

Lappeenrannan teknillinen yliopisto
School of Business and Management

Software Development Skills

Marta Xiaoyang Moraga Hernández, 001101267

LEARNING DIARY, FULL-STACK 2022-23 MODULE

24/12/2022

I accessed the course and read the necessary information. As it is quite similar to the Front-End course, I started setting up everything. I decided to work on Windows using Visual Studio Code.

Creating the repository was quite simple, because it was the same process as last time for the other course.

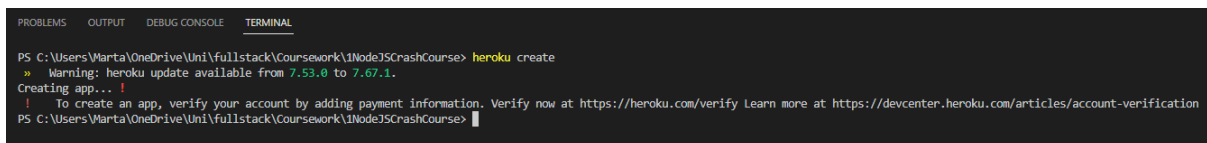
Node.js Crash Course

The start was quite simple to follow, as the Advanced Web Applications course also uses Node.js.

26/12/2022

The tutorial is easy to follow, though I ran into some issues due to spelling. The short rundown of the modules was quite useful. Learning about event, fs, http, os, path and url modules made me understand why a certain module would be required in different situations. Moreover, working with Express will be much easier after learning more about Node.js.

As it is necessary to add a payment method to Heroku, I did not deploy my application. However, I followed every step and noted down how the process would be if I used Heroku.



```
PS C:\Users\Marta\OneDrive\Uni\fullstack\Coursework\1\NodeJSCrashCourse> heroku create
* Warning: heroku update available from 7.53.0 to 7.67.1.
Creating app... !
! To create an app, verify your account by adding payment information. Verify now at https://heroku.com/verify Learn more at https://devcenter.heroku.com/articles/account-verification
PS C:\Users\Marta\OneDrive\Uni\fullstack\Coursework\1\NodeJSCrashCourse>
```

MongoDB Crash Course

To download MongoDB and use the shell, MongoDB Community Server <https://www.mongodb.com/try/download/community> and MongoDB Shell <https://www.mongodb.com/try/download/shell> are necessary.

When I was watching the tutorial and had downloaded MongoDB Community Server, I was not able to find mongo.exe on my computer. After looking up the solution online, I followed the first answer to this [stackoverflow question https://stackoverflow.com/questions/73081708/mongo-exe-not-installed-in-version-6-0-0](https://stackoverflow.com/questions/73081708/mongo-exe-not-installed-in-version-6-0-0), which solved the issue.

After trying to insert an object the warning: *DeprecationWarning: Collection.insert() is deprecated. Use insertOne, insertMany, or bulkWrite* appeared. I will use those commands in the future.

I also learnt that I can start or stop the MongoDB service throughout the Services console.

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It seems that `db.posts.find()` and `db.posts.find().pretty()` show similar results in the current version of mongosh.

When trying to update the message *MongoInvalidArgumentError: Update document requires atomic operator appears*. It seems that the functionality described in the tutorial has changed. Update can target individual properties of the DB document, while replace does change everything as the tutorial stated. Update cannot be used without an atomic operator like `$set` or `$inc`.

After trying to insert an object the warning: *DeprecationWarning: Collection.remove() is deprecated. Use deleteOne, deleteMany, findOneAndDelete, or bulkWrite* appeared. Similar to the insert method. I will use those commands in the future.

I ran into some issues connecting to the cluster as PowerShell did not recognize mongosh as a command. I used this tutorial <https://databasefaqs.com/mongodb-is-not-recognized-as-an-internal-or-external-command/> to solve them. It seems I had forgotten to add the path.

I was using MongoDB from its shell application Mongosh by running `mongosh.exe`, however, it could also be run from the PowerShell. That may be the reason for some differences between what I was doing and the tutorial.

Finally, using MongoDB Compass, I exported the collection 'posts' as a json to the Coursework folder. I also added a screenshot of the collection 'todos' that was on the cluster.

Express JS Crash Course

I was already familiar with Express, as it is necessary in the Advances Web Applications course. This tutorial deepened my understanding. After learning about Node.js, Express becomes more understandable. In Express, there is less to handle but now I understand the logic behind it.

The tutorial taught how to create get, post, put and delete methods to check, update and delete information, among other things like the basis of Express. I found middleware creation especially interesting.

When using the Handlebars Middleware I ran into a small issue. I copied the specified code from the Handlebars github as the tutorial stated::

```
app.engine('handlebars', exphbs({defaultLayout: 'main'}));  
app.set('view engine', 'handlebars');
```

Which resulted in *TypeError: exphbs is not a function*. I solved this by reading this thread <https://stackoverflow.com/questions/69959820/typeerror-exphbs-is-not-a-function>. I just had to add `.engine`.

Working with Handlebars and Bootstrap was a good introduction to views.

Angular: Tour of Heroes application and tutorial

Setting up the project went smoothly, except I did not expect a new folder to be created so I ended up with a couple redundant folders that had to be deleted. The Angular application is much heavier than what we were working with when using Node.js or Express.

The serve command has all the necessary functions to work on the application. It reminds me of the nodemon and tsc commands combined, but much more complex. I learnt about the app.component.html, app.components.ts and styles.css files. It felt similar to working with views in express.

Directives and bindings are very powerful tools.

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App-routing.module.ts was already generated, since Angular asked when the application was generated.

I was already familiar with Model–view–controller (MVC) due to object oriented programming, therefore Angular workflow did not surprise me too much.

Following the tutorial was simple as it shows the necessary code and it states where to paste it. However, understanding is a different story as there are a lot of concepts to learn. It was especially hard for me to set up the ‘pseudo server’ that let the app simulate fetching data from a server.

My favourite part was how angular handles the views. Everything is very modular, which is ideal to show different things that do not depend on each other.

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Angular: Building a template-driven form

I generated the app and the hero-form component with the commands from the last tutorial. I was able to recognize some expressions from the last tutorial, like binding with [(ngModel)] or the directive *ngFor.

I had some doubts where to put some of the code, for instance, where *const myHero* (an example of the hero class) went. I assumed it was just an example and left it for later. It truly was an example.

As the html was explained with excerpts and not the full code, my hero-form.component.html ended up slightly different from the example. For example, the main form and div that shows what you submitted are in different divs, the div with class="container" and the one with [hidden]="submitted" are the same one, and I forgot to add a warning message for "Power is required."

The end result looks the same and this is not an html focussed course, but I changed it anyways. I deleted power.pristine, because the warning will never show otherwise. Since you cannot select an invalid option, it will either be pristine or valid.

[hidden]="submitted" reminded me of the Front-end Course, where JS was used to add "show" to the classes and css to hide/show said classes. I suppose the logic is similar, but the syntax is quite different.

Things like (click)="newHero()" makes linking a method to an element quicker, as it erases the need to assign a document element to a variable.

MEAN Stack Front To Back

Part 1

I watched the video and got the main ideas of the project.

Part 2

I followed the tutorial. Setting up Express was simple because of the previous tutorials.

After linking a mongoDB database a warning appeared:

(node:30128) [MONGODB] DeprecationWarning: Mongoose: the `strictQuery` option will be switched back to `false` by default in Mongoose 7. Use `mongoose.set('strictQuery', false);` if you want to prepare for this change. Or use `mongoose.set('strictQuery', true);` to suppress this warning.

Therefore, I added `mongoose.set('strictQuery', true)`.

<https://stackoverflow.com/questions/74747476/deprecationwarning-mongoose-the-strictquery-option-will-be-switched-back-to> this thread points out that said line has to go before `mongoose.connect(config.database);`

For the latest nodejs version 'mongodb://localhost:27017/meanuth' has to be changed to 'mongodb://127.0.0.1:27017/meanuth'.

<https://www.mongodb.com/community/forums/t/mongooseserverselectionerror-connect-econnrefused-127-0-0-1-27017/123421>

Part 3

Everything worked as expected. I had trouble with a couple of misplaced parentheses.

Part 4

I followed the video and encountered some issues.

ExtractJwt.fromAuthHeader() had to be changed to ExtractJwt.fromAuthHeaderWithScheme("jwt") for the new Passport version.
<https://github.com/bradtraversy/meanauthapp/issues/9>

When trying to send a request to `http://localhost:3000/users/authenticate`, this warning appeared:

Error: Login sessions require session support. Did you forget to use `express-session` middleware?

I found two solutions online:

- Download passport 0.4.0 (older version)

`npm install passport@0.4.0 passport-local@1.0.0 passport-local-mongoose@5.0.1 --save`
https://www.reddit.com/r/node/comments/wh4lud/i_keep_getting_login_sessions_require_session/ (last comment)

- Download express-session to work with current passport version (0.6.0)

`npm install express-session`
<https://stackoverflow.com/questions/22298033/nodejs-passport-error-oauthstrategy-requires-session-support> (second answer)

Both worked. As I have already done some fixes that favoured the newer versions I settled on the second option.

```
const session = require('express-session');
```

```
app.use(session({  
  secret: config.secret,  
  saveUninitialized: true,  
  resave: false  
}));
```

That warning disappeared and this one substituted it:

Expected "payload" to be a plain object.

Fixed thanks to a comment on the part 4 video.



Giorgi Merabishvili 4 years ago

Hello, if anyone has the problem: "payload" to be a plain object. Just write : `const token = jwt.sign(user.toJSON(), config.secret, { expiresIn: 604800 });`
And That's it!
[Show less](#)

Part 5

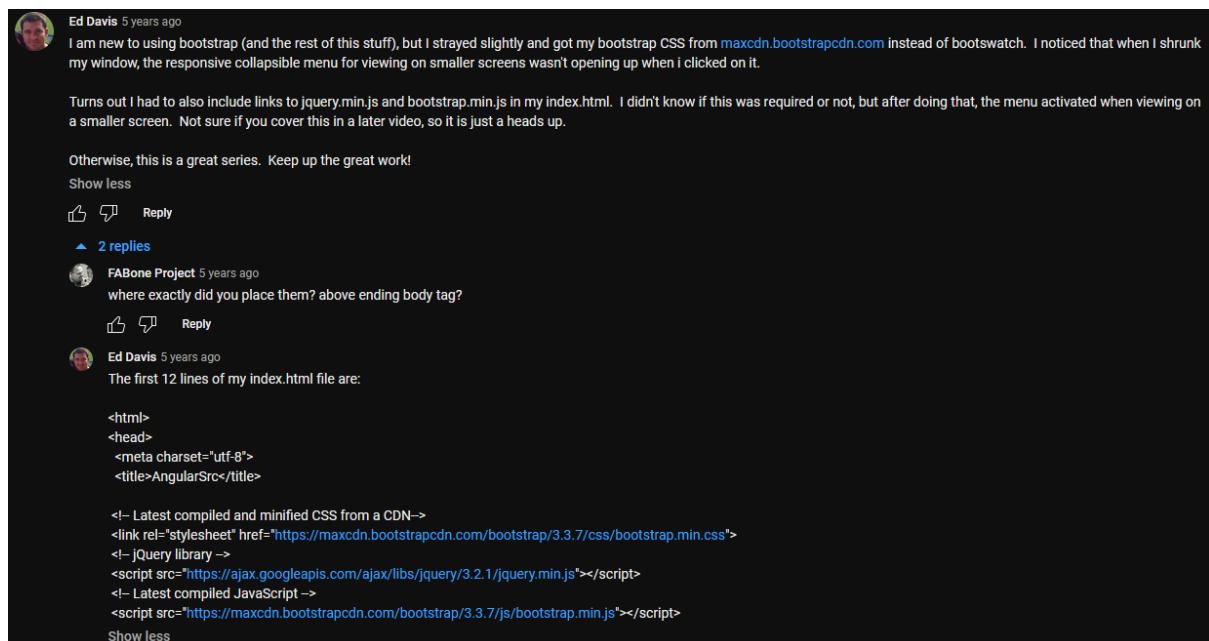
I followed the tutorial

10/01/2023

Bootstrap has changed a bit. Therefore I copied the navbar template directly from the video.

Even so, the navbar does not show the same way it does in the tutorial; moreover, the collapsible menu cannot be extended. I suspect it has to do with the linked bootstrap link.

Thanks to the following youtube comment on the video, it was solved:



Part 6

Temporarily, I had to add values to the register component constructor, to avoid errors. (Error: *Property 'password' has no initializer and is not definitely assigned in the constructor.*)

I forgot to import FormsModule, so it could not compile the register component. Once I added it, it was solved.

As I initialised the form values to "" I had to add a extra condition in the validation service:

```
if (user.name == "" || user.email == "" || user.password == "" ||
user.username == "") {
    return false;
```

So that the '*Please fill in all fields*' message could appear.

I had a bit of trouble with the FlashMessagesModule. It was resolved by adding the FlashMessagesService to the providers as the ValidateService was added.