Database

Lab Guide

Short Answer

1. what is Data?
   - Data is a fact that can be recorded. It may be a text, number, Videos, images.
   - Data is unorganized raw facts that need processing without which it is seemingly random and useless to humans
2. what is Information?
   - Information is the processed, organized, and structured data. It provides context for data. However, both the terms are used together, information can be easily understood than data.
3. what is Database (DB)?
   - A systematic collection related of Data, that represent some real-world entities.
   - It supports storage and manipulation of data. It's an organized collection of structured information, or data, typically stored electronically in a computer system.
4. What is the Relation Database Management System (RDBMS)?
   - A software application that interacts with the user, applications and the database itself to capture and analyze data. The data stored in the database can be modified, retrieved, and deleted, and can be of any type like strings, numbers, images etc.
5. Define the importance of Relation Database Management System (RDBMS)?
   - programs allow you to create forms that can streamline entering, editing, and deleting data.
6. As we all know that there are Two types of Databases. Relational Database (SQL) AND Non-Relational DB (NO sql). what is the difference between them?
   - DBMS applications store data as file.
   - In DBMS, data is generally stored in either a hierarchical form or a navigational form.
   - RDBMS applications store data in a tabular form.
   - n RDBMS, the tables have an identifier called primary key and the data values are stored in the form of tables

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

- helps in recovery of the database in case of loss of data
- normalization process will be present to check the database table consistency
- List examples of Relation Database Management System (RDBMS)?

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

- Non-relational databases are often used when large quantities of complex and diverse data need to be organized. For example, a large store might have a database in which each customer has their own document containing all of their information, from name and address to order history and credit card information.

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

- SQL is the core of a relational database which is used for accessing and managing the database.

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

- DML commands are used for manipulating the data stored in the table and not the table itself.
- All DDL commands are auto committed. That means it saves all the changes permanently in the database.
- t allows you to control access to the database. Example – Grant or Revoke access permissions.
- Transaction Control Language (TCL) commands are used to manage transactions in the database. These are used to manage the changes made to the data in a table

11. what is table in Database (DB)?

- A database table is a structure that organizes data into rows and columns forming a grid.

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

- In a table, columns are mostly separated from each other by lines, which help to enhance readability and attractiveness.
- A row is a series of data put out horizontally in a table or spreadsheet while a column is a vertical series of cells in a chart.