Databases

```sql
create DATABASE CLASSDB; -- Create a database using CREATE DATABASE command


SHOW DATABASES; -- List all the DBs in your MYSQL Server


CREATE DATABASE IF NOT EXISTS CLASSDB; -- it will only create the database
if it doesn't exits


DROP DATABASE CLASSDB; -- Deleting a database


USE CLASSDB; -- Select a DB to work


SHOW TABLES; -- List all the tables in the selected DB


CREATE DATABASE FBDB; -- Create a new database


USE FBDB; -- Select the new database


CREATE TABLE USERS (

EMAIL VARCHAR(50) ,

PASSWORD VARCHAR(50) ,

USERNAME VARCHAR(50) ,
```

```sql
    ID INT PRIMARY KEY AUTO_INCREMENT

); -- Create a table


SHOW TABLES; -- List all the tables in the selected DB


DESC USERS; -- Describe the table


INSERT INTO USERS (USERNAME, EMAIL, PASSWORD) VALUES

('SANKET', 'SANKET@GMAIL.COM', '123456'); -- Insert data into the table


INSERT INTO USERS (USERNAME, EMAIL, PASSWORD) VALUES

('SARTHAK', 'SJ@GMAIL.COM', '123456'); -- Insert data into the table


SELECT ID, EMAIL, USERNAME FROM USERS; -- Select data from the table


SELECT * FROM USERS; -- Select all the data from the table


INSERT INTO USERS (USERNAME, EMAIL, PASSWORD) VALUES

('JD', 'JD@GMAIL.COM', '123456'),

('RIYA', 'RY@GMAIL.COM', '123456'),

('ROHIT', 'RR@GMAIL.COM', '123456') ; -- Insert multiple data into the table


-- CREATE A POSTS TABLE WITH ID, CONTENT, USER_ID, CREATED_AT COLUMNS
```

```sql
CREATE TABLE POSTS (

ID INT PRIMARY KEY AUTO_INCREMENT,

CONTENT VARCHAR(255),

USER_ID INT, -- TO WHOM THE POST BELONGS

CREATED_AT TIMESTAMP DEFAULT CURRENT_TIMESTAMP

);


INSERT INTO POSTS (CONTENT, USER_ID) VALUES

('HELLO WORLD', 1); -- Insert data into the table


INSERT INTO POSTS (CONTENT, USER_ID) VALUES

('HELLO WORLD', 1); -- Insert data into the table


INSERT INTO POSTS (CONTENT, CREATED_AT, USER_ID) VALUES

('HELLO WORLD AGAIN', '2021-01-01 12:00:00', 1); -- Insert data into the
table


SELECT * FROM POSTS; -- Select all the data from the table


SELECT * FROM USERS WHERE ID = 3; -- Select all the data from the table


SELECT * FROM POSTS WHERE USER_ID = 1 AND CONTENT = 'HELLO WORLD'; -- Select
```

all the data from the table

-- OPERATOR IN MYSQL: =, !=, <, >, <=, >=, AND, OR, NOT, IN, BETWEEN, LIKE, IS NULL, IS NOT NULL

```sql
SELECT * FROM POSTS WHERE CONTENT LIKE '%AGAIN'; -- Select all the data from the table

-- %AGAIN% SUBSTRING MATCH

-- %AGAIN STARTS WITH ANYTHING BUT ENDS WITH AGAIN

-- AGAIN% STARTS WITH AGAIN BUT CAN HAVE ANYTHING AFTER THAT

SELECT * FROM POSTS WHERE CONTENT LIKE '%WORLD' ORDER BY CREATED_AT ASC;

DELETE FROM POSTS WHERE ID = 1; -- Delete a row from the table

DROP TABLE POSTS; -- Delete a table

UPDATE POSTS SET CONTENT = 'MY WORLD' WHERE ID = 2; -- Update a row in the table
```
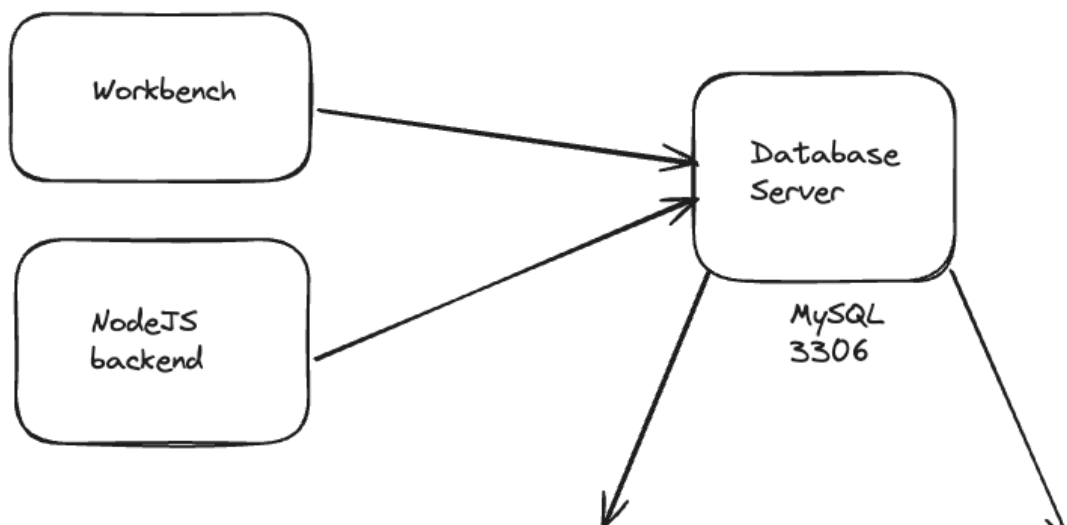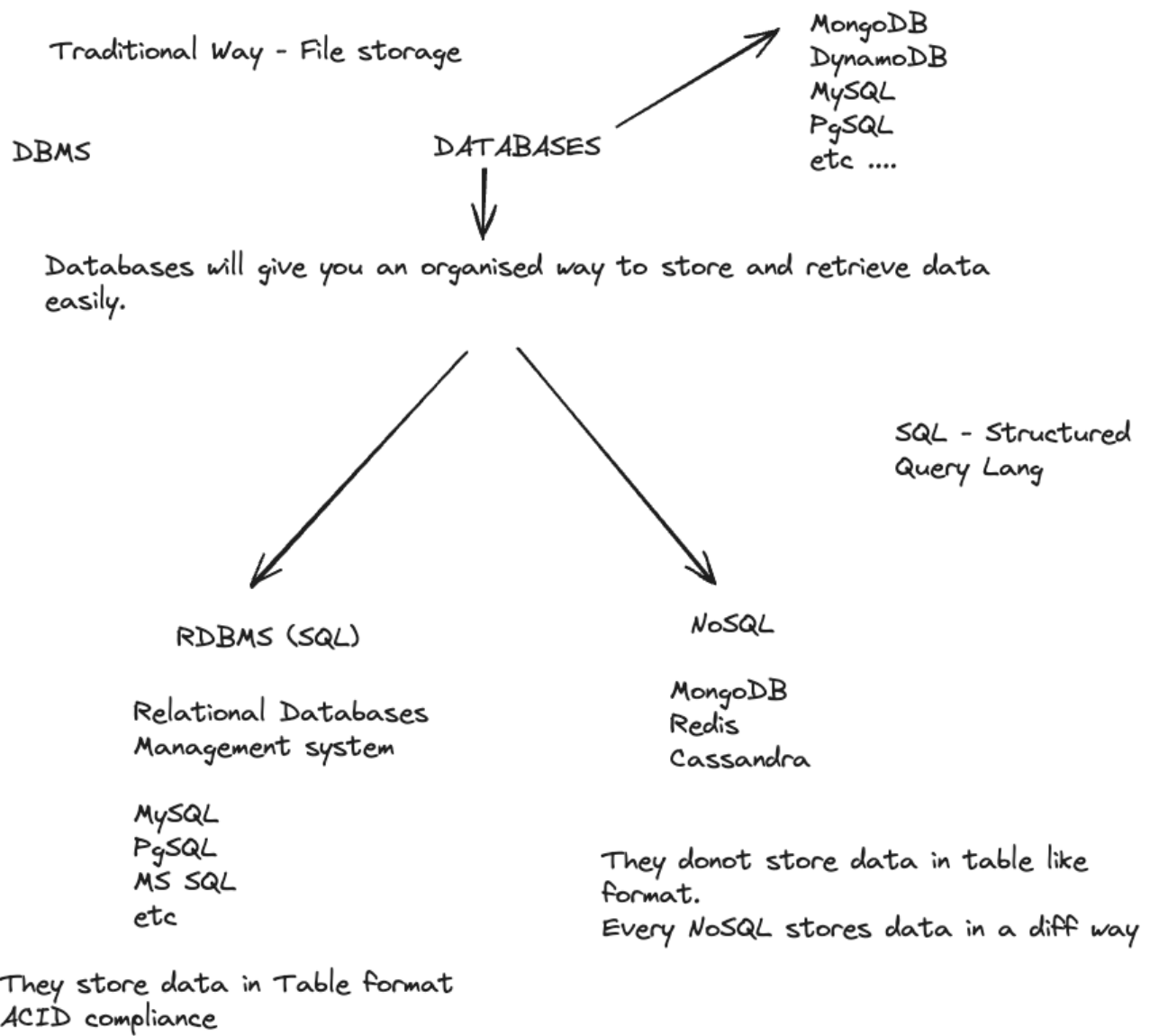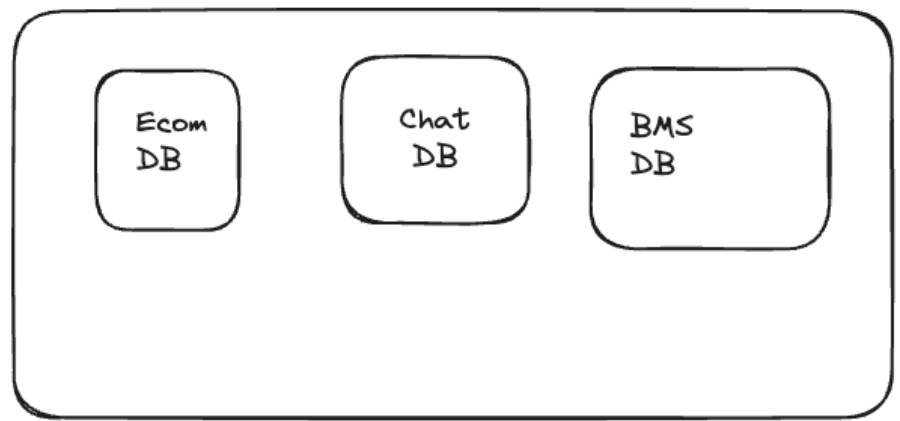
Traditional Way - File storage

DBMS   DATABASES   MongoDB
                                                 DynamoDB
                                                 MySQL
                                                 PgSQL
                                                 etc ....

Databases will give you an organised way to store and retrieve data easily.

                                                 SQL - Structured
                                                 Query Lang

RDBMS (SQL)   NoSQL

Relational Databases   MongoDB
Management system   Redis
                                     Cassandra
MySQL
PgSQL   They donot store data in table like
MS SQL   format.
etc   Every NoSQL stores data in a diff way

They store data in Table format
ACID compliance

```
┌─────────────┐
│  Workbench  │──────────┐
└─────────────┘          ╲      ┌─────────────┐
                          ╲     │  Database   │
                           ──→  │  Server     │
                           ──→  │             │
┌─────────────┐           ╱     └─────────────┘
│  NodeJS     │──────────╱        MySQL
│  backend    │                   3306
└─────────────┘
```

Ecom DB | Chat DB | BMS DB

ROWS

EMAIL	NAME	PASSWORD		
A@B.COM	AB	123		

COLUMNS

NUMERIC - INT, BIGINT, TINYINT, DECIMAL ETC

STRING - VARCHAR

JSON - JSON

DATE TIME : DATE, TIME, TIMESTAMP