**SQL : STRUCTURED QUERY LANGUAGE**

Ex: 1. MySQL

2. PostgreSQL

3. MariaDB

Reasons why we need a database:

1. Centralized Systems.
2. Better management of all resources.
3. Managing data and relationships.
4. Efficient tracking.
5. Planning for growth.

SQL: It is a domain specific language in programming and is designed for managing databases stored in a RDBMS or for stream processing in a relational data stream management system.

Big Data: **3 V’s of Big Data**

**1. High Volume**

**2. High Velocity**

**3. High Variety**

Other V’s

1. Veracity: Trustworthy data.

2. Value: Value of data.

Enables:

1. Enhanced decision making

2. Insight discovery

3. Process optimization

Banking DBMS:

Database System (Web application) → DBMS (PostgreSQL) → Database (Bank) →

Data (Employees, Loans, Installments, Accounts, Data files etc.)

Phases in Data Modelling:

1. Conceptual (Studetents)

2. Logical (id, name, dob, course etc.)

3. Physical (data types, constraints etc.)

Data modelling represents the nature of data and the business logic to control the data.

Relational Data Model: Collection of interrelated tables.

DBMS Languages:

DDL, DML, DQL, DCL, TCL

DDL:

1. CREATE: To create a new table in a database.

CREATE TABLE table\_name(

column1 datatype,

column2 datatype,

...,

...,

…);

2. INSERT: To insert new records in a table.

INSERT INTO TABLE

(col1, col2, col3, …)

VALUES

(val1, val2, val3, …),

(val1, val2, val3, …),

...,

...,

…);