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**LAB – 06 – Advanced Programming**

**Task 1:** **Create a database named "mydb". Save the code in a file called "demo\_create\_mongo\_db.js" and run the file.**

**Code**

var MongoClient = require('mongodb').MongoClient;

var url = "mongodb://localhost:27017/mydb";

MongoClient.connect(url, function(err, db) {

if (err) throw err;

console.log("Database created!");

db.close();

});

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**Task 2:** **Create a collection called "customers". Save the code in a file called "demo\_mongodb\_createcollection.js" and run the file.**

**Code**

var MongoClient = require('mongodb').MongoClient;

var url = "mongodb://localhost:27017/";

MongoClient.connect(url, function (err, db) {

if (err) throw err;

var dbo = db.db("mydb")

dbo.createCollection("Customers", function (err, res) {

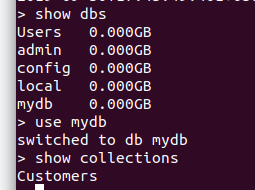
if (err) throw err;

console.log("Collection Created!");

db.close();

});

});



**Task 3:** **Insert a document in the "customers" collection. Save the code in a file called "demo\_mongodb\_insert.js" and run the file.**

**Code**

var MongoClient = require('mongodb').MongoClient;

var url = "mongodb://localhost:27017/";

MongoClient.connect(url, function(err, db) {

if (err) throw err;

var dbo = db.db("mydb");

var myobj = { name: "Company Inc", address: "Highway 37" };

dbo.collection("customers").insertOne(myobj, function(err, res) {

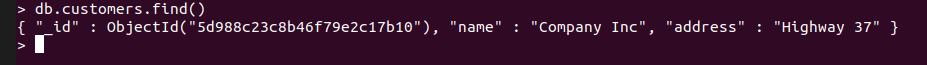
if (err) throw err;

console.log("1 document inserted");

db.close();

});

});



**Task 4: Insert multiple documents in the "customers" collection. Save the code in a file called "demo\_mongodb\_insert\_multiple.js" and run the file.**

**Code**

var MongoClient = require('mongodb').MongoClient;

var url = "mongodb://localhost:27017/";

MongoClient.connect(url, function(err, db) {

if (err) throw err;

var dbo = db.db("mydb");

var myobj = [

{ name: 'John', address: 'Highway 71'},

{ name: 'Peter', address: 'Lowstreet 4'},

{ name: 'Amy', address: 'Apple st 652'},

{ name: 'Hannah', address: 'Mountain 21'},

{ name: 'Michael', address: 'Valley 345'},

{ name: 'Sandy', address: 'Ocean blvd 2'},

{ name: 'Betty', address: 'Green Grass 1'},

{ name: 'Richard', address: 'Sky st 331'},

{ name: 'Susan', address: 'One way 98'},

{ name: 'Vicky', address: 'Yellow Garden 2'},

{ name: 'Ben', address: 'Park Lane 38'},

{ name: 'William', address: 'Central st 954'},

{ name: 'Chuck', address: 'Main Road 989'},

{ name: 'Viola', address: 'Sideway 1633'}

];

dbo.collection("customers").insertMany(myobj, function(err, res) {

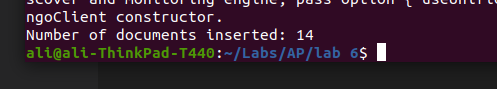
if (err) throw err;

console.log("Number of documents inserted: " + res.insertedCount);

db.close();

});

});





**Task 5:** **Insert three records in a "products" table, with specified \_id fields. Save the code in a file called "demo\_mongodb\_insert\_id.js" and run the file.**

**Code**

var MongoClient = require('mongodb').MongoClient;

var url = "mongodb://localhost:27017/";

MongoClient.connect(url, function(err, db) {

if (err) throw err;

var dbo = db.db("mydb");

var myobj = [

{ \_id: 154, name: 'Chocolate Heaven'},

{ \_id: 155, name: 'Tasty Lemon'},

{ \_id: 156, name: 'Vanilla Dream'}

];

dbo.collection("products").insertMany(myobj, function(err, res) {

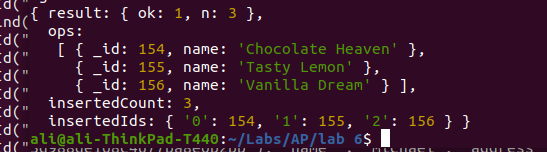
if (err) throw err;

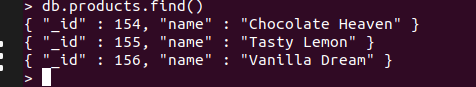
console.log(res);

db.close();

});

});





**Task 6:** **Find the first document in the customer’s collection. Save the code in a file called "demo\_mongodb\_findone.js" and run the file.**

**Code**

var MongoClient = require('mongodb').MongoClient;

var url = "mongodb://localhost:27017/";

MongoClient.connect(url, function(err, db) {

if (err) throw err;

var dbo = db.db("mydb");

dbo.collection("customers").findOne({}, function(err, result) {

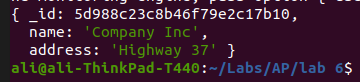
if (err) throw err;

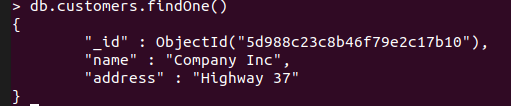
console.log(result);

db.close();

});

});





**Task 7:** **Return the fields "name" and "address" of all documents in the customers collection**

**Code**

var MongoClient = require('mongodb').MongoClient;

var url = "mongodb://localhost:27017/";

MongoClient.connect(url, function(err, db) {

if (err) throw err;

var dbo = db.db("mydb");

dbo.collection("customers").find({}, { projection: { \_id: 0, name: 1, address: 1 } }).toArray(function(err, result) {

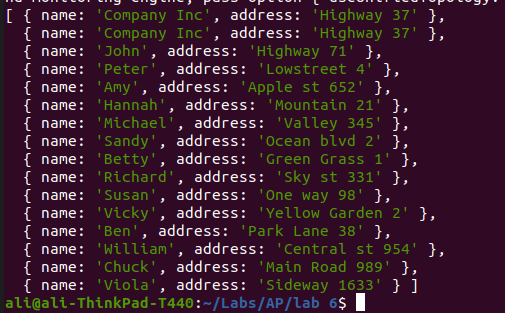
if (err) throw err;

console.log(result);

db.close();

});

});



**Task 8:** **Find documents with the address "Park Lane 38". Save the code in a file called "demo\_mongodb\_query.js" and run the file.**

**Code**

var MongoClient = require('mongodb').MongoClient;

var url = "mongodb://localhost:27017/";

MongoClient.connect(url, function(err, db) {

if (err) throw err;

var dbo = db.db("mydb");

var query = {address:"Park Lane 38"}

dbo.collection("customers").find(query, { projection: { \_id: 0, name: 1, address: 1 } }).toArray(function(err, result) {

if (err) throw err;

console.log(result);

db.close();

});

});



**Task 9:** **Sort the result alphabetically by name. Save the code in a file called "demo\_sort.js" and run the file.**

**Code**

var MongoClient = require('mongodb').MongoClient;

var url = "mongodb://localhost:27017/";

MongoClient.connect(url, function(err, db) {

if (err) throw err;

var dbo = db.db("mydb");

var mysort = {name : 1}

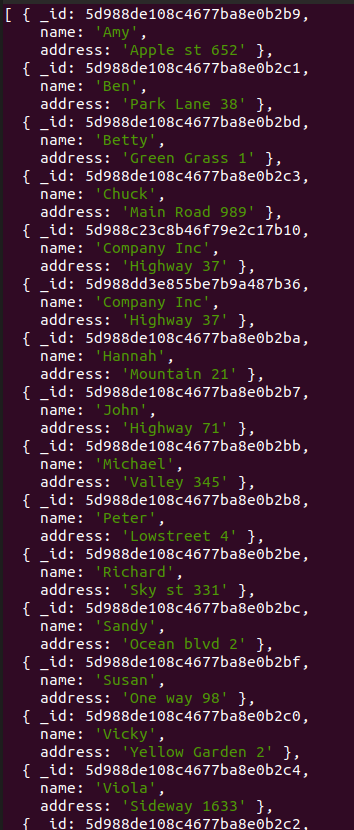
dbo.collection("customers").find().sort(mysort).toArray(function(err, result) {

if (err) throw err;

console.log(result);

db.close();

});

});

**Task 10:** **Delete the document with the address "Mountain 21". Save the code in a file called "demo\_delete.js" and run the file.**

**Code**

var MongoClient = require('mongodb').MongoClient;

var url = "mongodb://localhost:27017/";

MongoClient.connect(url, function(err, db) {

if (err) throw err;

var dbo = db.db("mydb");

var myquery = { address: 'Mountain 21' };

dbo.collection("customers").deleteOne(myquery, function(err, obj) {

if (err) throw err;

console.log("1 document deleted");

db.close();

});

});



**Task 11: Delete all documents were the address starts with the letter "O". Save the code in a file called "demo\_delete\_many.js" and run the file**

**Code**

var MongoClient = require('mongodb').MongoClient;

var url = "mongodb://localhost:27017/";

MongoClient.connect(url, function(err, db) {

if (err) throw err;

var dbo = db.db("mydb");

var myquery = { address: /^O/ };

dbo.collection("customers").deleteMany(myquery, function(err, obj) {

if (err) throw err;

console.log(obj.result.n + " document(s) deleted");

db.close();

});

});



**Task 12: Delete the "customers" table. Save the code in a file called "demo\_drop.js" and run the file.**

**Code**

var MongoClient = require('mongodb').MongoClient;

var url = "mongodb://localhost:27017/";

MongoClient.connect(url, function(err, db) {

if (err) throw err;

var dbo = db.db("mydb");

dbo.collection("customers").drop(function(err, delOK) {

if (err) throw err;

if (delOK) console.log("Collection deleted");

db.close();

});

});





**Task 13: Update the document with the address "Valley 345" to name="Mickey" and address="Canyon 123". Save the code in a file called "demo\_update\_one.js" and run the file**

**Code**

var MongoClient = require('mongodb').MongoClient;

var url = "mongodb://127.0.0.1:27017/";

MongoClient.connect(url, function(err, db) {

if (err) throw err;

var dbo = db.db("mydb");

var myquery = { address: "Valley 345" };

var newvalues = { $set: {name: "Mickey", address: "Canyon 123" } };

dbo.collection("customers").updateOne(myquery, newvalues, function(err, res) {

if (err) throw err;

console.log("1 document updated");

db.close();

});

});



**Task 14: Consider you have a "customers" collection. Limit the result to only return 5 documents. Save the code above in a file called "demo\_mongodb\_limit.js" and run the file.**

**Code**

var MongoClient = require('mongodb').MongoClient;

var url = "mongodb://localhost:27017/";

MongoClient.connect(url, function(err, db) {

if (err) throw err;

var dbo = db.db("mydb");

dbo.collection("customers").find().limit(5).toArray(function(err, result) {

if (err) throw err;

console.log(result);

db.close();

});

});



**Task 15: Practice the Join operations on different tables**.

**Code**

var MongoClient = require('mongodb').MongoClient;

var url = "mongodb://127.0.0.1:27017/";

MongoClient.connect(url, function(err, db) {

if (err) throw err;

var dbo = db.db("mydb");

dbo.collection('customers').aggregate([

{ $lookup:

{

from: 'products',

localField: 'product\_id',

foreignField: '\_id',

as: 'orderdetails'

}

}

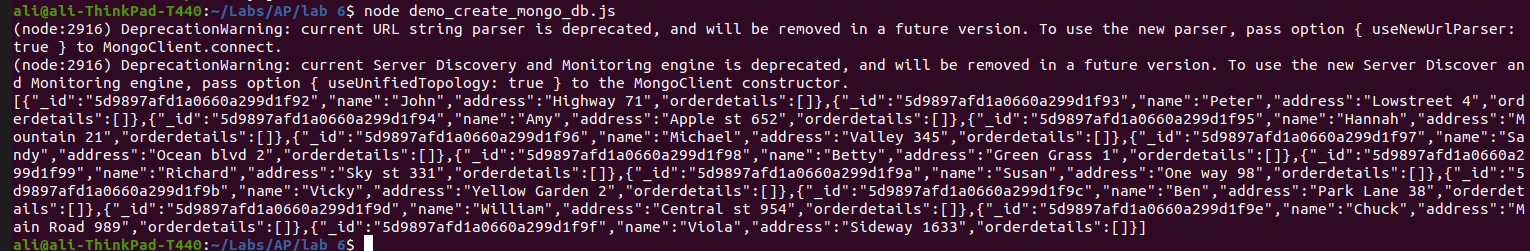
]).toArray(function(err, res) {

if (err) throw err;

console.log(JSON.stringify(res));

db.close();

});

});