Web Tech Lab Assignment - 9

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1. Connect to a MongoDB server using MongoDB Compass.
2. Create a new database named "test db" in MongoDB Compass.
3. Create a new collection named "students" in the "testdb" database.
4. Insert ten documents into the "students" collection with the following fields: name, age, and email.

```
const { MongoClient } = require('mongodb');

// Connection URI
const uri = "mongodb://localhost:27017/";

// Create a new MongoClient
const client = new MongoClient(uri);

async function main() {
    try {
        // Connect the client to the MongoDB server
        await client.connect();
        console.log("Connected to MongoDB server");

        // Access a specific database (replace 'testdb' with your desired
database name)
        const database = client.db('testdb');

        // Access a specific collection within the database
        const collection = database.collection("students");

        // Example: Inserting a document into the collection
        const result = await collection.insertOne({ name: "John", age: 21,
email: "123@rgipt.ac.in" });
        console.log("Inserted document:", result.insertedId);
        const result = await collection.insertOne({ name: "Jinny", age:
21, email: "123@rgipt.ac.in" });
        console.log("Inserted document:", result.insertedId);
```

```
        const result = await collection.insertOne({ name: "jalan", age:
21, email: "123@rgipt.ac.in" });
        console.log("Inserted document:", result.insertedId);
        const result = await collection.insertOne({ name: "Jonny", age:
21, email: "123@rgipt.ac.in" });
        console.log("Inserted document:", result.insertedId);
        const result = await collection.insertOne({ name: "James", age:
21, email: "123@rgipt.ac.in" });
        console.log("Inserted document:", result.insertedId);
        const result = await collection.insertOne({ name: "Jacob", age:
21, email: "123@rgipt.ac.in" });
        console.log("Inserted document:", result.insertedId);
        const result = await collection.insertOne({ name: "Justin", age:
21, email: "123@rgipt.ac.in" });
        console.log("Inserted document:", result.insertedId);
        const result = await collection.insertOne({ name: "Jolly", age:
21, email: "123@rgipt.ac.in" });
        console.log("Inserted document:", result.insertedId);
        const result = await collection.insertOne({ name: "John", age: 21,
email: "123@rgipt.ac.in" });
        console.log("Inserted document:", result.insertedId);
        const result = await collection.insertOne({ name: "John", age: 21,
email: "123@rgipt.ac.in" });
        console.log("Inserted document:", result.insertedId);

        // Example: Querying documents from the collection
        const queryResult = await collection.findOne({ name: "John" });
        console.log("Query result:", queryResult);
    } finally {
        // Close the client connection
        await client.close();
    }
}

// Call the main function
main().catch(console.error);
```

5. View the contents of the "students" collection.

```
const { MongoClient } = require('mongodb');
```

```
// Connection URI
const uri = "mongodb://localhost:27017/";

// Create a new MongoClient
const client = new MongoClient(uri);

async function viewStudentsCollection() {
    try {
        // Connect the client to the MongoDB server
        await client.connect();
        console.log("Connected to MongoDB server");

        // Access the database containing the "students" collection
        const database = client.db('<testdb>');
        const collection = database.collection('students');

        // Find all documents in the "students" collection
        const cursor = collection.find();

        // Iterate over the cursor to access each document
        await cursor.forEach(document => {
            console.log(document);
        });
    } finally {
        // Close the client connection
        await client.close();
    }
}

// Call the function to view the contents of the "students" collection
viewStudentsCollection().catch(console.error);
```

6. Update the age of a specific student in the "students" collection.

```
const { MongoClient, ObjectId } = require('mongodb');

// Connection URI
const uri = "mongodb://localhost:27017/";
```

```
// Create a new MongoClient
const client = new MongoClient(uri);

async function updateStudentAge(studentId, newAge) {
    try {
        // Connect the client to the MongoDB server
        await client.connect();
        console.log("Connected to MongoDB server");

        // Access the database containing the "students" collection
        const database = client.db('<your_database_name>'); // Replace
'<your_database_name>' with the name of your database
        const collection = database.collection('students');

        // Update the age of the student with the specified studentId
        const filter = { _id: ObjectId(studentId) }; // Convert the
studentId string to ObjectId
        const updateDoc = {
            $set: {
                age: newAge // Update the age field
            }
        };
        const result = await collection.updateOne(filter, updateDoc);

        // Check if the update was successful
        if (result.modifiedCount === 1) {
            console.log(`Successfully updated age of student with ID
${studentId}`);
        } else {
            console.log(`No student found with ID ${studentId}`);
        }
    } finally {
        // Close the client connection
        await client.close();
    }
}

// Call the function to update the age of a specific student
updateStudentAge('James', 25).catch(console.error)
```