TCL** this is a statement used to manage the changes made by DML statements. It allows statements to be grouped together into logical transactions. In TCL these are used; 1. Begin transaction, 2. Commit transaction, 3. Rollback transactions and 4 Save transaction.

1. What is table in Database (DB)?

A table is a data sorting method that data entities are sorted into a “column” and “rows” for ease access.

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

Column contain name, date and/or any other attributes for the table and Row contains the records/data based on the stated objects on the column.