**JFSD: A-Z of Back-end and Database Development**

**Day 14 : 25 Aug 24**

RDBMS database

Limitation of RDBMS database

1. RDBMS database is schema database. Means before storing our record in database first we need to create table with number column as well their data types. Then only we can store the data.
2. RDBMS database is to store structure data.
3. Data : a. structure format b. semi structure (xml, json or any other format). C. non structure
4. Emp

Id(PK), name(varchar), salary(float), phnumber, city

1 Raj 12000 null null

2 Ravi 15000 null null

3 Steven 18000 987474747 null

4 Leena 34000 null Bangalore

5. Codd’ Rule

Sid SName tech

1 Ravi Java

2 Raj Java,Python

To store more than one value we need to create more than one table and link with pk and fk. To retrieve the value from more than one table we need to use join concept. Retrieve the record from single table is always faster than retrieve record from more than one table.

Why need to learn no sql database.

Mongo DB : Mongo DB is an open source no sql database. In mongo db we store the information using document concept the form of json.

MEAN Stack Mongo DB Express JS Angular Node JS

MERN Stack Mongo DB express JS React JS Node JS

Express JS is a type of Node JS external module which help to create server side programming or rest api using JavaScript.

RDBMS(MySQL) Mongo DB

create database databasename use databasename

sse databaseame if db not present it will create and switch to that db. If present it will switch to that db

show databases show databases

or

show dbs

table collections

record document

in table format in json format

window user

in C driver create folder as data and inside data create the folder as db

non window user open the terminal and run the command

sudo mkdir -p /data/db

to run the server we need to execute the command as

mongod

mongo db run on default port number 27017

please download mongo shell and copy and paste in bin folder and run the command as mongosh

mongo db commands

use akash\_db

show tables

show collections to view all collection details.

Creating new collection like a table.

Mongo db provided pre defined object ie db which contains set of function which help to operation.

db.createCollection("Sample"); this command is use to create the collection.

Below command is use to insert the data using document in collection

db.Sample.insertOne({name:"Raju"})

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

to view all record or document from collection

db.Sample.find();

db.Employees.insertMany(

[

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

{\_id:2,name:"Ajay",age:23,city:"Delhi"},

{\_id:3,name:"Vijay",age:26,city:"Bangalore"},

{\_id:4,name:"Raj",age:22,city:"Delhi"},

{\_id:5,name:"Steven",age:21,city:"Pune"},

{\_id:6,name:"John",age:29,city:"Bangalore"},

{\_id:7,name:"Reeta",age:23,city:"Mumbai"},

{\_id:8,name:"Meeta",age:24,city:"Bangalore"}

]);

To view document using index position

Error in this query

db.Employees.find()[0]

inside find 1st curly braces to apply condition and 2nd curly braces to retrieve specific field values.

db.CollectionName.find({condition},{fieldname,fieldName});

db.Employees.find({},{name:1}); it display name and \_id 1 true consider.

db.Employees.find({},{name:1,\_id:0}); 1 true and 0 false.

Apply condition

db.Employees.find({\_id:2});

db.Employees.find({name:”Bangalore” });

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

$gt, $lt, $gte, $lte, $eq, $ne

Update the document

db.Employees.updateOne({\_id:1},{$set:{age:25}});

db.Employees.updateMany({city:"Delhi"},{$set:{city:"New Delhi"}});

remove document

db.Employees.deleteOne({\_id:6});

Trainer and Student embedded style relationship

db.Trainer.insertOne({\_id:100,name:"Ravi",tech:"Java",student:{\_id:1,sname:"Meeta",age:21}});

db.Trainer.insertOne({\_id:101,name:"Raj",tech:["Java","Python"],student:[{\_id:2,sname:"Veeta",age:24},{\_id:3,sname:"Leeta",age:25}]});