

Client Side Hydration

When the user first loads the page, we need to show some list items right away. We'll learn how to in this lesson!

WE'LL COVER THE FOLLOWING ^

- Server side
- Fetching and rendering tweets
- Line breaking long tweets

Server side

We first want to get to a point where we have our initial set of data. As soon as the window loads, let's pull data from the server and display it as a series of tweets.

To know if we've succeeded, the server should have some data.

We'll write a short script to do so:

```
function loadTestData() {
  const sampleData = [];
  const sampleDataSize = 20;
  for (let i = 0; i < sampleDataSize; i++) {
    const message = getRandomString({
      length: getRandomInteger({min: 10, max: 150}),
      includeSpaces: true
    });
    const firstName = getRandomString({
      length: getRandomInteger({min: 3, max: 7}),
      includeSpaces: false
    });
    const lastName = getRandomString({
      length: getRandomInteger({min: 3, max: 7}),
      includeSpaces: false
    });
    const handle = '@' + getRandomString({
      length: getRandomInteger({min: 4, max: 8}),
      includeSpaces: false
    });
    sampleData.push({
      tweet: {
```



```

        name: `${firstName} ${lastName}`,
        message, handle
      }
    });
  }
  for (const data of sampleData) {
    // Do nothing with result
    api.post(HOST + 'tweets', data, () => {});
  }
}

```

Hopefully, this gives a good set of data. I've changed the `getRandomString` function slightly to include spaces only if specified, since we don't want things like handles to have spaces. We do want messages to, however.

If you're interested in the server changes, here they are:

```

class Database {
  constructor() {
    this.tweets = [];
  }

  query({lastTweetId, pageSize}) {
    if (!lastTweetId) {
      return this.tweets.slice(0, pageSize);
    }
    for (let i = 0; i < this.tweets.length; i++) {
      const currentTweet = this.tweets[i];
      if (currentTweet.id === lastTweetId) {
        return this.tweets.slice(i + 1, i + 1 + pageSize);
      }
    }
    return [];
  }

  insert(tweet) {
    this.tweets.push({
      tweet,
      id: getRandomString({length: 50}),
      timestamp: (new Date()).getTime()
    });
  }
}

```

The only thing I want you to note is that the `insert` function adds data to the request instead of putting in the database directly. Namely, we give it a unique ID (this has to be done on the server to avoid conflicts with others) and the current time as received by the server.

Fetching and rendering tweets

Now for the actual hydration on the client, we just call `get` with a `pageSize`.

Now, for the actual hydration on the client, we just call `get` with a page size, and then pass the relevant fields to a template we created.

The hydration looks like this:

```
const DEFAULT_PAGE_SIZE = 5;
const DEFAULT_SORT_ORDER = 'recent';

function onNewTweets(data) {
  // TODO create tweet and render it
}

function hydrate() {
  const params = {
    pageSize: DEFAULT_PAGE_SIZE,
    sortOrder: DEFAULT_SORT_ORDER
  }
  api.get(HOST + 'tweets', params, onNewTweets);
}

loadTestData();
hydrate();
```

Pretty simple.

As for the template, we have to move that whole chunk of HTML to JavaScript to populate it dynamically. Some people are extremely opposed to this trend in the web – and it is a trend now. One of the biggest complaints about a popular framework, AngularJS, was that it coupled the HTML and JavaScript too much. React went one step further and just had all the HTML reside within JavaScript files. So many websites these days are dynamically populated that there’s little static HTML on them (maybe just the footer with links to “about,” “career,” etc.), in which case it can make sense for convenient templating.

In any case, I don’t want to take up space with the template in the JavaScript file. Just know that there’s a function `createTweet` that returns a string, which represents the HTML we wrote earlier with the values set to the parameters.

```
function createTweet({name, handle, message}) {
  const template = `
    <div class="tweet">
      ...
      <div class="tweet__main__message">
        ${message}
      </div>
      ...
    </div>
  `;
  ;
```

```
return template;  
}
```


Putting that all together, we get:

Output

JavaScript

HTML

CSS (SCSS)




3M616 lwW

@1CaVJ 7h

bOZ1NUW6otHKqJ8NHJ4eBGtWLYHT7XGHOHBCwfmSVTy6NhmNrrjXrMqldci
ftQ

10 900 1.1K

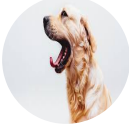


rldKv iwJ

@mPk6o 7h

EHkoCqxVC2ICsiDq
kB9p12Z6TwfGImIZeG7BxV16dKqQQ2sc2cczTfoiXT8DudsBjfi

10 900 1.1K

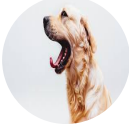


tcX29 mSR

@dxuja7 7h

At4e6sBeDIDau0PKhxQhXqW4Xomp2MVPAvmk0dgFOHoZ4foYLeVWbkoIRnC
jSOiix

10 900 1.1K

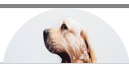


AeUAP YEI

@yn017U1 7h

RWpUI6B1Fbmt3Ozdq0DbR4AbvKnx7zJScdUvYPbC
Oe3c3wfeRIFDIWv7yeH1ZtuEJljBqia9uYbRxCvm1fDDj
h46uGWHVr mCugQwpqTP2i

10 900 1.1K



uQV etvbkd

@CjmQBu 7h

Save

Back












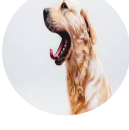









Line breaking long tweets


So, I'm not sure about what you see, but if you refresh enough, you'll get long outputs and the component styling breaks. We didn't rigorously test our CSS when we first applied styles – but that's okay. That's what generated test data is for! It looks like we're not breaking text that's too long. Thankfully, we have an easy fix for this!

Output

JavaScript

HTML

	RLnDH m1B  @RT0h 7h LdvNud1gtsmXaGgKe  10  900  1.1K 	
	nN8 rNME  @lcb2nHf 7h rdqg7fOS5JF7Lv3NztZJQBFI9bSIPDIG  10  900  1.1K 	
	LYCGVN ykt  @6QFxl6R 7h HV8Fm231jGhUqbwPru773rhJeLLfOEMbHfm7wMgja wfXBmxvWaQlgjvyYbZziXKdsHzTvYeTKoFIQzLhZZa6S IfksebmDI1go7ojqaGYpEn80P6LcghC8QU67Nk6JTUCi Hqiuss1n ormDecy1K  10  900  1.1K 	
	ZXN cXLi  @moYGLuy 7h I7RQ0LVRqCi4BxGguBlqI3W6ICCpwV qgCDpkO0R  10  900  1.1K 	
	68n ODFR  @N0SHVG 7h 7g0uMaTisvicKKg3YIAokoK3Url9uxxwu  10  900  1.1K 	




Now it looks indistinguishable to me from a typical Twitter discussion.

In the next lesson, we'll add a loading element to our list.