classmate
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Lab-1.

Aim - Explore Mongodb Database

Q. What is Mongobd database.

A:
* Mongo db is a popular NoSQL database that is designed for storing and managing large volumes of data that is unstructured. It follows document oriented data model, where data is stored in flexible, JSON like documents that can have varying structures and fields. It is also open source.
* Mongo db scales horizontally using sharding.
* It also increases data availability with multiple copies of data on different servers.

Q. What is the difference between Mongo db and SQL.

Mongo db	SQL
* data is represented as a collection of JSON documents.	* Data in SQL is represented as table and rows.
* Mongo db does not handle transactions, each operation is atomic.	* SQL allows for atomic transactions.
* We need not define schema in Mongo db.	* In case of SQL we first define the tables and columns.
* Mongodb does not enable join but instead supports multidimensional data types such as arrays.	* Join commands permits querying across multiple tables which is a significant advantage.

Q3 What are Crud operations in Mongodb.

A3. Create, insert, update, delete.

Q4. What is find operation.

db.collection_name.find(query, projection)
query - optional parameters that defines selection criteria.
projection - optional parameters that defines what to return if query criteria are not successfully met.

Working with Mongodb. (Commands.)

1. → mongo or mongosh
→ use myDB
→ db
→ show dbs.

→ db.createCollection("Student");
o/p {"ok" : 1}.

→ db.Student.drop();
o/p true.

→ db.createCollection("student");

→ db.Student.drop();

→ db.Student.insert({_id:1, StudName: "Michelle Jacinth
, Grade: "VII" Hobbies: "Internet surfing
});

→ db.Student.update({_id:3, StudName:"AryanDavid", Grade:"VII"}, {$set:{Hobbies:"Skating"}}, {upsert:true});

→ Find Method:

→ db.Student.find({StudName:"Aryan David"});

→ db.Student.find({}, {StudName:1, Grade:1, _id:0});

→ db.Student.find({Grade:{$eq:'VII'}}).pretty();

→ db.Student.find({Hobbies:{$in:['Chess','Skating']}}).pretty();

→ db.Student.find({StudName:/^M/}).pretty();

→ db.Student.find({StudName:/e/}).pretty();

→ db.Student.count();

→ db.Student.find().sort({StudName:-1}).pretty();

Save Methods:

→ db.Students.save({StudName:"Vamsi", Grade:"VI"})

→ db.Students.update({_id:4}, {$set:{Location:"Nellore"}});

→ db.Students.update({_id:4}, {$unset:{Location:"Nellore"}});

→ db.Student.find({_id:1}, {StudName:1, Grade:1, _id:0});