No SQL Database

Limitation of SQL Database like RDBMS (MySQL, Oracle, Db2 etc)

These all database are schema base db. Before storing record in database we need to create schema table name of the table, table contains number of columns with data types. These database are good if data in structure format

Employee

Id Name Age city phnumber

100 Ravi 21 null null

101 Raju 24 null null

102 Mahesh 35 Bangalore null

103 Ajay null null phnumber

Student table sid,sname,age,skill

Sid SName Age Skill

1 Ravi 21 C

2 Ramesh 22 C,C++

Student, SkillSet, StudentSkillSet

To link we need to use join concept.

Retrieving the records from single table is faster than retrieve the records from more than one table using join.

No SQL Database

Mongo DB is one of the type of No SQL Database. It is an open source db. Which help to store the data using document in form of json.

Please verify the mongo db software home directory

C:\Program Files\MongoDB\Server\7.0\bin

To run mongo db we need to open the command prompt inside bin folder of specific version of database

mongod this command is use to run the server

by default mongo db check default path to store all required file to run the db.

Ie C🡪 data 🡪db

mongo db run on default port number 27017

to interact with mongo db server we can use

1. Command prompt

Open the terminal inside bin folder and write the command as mongosh

1. Gui : compass

RDBMS Mongo DB

show databases show databases

show dbs

create database databasename use databasename;

use databasename if db present it move inside that db else it will create

and switch to that db.

Table collection

show tables show collection or show tables

records document

row and column format json format.

mongo db provided pre defined object or reference is db which contains set of function which help to do some operation on mongo db database.

db.createCollection("Sample"); created collection ie table.

Mongo db collection is like a table which contains more than one document like a records in the form of JSON.

db.Sample.insertOne({name:"Raj"}); insert the document in collection.

db.Sample.insertOne({name:"Mahesh",age:25,city:"Bangalore"});

In Mongo DB \_id is like pk.

db.Employee.insertMany([

{\_id:1,name:"Ravi",age:21,city:"Bangalore"},

{\_id:2,name:"Raj",age:22,city:"Delhi"},

{\_id:3,name:"Rajesh",age:28,city:"Bangalore"},

{\_id:4,name:"Raju",age:27,city:"Mumbai"},

{\_id:5,name:"Reeta",age:23,city:"Bangalore"},

{\_id:6,name:"Ramu",age:21,city:"Pune"},

{\_id:7,name:"Meeta",age:26,city:"Bangalore"},

{\_id:8,name:"Ajay",age:25,city:"Delhi"},

{\_id:9,name:"Vijay",age:22,city:"Bangalore"},

{\_id:10,name:"Dinesh",age:23,city:"Hyderabad"},

{\_id:11,name:"Lex",age:24,city:"Bangalore"}

]);

db.CollectionName.find({condition},{columName1,columName2})

db.Employee.find({name:"Ravi"});

db.Employee.find({city:"Bangalore"});

db.Employee.find({age:{$gt:25}});

db.Employee.find({age:{$lt:25}});

db.Employee.find({},{name:1}); it retrieve name and \_id

db.Employee.find({},{name:1,age:1}); it retrieve name,\_id,age

db.Employee.find({},{name:1,age:1,\_id:0}); it retrieve name and age not \_id

**update query**

db.collectionname.updateOne({\_id:value},{$set:{field:value}})

db.collectionname.updateMany({field:value},{$set:{field:value}})

db.Employee.updateOne({\_id:2},{$set:{city:"New Delhi"}});

delete query

db.collectionName.deleteOne({\_id:value})

db.collectionName.deleteMany({field:value});

db.Employee.deleteOne({\_id:11});

mongo db collection relationship embedded style relationship.

Trainer

Student

Course

db.Trainer.insertOne({\_id:1,tname:"Ravi",skill:["Java","Python"]});

db.Trainer.insertOne({\_id:2,tname:"Raj",skill:["Java","Python","Angular","React JS"],students:{sid:100,sname:"Seeta",age:21}});

db.Trainer.insertOne({\_id:3,tname:"Ramesh",skill:["Java","Python","AI","ML"],students:[{sid:101,sname:"Veeta",age:22},{sid:102,sname:"Leeta",age:23}]});