**Experiment - 8**

Develop a script that uses MongoDB's aggregation framework to perform operations like grouping, filtering, and sorting. For instance, aggregate user data to find the average age of users in different cities.

**a) Programs: List the databases**

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

async function main() {

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

const client = new MongoClient(uri);

try {

// Connect to the MongoDB cluster

await client.connect();

// Make the appropriate DB calls

await listDatabases(client);

} catch (e) {

console.error(e);

} finally {

// Close the connection to the MongoDB cluster

await client.close();

}

}

main().catch(console.error);

async function listDatabases(client) {

databasesList = await client.db().admin().listDatabases();

console.log("Databases:");

databasesList.databases.forEach(db => console.log(` - ${db.name}`));

};

**Output:**

**A black screen with white text

Description automatically generated**

**b) Program: To create database**

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

async function main(){

const uri = "mongodb://localhost:27017/mydb";

const client = new MongoClient(uri);

try {

// Connect to the MongoDB cluster

await client.connect();

await createdb(client, "mydatabase");

} finally {

// Close the connection to the MongoDB cluster

await client.close();

}

}

main().catch(console.error);

async function createdb(client, dbname){

const dbobj = await client.db(dbname);

console.log("Database created");

console.log(dbobj);

}

**output:**

**A black background with white text

Description automatically generated**

**c) Program: To create collection**

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

async function main(){

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

const client = new MongoClient(uri);

try {

// Connect to the MongoDB cluster

await client.connect();

await newcollection(client, "mydatabase");

} finally {

// Close the connection to the MongoDB cluster

await client.close();

}

}

main().catch(console.error);

async function newcollection (client, dbname){

const dbobj = await client.db(dbname);

const collection = await dbobj.createCollection("MyCollection");

console.log("Collection created");

console.log(collection);

}

**Output:**

A close-up of a black background

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