**Mongo DB Database**

Mongo DB is a no SQL open source database. In Mongo DB we store the data in the form of json format using document concept.

No SQL (not only SQL).

MySQL, Oracle, DB2, SQL Server, Postgres : RDBMS Database.

Data must be structure format ie table

Data can be on any website divided into 3 category

Structure format : RDBMS Database

Semi structure format like xml, json etc.

No structure

Limitation of MySQL or any RDMBS database.

1. RDMBS database are schema base database means before storing data in database first we need to create table. Number of column for that table including data type of that column.

Employee 🡪 Id(int), Name(Varchar(20)), salary(float) etc.

1. If we need, to add new column we need to re-create the table or alter the table.

Employee

Id Name salary age city

100 Ravi 34000 null null

101 Ramesh 56000 null null

102 John 45000 24 null

103 Steven 58000 null Bangalore

3.Student 🡪Sid,SName,Age,SkillSet

1 Steven 34 C, C++

2 John 45 Java, Angular, ReactJS

Student

PK

1 Steven 34

2 John 45

SkillSet

PK

1000 Java

1001 C

1002 C++

1003 Angular

1004 ReactJS

StudentSkillSet

PK FK FK

Sssid SsId SId

111 1001 1

222 1002 1

In mongo DB we store the data in the form key-value pairs, value can be any type like

Number, string, Boolean, array type, object, array object type.

MySQL Mongo DB

Database Database

Tables Collections

Column/Attribute Attribute

Record document

Each document not mandatory must same types.

**Window User :**

Open the terminal or command prompt inside **C:\Program Files\MongoDB\Server\7.0\bin**

**mongod : this command is use to run the mongo db server.**

Before running this command we need to create one directory or folder inside C drive.

C: Drive

**data** 🡪folder

**db** -🡪folder

Non window user

Open the terminal

sudo mkdir -p /data/db creating the folder.

sudo chown -R $(whoami) /data/db provide the permission

now run the command as mongod

**mongod** -🡪 to run the server

**mongo**  -🡪 to run client terminal old version

**mongosh** -🡪run the client terminal new version

show databases; it is use to display all databases present in mongodb

show dbs;

use databasename; it that database not present it will create and switch inside that database. If already present then it move inside that database.

show collections;

Or

show tables; it display all tables present in current db.

Creating collection in mongo db.

Mongo DB provided pre defined object it db. Which contains lot of function which help to do operation as create, view, delete, update etc.

db.createCollection(“CollectionName”)

inserting document inside a collection

db.collectionName.insertOne(**{key:value}**);

**db.Sample.insertOne({"name":"Steven"});**

db.Sample.insertMany([{name:"Ajay",city:"Bangalore"},{name:"Vikash",age:34},{fname:"Raj",lname:"Deep"}]);

**To view documents from a collections**

db.collectionName.find();

mongo db by default \_id attribute created for each document with unique value.

In mongo db \_id is like primary key. But in mongo db \_id is a pre-defined attribute. We can’t make any other column as PK. If you want to insert unique value you can pass the attribute name must \_id.

In Mongo DB we can insert the document in a collection without creating a collection.

db.Employees.insertMany(

[

{\_id:100,name:"Steven",age:25,salary:45000,deptid:1,city:"Bangalore"},

{\_id:101,name:"Raj",age:27,salary:42000,deptid:2,city:"Mumbai"},

{\_id:102,name:"Ajay",age:29,salary:41000,deptid:3,city:"Bangalore"},

{\_id:103,name:"Leena",age:35,salary:49000,deptid:1,city:"Delhi"},

{\_id:104,name:"John",age:38,salary:48000,deptid:1,city:"Bangalore"},

{\_id:105,name:"Root",age:21,salary:46000,deptid:2,city:"Mumbai"},

{\_id:106,name:"Butler",age:27,salary:45000,deptid:2,city:"Delhi"},

{\_id:107,name:"Reeta",age:22,salary:42000,deptid:3,city:"Bangalore"},

{\_id:108,name:"Meeta",age:29,salary:43000,deptid:3,city:"Delhi"},

{\_id:109,name:"Leeta",age:30,salary:42000,deptid:2,city:"Bangalore"},

{\_id:110,name:"Keeta",age:32,salary:40000,deptid:1,city:"Mumbai"}

]

);

**View control functions**

limit() function : this function is use to view top n document present in collection

db.Employees.findOne(); : it is use to retrieve top most document present in collection without condition.