

## **DATA:**

- Data is a collection of a distinct small unit of information.
- It can be used in a variety of forms like text, numbers, media, bytes, etc.

## **DATABASE**

- A database is an organized collection of data, so that it can be easily managed and accessed.

## **RDBMS**

- RDBMS stands for Relational Database Management System
- All modern database management systems like SQL, MS SQL Server, IBM DB2, ORACLE, My-SQL, and Microsoft Access are based on RDBMS
- It is called Relational Database Management System (RDBMS) because it is based on the relational model introduced by E.F. Codd.
- Data is represented in terms of tuples (rows) in RDBMS.
- A relational database is the most commonly used database. It contains several tables, and each table has its primary key.
- Due to a collection of an organize Everything in a relational database is stored in the form of relations.
- The RDBMS database uses tables to store data. A table is a collection of related data entries and contains rows and columns to store data.
- Each table represents some real-world objects such as person, place, or event about which information is collected.
- The organized collection of data into a relational table is known as the logical view of the database. d set of tables, data can be accessed easily in RDBMS.

## **SQL:**

- SQL stands for Structured Query Language
- SQL lets you access and manipulate databases
- SQL became a standard of the American National Standards Institute (ANSI) in 1986, and of the International Organization for Standardization (ISO) in 1987

## **What SQL Can Do?**

- SQL can execute queries against a database
- SQL can retrieve data from a database

- SQL can insert records in a database
- SQL can update records in a database
- SQL can delete records from a database
- SQL can create new databases
- SQL can create new tables in a database
- SQL can create stored procedures in a database
- SQL can create views in a database
- SQL can set permissions on tables, procedures, and views

### **Show Databases:**

- Using this user will be able to see all databases existing in the system/account.

### **Create Database:**

- The CREATE DATABASE statement is used to create a new SQL database.

**Syntax:**CREATE DATABASE databasename;

**Example:** Create Database Student

### **Use Database:**

- When having multiple databases and user want to use or perform actions on a particular database then we will use the Use Database.

**Syntax:**Use Databasename;

**Example:**Use Student;

## **Create Table:**

- The CREATE TABLE statement is used to create a new table in a database.

### **Syntax:**

```
CREATE TABLE table_name (  
    column1 datatype,  
    column2 datatype,  
    column3 datatype,  
    ....  
);
```

### **Example:**

```
Create Table Student_record(  
Student_id int,  
Student_name varchar(25)  
Student_Address(45));
```

## **Show Tables:**

- Show tables will display all tables from current database  
Syntax: Show tables;

## **Insert Into Statement:**

The INSERT INTO statement is used to insert new records in a table.

### **Syntax:**

```
INSERT INTO table_name  
VALUES (value1, value2, value3, ...);
```