

HOME

A Quick, Vital Tip for New MongoDB'ers

in Angular and Express App Part 1

How I Setup Angular + Node

Posted on 11 April
by J Cole Morrison



This is aimed at people interested in the MEAN stack and have a need to sprinkle some relational functionality onto Mongo. If you need to do this USE MONGOOSE.JS.

So this is pretty simple, but at first (especially if you haven't done a lot with databases) it can be counter intuitive.

HOME

For example, if you have a user document and they have "books" don't do it like this:

```
> db.users.find({ email: "me@jcolemorrison.com"})

{
  _id: ObjectId("asdfn1238nakljx"),
  firstname: "Cole",
  lastname: "Morrison",
  email: "me@jcolemorrison.com",
  books: [
    {
      title: "Ender's Game",
      author: "Orson Scott Card",
      thoughts: "Awesome book, bad movie."
    },
    {
      title: "The Way of Kings",
      author: "Brandon Sanderson",
      thoughts: "Storm you all!"
    }
  ]
}
```

I know. I know. I know. This looks like it makes sense. And it does. BUT. MongoDB gives no easy way to sort, modify, and traverse through nested collections. So let's say you want to change the "thoughts" on "Ender's Game." Here's the fun query you have to type out:

```
> db.users.update(  
  {  
    "email": "me@jcolemorrison.com",  
    "book.title": "Ender's Game"  
  },  
  {  
    $set: {  
      'books.$.thoughts': "My thoughts exactly"  }  
    }  
);
```

Oh what? You forgot to add a unique ID to each book? Too bad. This is how you'd do it. Okay okay, this isn't TOO bad. But I'll show you what is.

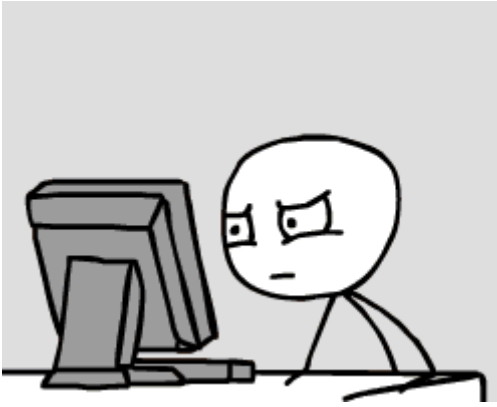
Client: Can we add a "Date Added" field to all of the books that users have?

Mwahahaha. Try it. Oh that's right. YOU CAN'T. Not without writing a script to handle it or doing it manually.

Client: Well, could we rename the "thoughts" field to "description" ?

BAHAHAHAHA. TRY IT. OH YOU CAN'T. Mongo won't let you update all items in an array simultaneously.

Let's pretend that you HAD added a date field to the books before you'd inserted them. And then let's pretend that you want to change all books in a user's collection that we're added AFTER 4/1/14. You can't.



How You Should Do it

When you need to give a user "books" just make a whole new collection. So just like you have a "users" collection (`db.users.find()`) you'd have a "books" collection (`db.books.find()`). Now let's revisit the above. So a document would look like this:

```
> db.books.findOne()

{
  _id: ObjectId("somerandomthingofids"),
  userId: "idOfUserWhoOwnsThisBook",
  title: "Some Title",
  author: "Some Author",
  thoughts: "Some Thoughts about book"
}
```

Client: Can we add a "Date Added" field to all of the books that users have?

```
> db.books.update({},
  { $set: { "dateAdded": 1 } },
  { multi: true })
```

Client: Well, could we rename the "thoughts" field to "description" ?

```
> db.books.update({},  
  { $rename: { "thoughts": "description" }},  
  { multi: true })
```

And done.



Hopefully this helps some other developer from wasting hours upon hours trying to push and pull nested documents.



About the author



J Cole Morrison

Sacramento, CA

<http://jcolemorrison.com>

Comments

6 Comments start.jcolemorrison.com

 Login ▾

 Recommend  Share

Sort by Best ▾



Join the discussion...

Drex • 2 years ago

this is good advice. although, I would like to point out that the date on which the object was created is stored inside mongo's objectId, so adding a field called dateAdded would be redundant.

1 ^ | ▾ • Reply • Share ›

Cole Morrison Mod ➔ **Drex** • 2 years ago

Ha, I should've used a different field as an example. Really, any new field.

^ | ▾ • Reply • Share ›

Jan Ažaltovič • 2 years ago

Isn't it kinda normalizing it like in sql? I'm new to mongo and just did some little bit more complex schema saving references to another collections as you advice in your post, but in the end it's kinda hard to query, I tried query it manually, just get say userid from userApplication then by that id, query user to get additional info, it adds db calls a lot, how do you query your data? Do you use mongoose population or do it manually? Maybe you could write new post on this. All tutorials on web are super easy not nested stuff.. Thanks

^ | ▾ • Reply • Share ›

Cole Morrison Mod ➔ **Jan Ažaltovič** • 2 years ago

Exactly. The pattern that I say to "avoid" isn't one that you should ALWAYS avoid. It's

one you should likely avoid if you're trying to sprinkle relational style functionality onto MongoDB (which most MEAN stack users do). Check out this documentation:

<http://docs.mongodb.org/manual...>

In there they outline the embedded style and the normalized style. The normalized style, works GREAT with something like Mongoose.js (which is what I use). Otherwise, you'll need to do two fetches, one for the beginning, and then use the data from that one to find the documents you want "joined" in. If you look at Mongoose.js's source code that's how they do it.

As far as how I usually do it, I just use mongoose. MongoDB doesn't natively support anything really "like" joins. You "can" use aggregations / map reduce, but last time I tried using those to do a simple join, I found it much more time saving to just bite the bullet and do two queries.

^ | v • Reply • Share ›

Jan Ažaltovič ➔ Cole Morrison • 2 years ago

Good, I got it to work with mongoose populations. Read the new post too, thanks for help.

^ | v • Reply • Share ›

Benoît Boucart • 2 years ago

Thanks for your blog posts. Very interesting articles!

^ | v • Reply • Share ›

ALSO ON [START.JCOLEMORRISON.COM](http://start.jcolemorrison.com)

Journaling a New Start(up)

1 comment • 2 years ago •

Aspire Subedi — inspirational, best of luck!

AngularJS, Rails 4.1 and UI Router Tutorial

47 comments • 2 years ago •

Play Spades Online — this explains how to do exactly what you want: <http://angular-ui.github.io/ui...> basically, use ui-sref-active

Building an Angular and Express App Part 1

112 comments • 2 years ago •

Fadel Chafai — Thank for the tutorial, just for the bower_components folder bower put it on the client folder and when i start the ...

The Weird Impact of Expertise on Ideation

1 comment • 2 years ago •

ganasist — "In the beginner's mind there are many possibilities, in the expert's mind there are few."

 [Subscribe](#)  [Add Disqus to your site](#) [Add Disqus](#) [Add](#)  [Privacy](#)



All content copyright [J Cole Morrison](#) © 2016 • All rights reserved.

Proudly published with [Ghost](#)