Today, we will be talking about databases and do operations on one ourselves

kingabesh ⭐

@here what is your definition of a database?

Your first task was designed to show you how to write data to somewhere, albeit, a file
You will make use of the fs module as you proceed and when you start writing CLIs and certain packages (edited)

`The database is a systematic collection of data databases support storage and manipulation of data. Databases make data management easy`

The main operations you carry out on a database are:

`Insert, Read, Update and Delete`

We have two major types of databases
Relational databases and non-relational databases

Relational databases are well suited for `creating relations` and make use of tables, rows, and columns
Non-relational databases make use of documents, collections, and fields

If we are to create a comparison

```
Relational  Non-relational
Tables === Documents
Rows === Collections
Columns === Fields
```

Examples of relational databases are but not limited to `MySQL, Microsoft SQL, Oracle Database, PostgreSQL`

Example of non-relational databases are: **MongoDB**, DocumentDB, **Cassandra**, Coachbase, **HBase**, **Redis**, and **Neo4j**
I highlighted the words `creating relations`

In the world of databases, you are better off associating items with their owners.
Let me use you guys as examples

Every intern here must have a slack username:
You are related to your slack username in the world of databases
This is helpful so we can do stuff like `getting all slack details for a particular intern`

That relation enables us to do this

This is just what you need to know
Should in case anyone decides to ask you what relations are

Non-relational databases do not prioritize creating relations where you can relate items with their owners of course

The key difference to note is, relational databases make use of tables but non-relational databases do not

That is easily the difference.
Our main focus today is on a database that goes well with node

`Mongo DB`

You can use any database with node but this is the most popular and for reasons, you might find interesting

- It is fast
- Collections are just like plain javascript objects so you have an easier time wrapping your head around them

A document is made of many collections

Matter of factly speaking, data is stored like objects in non-relational databases and javascript engineers love objects

a collection has fields just like an object would have a field

```
{
name: "Node JS",
email: "nodejs@gmail.com",
phone_no: 07012345678
address: "start ng road, node, HNG"
}
```

the above is what a collection looks like

the `name`, `email`, `phone_no,` and `address` are fields on the collection

the above could be a user collection. That could be how you are stored in our database

Why don't we create our own database?

@here you will all be creating databases now

```
1). Install Mongo DB
- Open up your terminal
- Run npm install mongodb
```

React here once you have done so:

5 replies

```
create a folder or use the same folder you used for the previous class:
- Create a file called mongo_db.js
- Write var mongo = require('mongodb') at the top of this file;
```

React here once you do so:

@here

```
2) Now we create a database.
```

```
- To create a database in MongoDB, start by creating a MongoClient object, then
specify a connection URL with the correct IP address and the name of the database you
want to create.
MongoDB will create the database if it does not exist, and make a connection to it.
```

The above may seem like too much talk:

Let me show you in code:

```
Paste this in the file you just created.
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();
});
```

What does this do?

The MongoClient comes with MongoDB

It is an object.
I guess at this point, we all understand that that connect is a method on the MongoClient object **@here**

right?

connect does what it says, connect your app to MongoDB

connect takes in an error object and a callback
we talked about callbacks in the last class, it is a function that is passed into a function.

```
Run node mongo_db.js
What do you see on your terminal?
```

6 replies

View thread

@class run `mongo --version` and send a screenshot

9 replies

View thread

@class:

navigate here:

`C:\Program Files\MongoDB\Server\4.2\bin\mongo.exe`

on your terminal

go to program files

click on Mongo DB

click on Server

click on 4.2

Click on bin

click on mongo

Do this and send a screenshot **@here**

8 replies

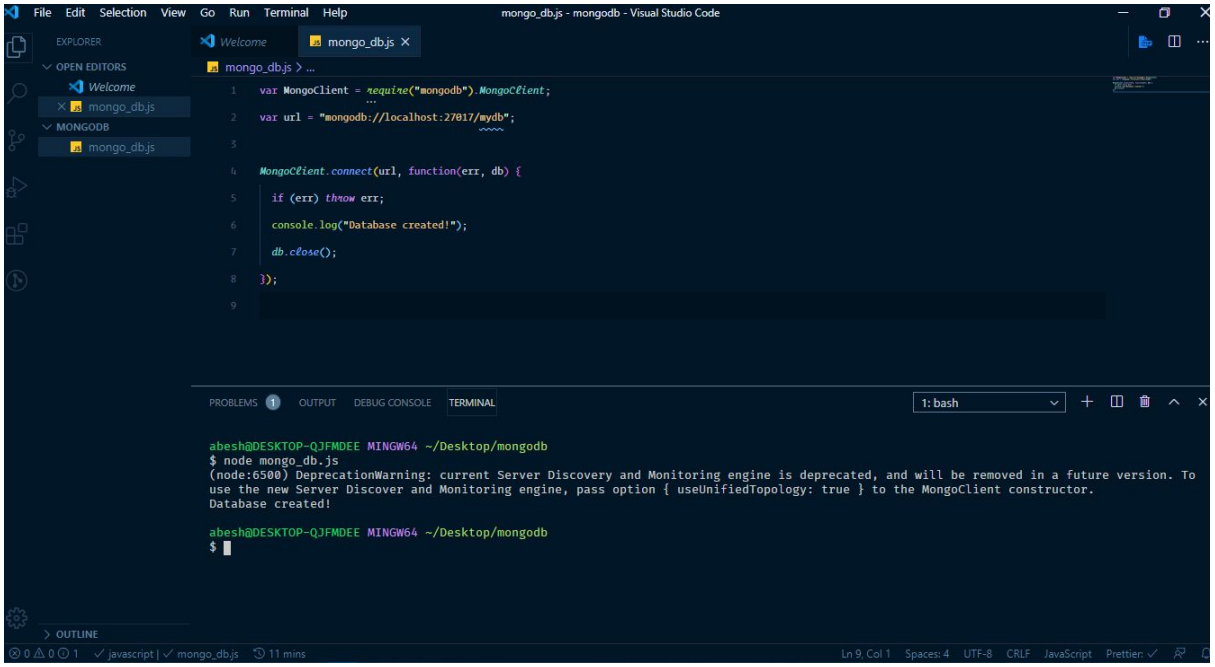
View thread

@here did you run npm install MongoDB as instructed?

3 replies

View thread

Capture.PNG

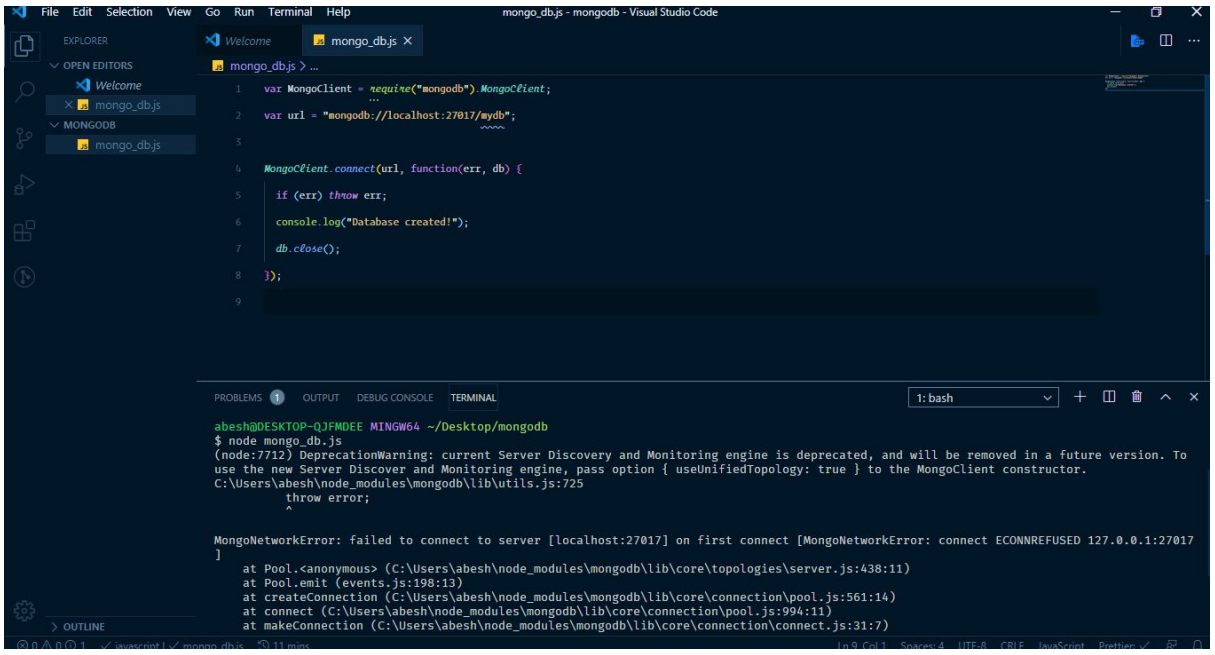


@here to get it running like that you need to have your local mongo db server running

Those who navigated to that path, can run `node mongo_db.js` and send a screenshot again

When you do not have your server running

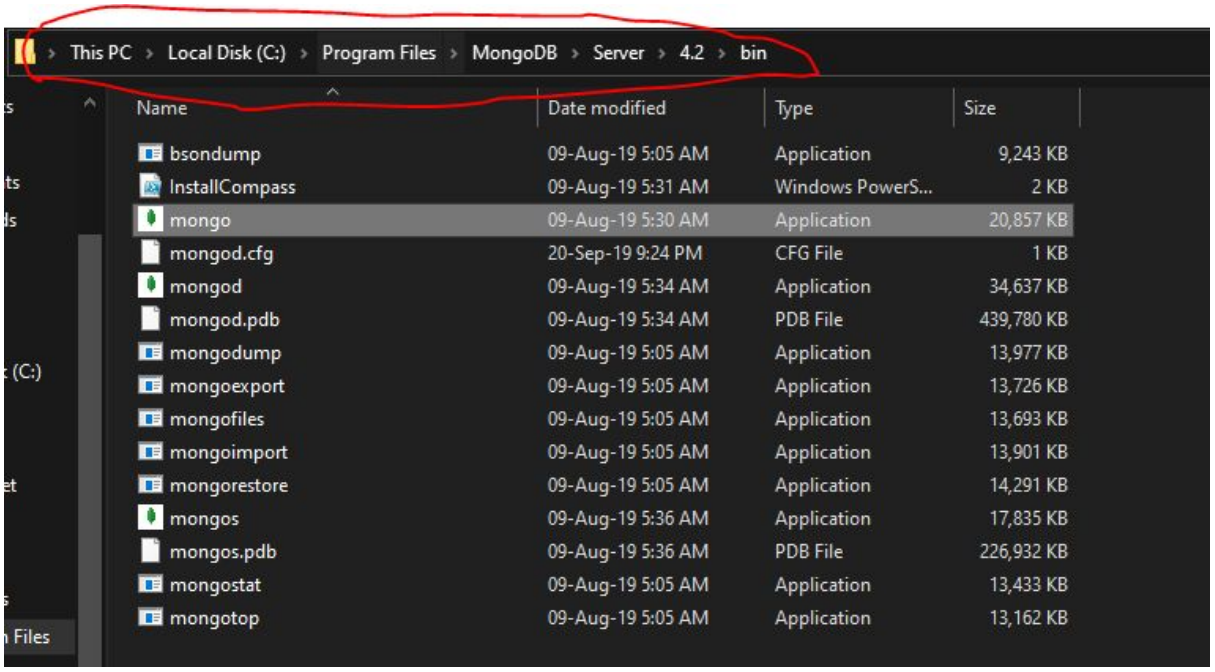
Capture.PNG



@here send a screenshot if you have successfully run `node mongo_db.js`

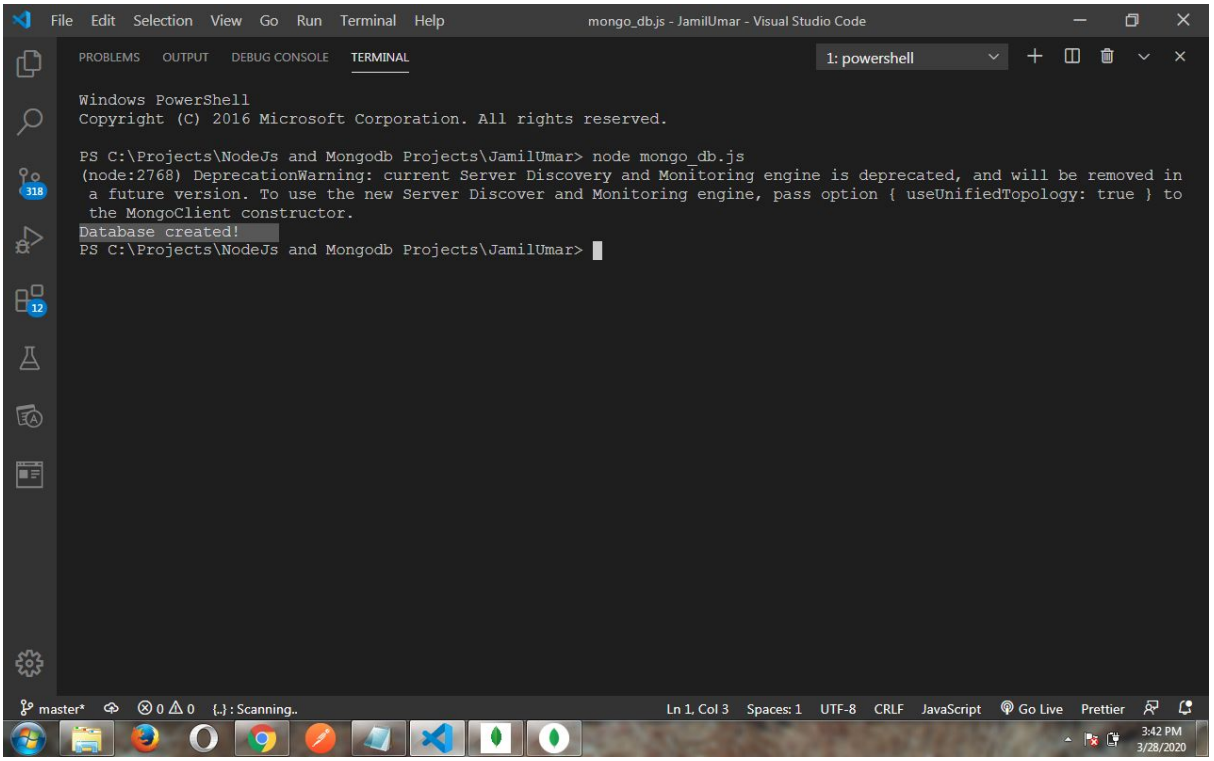
See where to find your server and start it for windows users

Capture.PNG



@here you should get this

mongodb_1.png



@JamilUmar Please explain how you got that for the class

The floor is open for you

JamilUmar

First, install MongoDB:

```
npm install MongoDB
```

3:51

once install is complete put down the following 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();
});
```

just run node mongo_db.js which is the name of your file

if everything is successful you should get the message Database Created

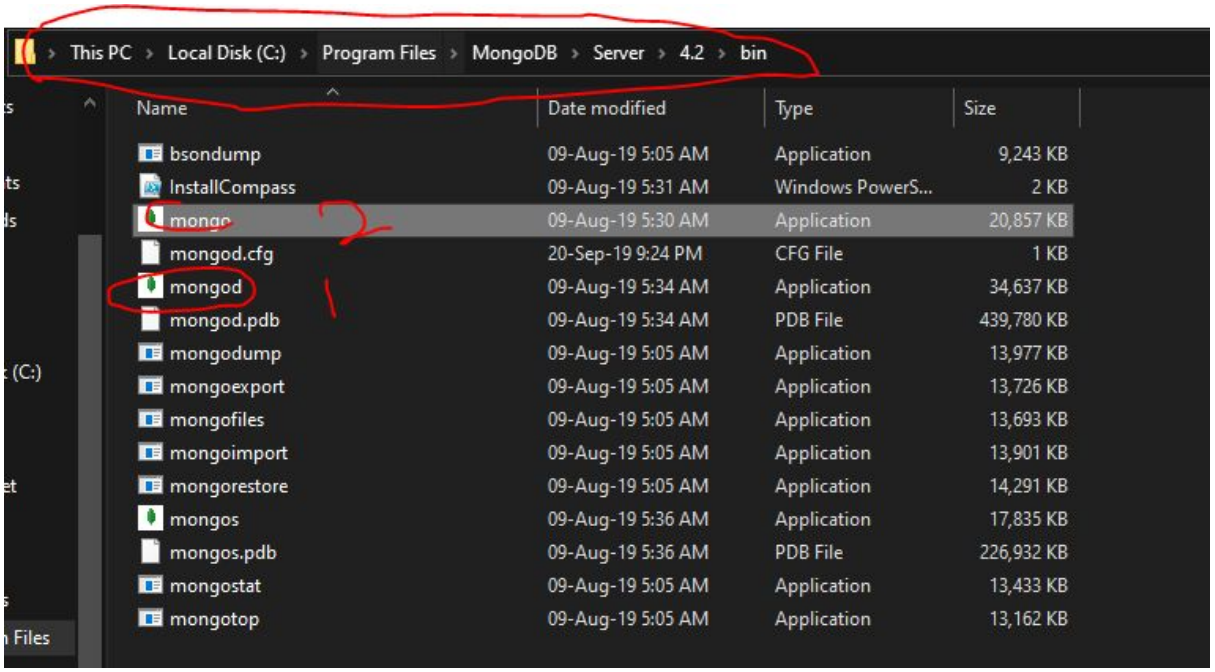
else an error is thrown
done sir

kingabesh
@here you can install MongoDB server here
https://www.mongodb.com/download-center/community

hit install the MongoDB server above first
then you can run npm install MongoDB in your project's directory

navigate to the mongod.exe and start it
then, you can optionally start mongo.exe

Capture.PNG



those are your local servers...

MongoDB is the server

mongo is just a terminal you can use

we will play there next class

The class is adjourned for now.

Please reach out to your fellow classmates for help on how to install the MongoDB server

Next class, we will be running database commands