



The Pig
and
Butcher
PUB & EATING

Arundel Football
Club



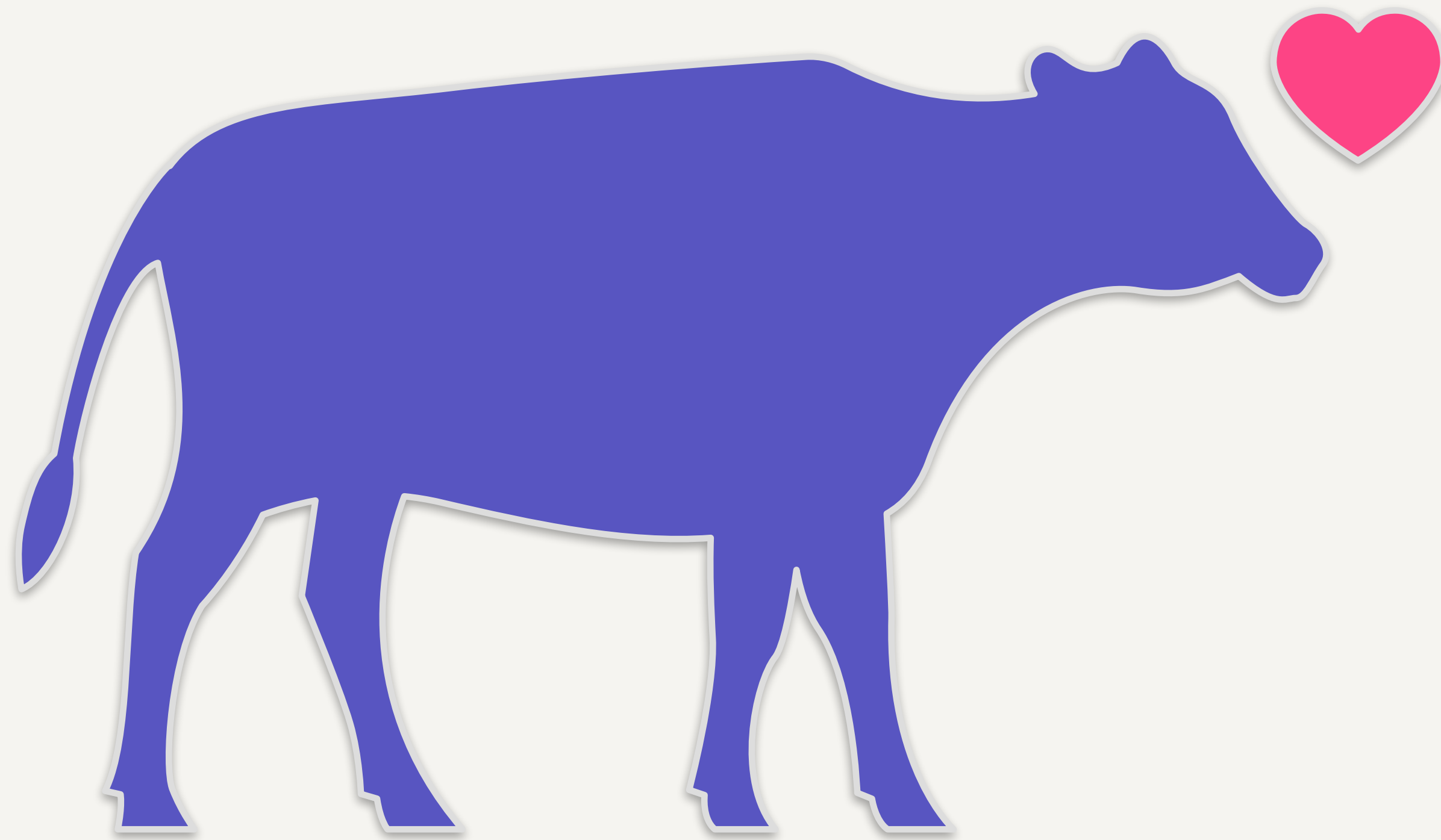
I'M AN EXPERT



IN MY FIELD

memegenerator.net

SERVICE WORKERS & COWS – a love story



**I DIDN'T REALLY UNDERSTAND
THE NEED FOR S.W.S UNTIL...**

We moved to Oklahoma.



@AlyssaNicoll

Oklahoma is full of these lovely creatures:

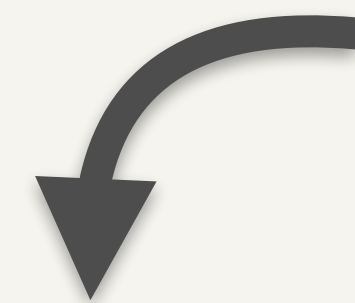


AND THESE OF COURSE ;)



6

Mb



That's not a typo



FAST

41

Kbps



 Compare on
SPEEDTEST.NET

So this land of Moo'ers showed me just how valuable Service Workers really are.

HOW

DO SERVICE WORKERS

HELP IN THIS SITUATION?

SERVICE WORKERS ARE THE

ASPIRIN

**TO THE HEADACHE THAT IS
PAINFUL NETWORK SPEEDS.**



WHAT
WHAT BE YOU, SERVICE WORKER?

To put it simply, a JS file.

WHAT

WHAT BE YOU, SERVICE WORKER?

A service worker is a script that your browser runs in the background, separate from a web page, opening the door to features that don't need a web page or user interaction.

WHAT WHAT DOES THE SERVICE WORKER DO?

♡ push notifications

♡ background sync

♡ **intercept & cache** network responses

The reason this is such an exciting API is that it allows you to support offline experiences, giving developers complete control over the experience.

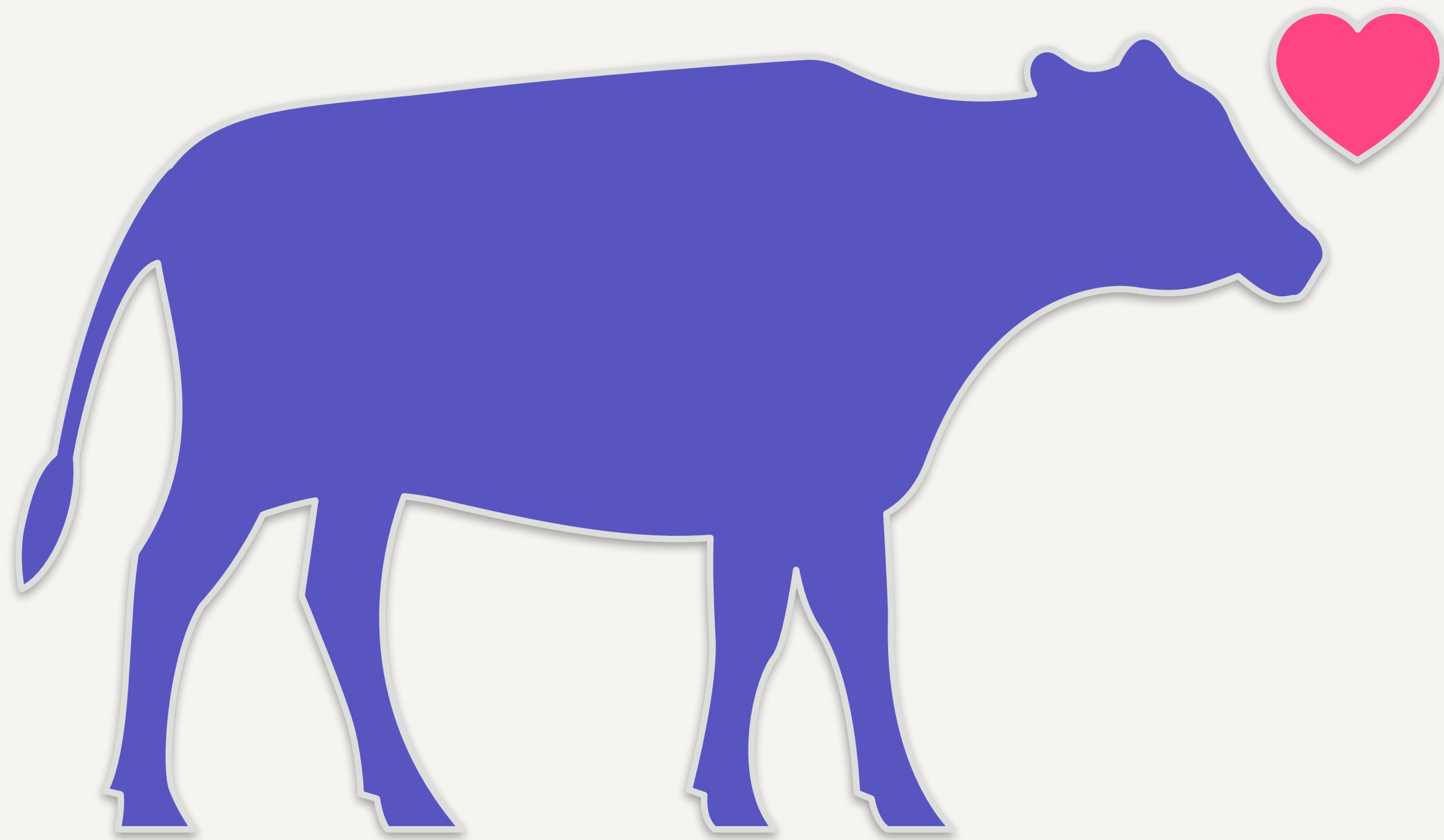
<https://developers.google.com/web/fundamentals/primers/service-workers/>

My Journey of adding Service Workers to ngdoc.io

HOW

The Steps

breaking down S.W.s in angular so they are less intimidating



#1 Install that Service Worker, yo

```
yarn add @angular/service-worker
```

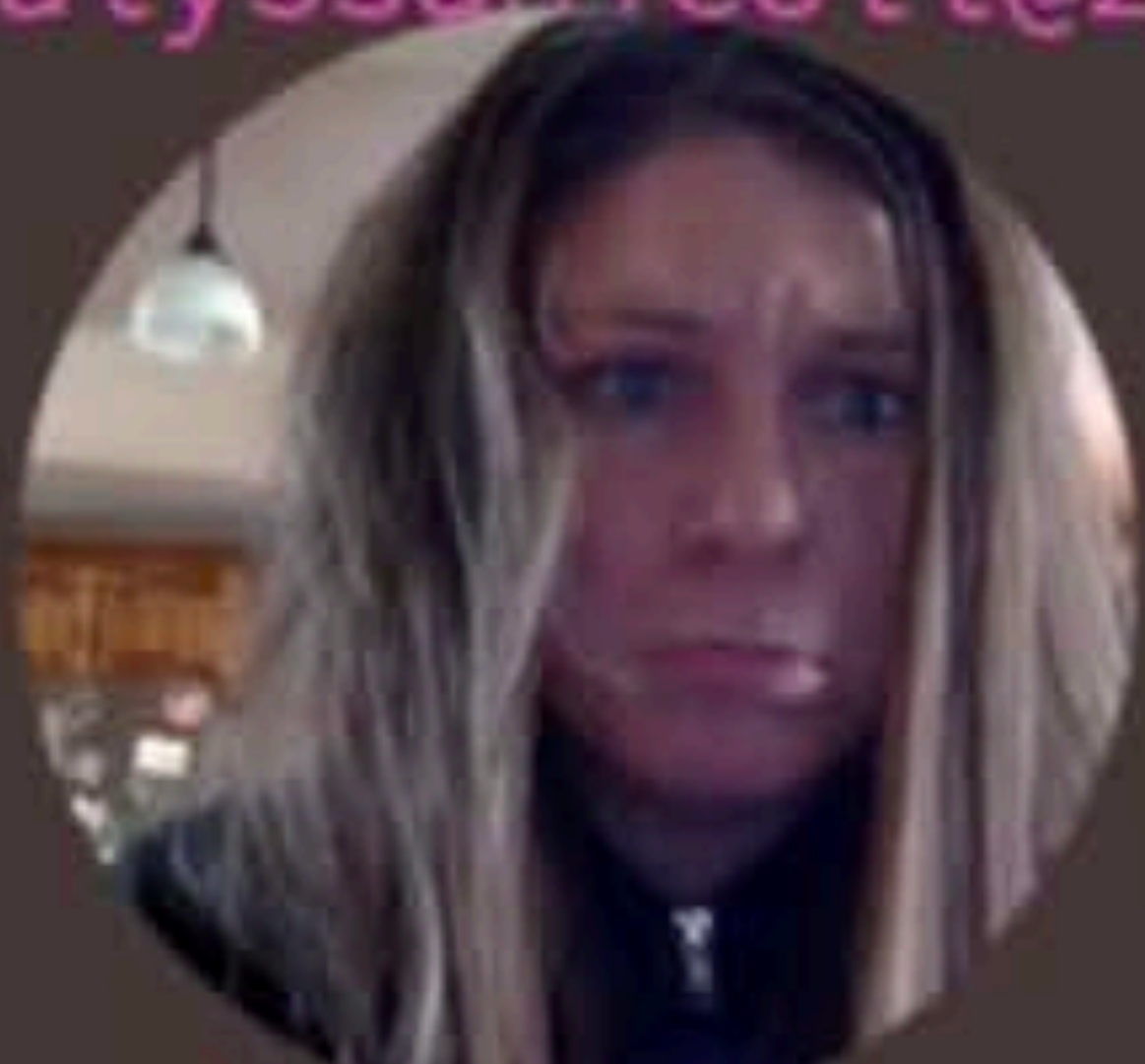
which in our case is...

```
npm install @angular/service-worker
```

alyssanicoll@zip ~/D/ngDocIO>



```
[alyssanicoll@zip ~/D/ngDocIO> npm install @angular/service-w  
npm WARN @angular/service-worker@5.2.1 requires a peer of @a  
dependencies yourself.  
npm WARN @angular/service-worker@5.2.1 requires a peer of @a  
dependencies yourself.  
  
+ @angular/service-worker@5.2.1  
updated 1 package in 14.12s  
alyssanicoll@zip ~/D/ngDocIO> _
```



dependencies yourself.

```
+ @angular/service-worker@5.2.1
```

```
updated 1 package in 14.12s
```

```
alyssanicoll@zip ~/D/ngDocIO> _
```



alyssanico11@z1p



alyssanicoll@zip



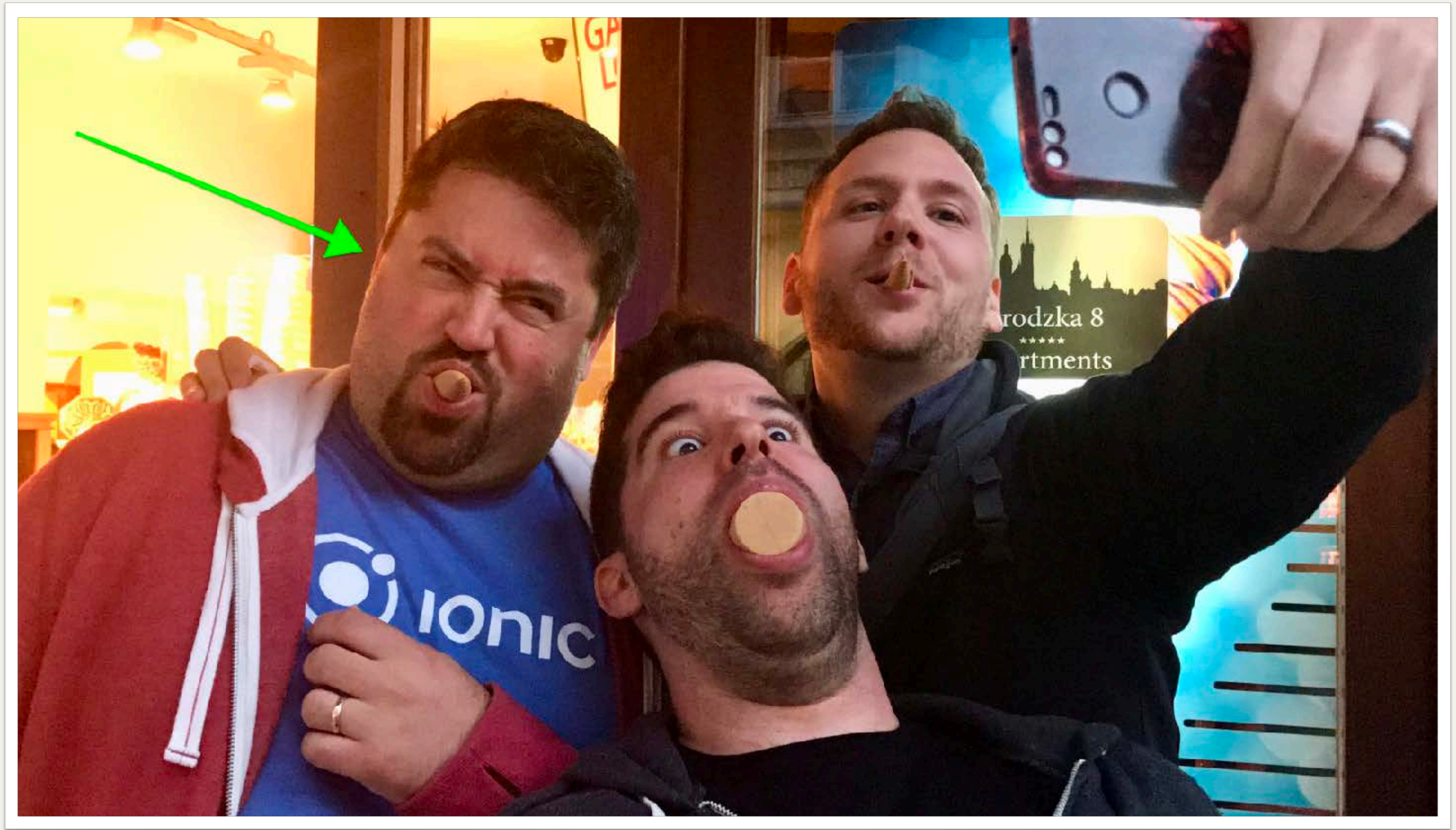
But... Make sure yo' code is up-to-date!

```
ngDocIO — alyssanicoll@zip — ..pment/ngDocIO — -zsh — 125x37
[alyssanicoll@zip ~/D/ngDocIO> npm install @angular/service-worker 130 service-worker ]
npm WARN @angular/service-worker@5.2.1 requires a peer of @angular/core@5.2.1 but none is installed. You must install peer de
dependencies yourself.
npm WARN @angular/service-worker@5.2.1 requires a peer of @angular/common@5.2.1 but none is installed. You must install peer
dependencies yourself.

+ @angular/service-worker@5.2.1
added 1 package in 16.919s
alyssanicoll@zip ~/D/ngDocIO> service-worker!
```

I know it's a pain. But I have some good news for you! A bit of hope in this dark time.

This guy >>



is currently working on finishing ng update, which will...

REVOLUTIONIZE

YOUR UPDATE LIFE.

**But for now, we have to suck it
up and update our
dependencies and angular
packages like women! ;)**



TWO HOURS LATER

rolls eyes + GOODlordt

#2 Enable service worker

```
ng set apps.0.serviceWorker=true
```

```
ng new --service-worker
```


#3 Import SW in root app module

app.module.ts


```
import { ServiceWorkerModule } from '@angular/service-worker';  
import { environment } from '../environments/environment';
```

#4 Register SW in root app module

app.module.ts

```
import { ServiceWorkerModule } from '@angular/service-worker';  
import { environment } from '../environments/environment';
```

```
ServiceWorkerModule.register('/ngsw-worker.js', {enabled:  
environment.production})
```



Add this to your imports to register
your service worker with your app
& enable it ONLY DURING
PRODUCTION MODE!

#4 Register SW in root app module

app.module.ts

```
import { ServiceWorkerModule } from '@angular/service-worker';  
import { environment } from '../environments/environment';
```

```
ServiceWorkerModule.register('/ngsw-worker.js', {enabled:  
environment.production})
```

SW MODULE TO IMPORT



.register() HELPER FOR REGISTERING PURPOSES!



#4 Register SW in root app module

app.module.ts

```
import { ServiceWorkerModule } from '@angular/service-worker';  
import { environment } from '../environments/environment';  
  
ServiceWorkerModule.register('/ngsw-worker.js', {enabled:  
environment.production})
```

The file `ngsw-worker.js` is the name of the prebuilt service worker script, which the CLI copies into `dist/` to deploy along with your server.

#4 Register SW in root app module

app.module.ts

```
import { ServiceWorkerModule } from '@angular/service-worker';  
import { environment } from '../environments/environment';
```

```
ServiceWorkerModule.register('/ngsw-worker.js', {enabled:  
environment.production})
```



BUT WHY PRODUCTION MODE?!

I ASKED STEPHEN FLUIN, WHY IT WOULD BE BAD TO RUN SERVICE WORKERS OUTSIDE OF PRODUCTION MODE?



**"It would break
developer expectations"**

#5 Create the CONFIG file, ngsw-config.json

The CLI has a boilerplate one, but so do the Angular docs:

src/ngsw-config.json

```
{
  "index": "/index.html",
  "assetGroups": [{
    "name": "app",
    "installMode": "prefetch",
    "resources": {
      "files": [
        "/favicon.ico",
        "/index.html"
      ],
    },
    "versionedFiles": [
      "/*.bundle.css",
      "/*.bundle.js",
    ],
  }
}
```

#5 Create the CONFIG file, ngsw-config.json

The CLI has a boilerplate one, but so do the Angular docs:

src/ngsw-config.json

```
{
  "index": "/index.html",
  "assetGroups": [{
    ...
    "resources": {
      "files": [
        "/assets/**"
      ]
    }
  ]
}
```


#5 Create the CONFIG file, ngsw-config.json

The CLI has a boilerplate one, but so do the Angular docs:

src/ngsw-config.json

```
{
  "index": "/index.html",
  "assetGroups": [{
    ...
    "resources": {
      "files": [
        "/assets/**"
      ]
    }
  ]
}
```

**(LOTS OF OTHER PEOPLE HAVE
THEM OUT THERE TOO)**

PICK YOUR POISON AND LET'S GET GOING.

#6 Build the project

```
ng build --prod
```

BE VERY

SURE

**I've heard a rumor, that service workers can be difficult to
remoove...**

YOU HAVE BEEN WARNED.



#6 Build the project

```
ngDocIO — alyssanicoll@zip — ..pment/ngDocIO — -zsh — 141x30
Last login: Fri Jan 19 12:18:49 on ttys001

    ##          User: alyssanicoll
   ###         Hostname: zip
  ####        Distro: OS X 10.13.2
 #####       Kernel: Darwin
#####       Uptime: 15 mins
#####       Shell: /bin/zsh
#####       Terminal: xterm-256color Apple Terminal
#####       CPU: Intel Core i5-4258U CPU @ 2.40GHz
#####       Memory: 8 GB
#####       Disk: 61%
#####       Battery: 81.64%%
#####       IP Address: 166.137.126.22
#####
#####

[alyssanicoll@zip ~]# cd Development/ngDocIO
[alyssanicoll@zip ~/D/ngDocIO]# vscode ,
[alyssanicoll@zip ~/D/ngDocIO]# ng build --prod
Date: 2018-01-19T18:30:36.170Z
Time: 117072ms
chunk {0} polyfills.53ddd34bdf9d1b97acae.bundle.js (polyfills) 99.4 kB [initial] [rendered]
chunk {1} main.92c33f2cf86e5325f45c.bundle.js (main) 1.29 MB [initial] [rendered]
chunk {2} styles.e025092956b44002b463.bundle.css (styles) 6.17 kB [initial] [rendered]
chunk {3} inline.5f8a34cdf4d2623f54c3.bundle.js (inline) 1.45 kB [entry] [rendered]
alyssanicoll@zip ~/D/ngDocIO>
```

DOES IT WORK?!

Serving with http-server

what the dickens?!



Because ng serve does not work with service workers, you must use a separate HTTP server to test your project locally. You can use any HTTP server. The example below uses the [http-server](#) package from npm. To reduce the possibility of conflicts, test on a dedicated port.

“Does it break? It broke.”





Run the project in production mode

```
cd dist  
http-server -p 8080
```

Last login: Fri Jan 19 12:18:49 on ttys001

```

### User: alyssanicoll
### Hostname: zip
### Distro: OS X 10.13.2
##### Kernel: Darwin
##### Uptime: 15 mins
##### Shell: /bin/zsh
##### Terminal: xterm-256color Apple Terminal
##### CPU: Intel Core i5-4258U CPU @ 2.40GHz
##### Memory: 8 GB
##### Disk: 61%
##### Battery: 81.64%
##### IP Address: 166.137.126.22
###

```

```

[alyssanicoll@zip ~] $ cd Development/ngDocIO
[alyssanicoll@zip ~/D/ngDocIO] $ vscode
[alyssanicoll@zip ~/D/ngDocIO] $ ng build --prod
Date: 2018-01-19T18:30:36.170Z
Time: 117072ms
chunk {0} polyfills.53ddd34bdf9d1b97acae.bundle.js (polyfills) 99.4 kB [initial] [rendered]
chunk {1} main.92c33f2cf86e5325f45c.bundle.js (main) 1.29 MB [initial] [rendered]
chunk {2} styles.e025092956b44002b463.bundle.css (styles) 6.17 kB [initial] [rendered]
chunk {3} inline.5f8a34cdf4d2623f54c3.bundle.js (inline) 1.45 kB [entry] [rendered]
[alyssanicoll@zip ~/D/ngDocIO] $ cd dist
[alyssanicoll@zip ~/D/n/dist] $ http-server -p 8080
zsh: command not found: http-server
[alyssanicoll@zip ~/D/n/dist] $ WHAT THE DICKENS

```

```

1
service-worker!
service-worker!
y Hash: 2f7bc80015dd327cdfa2
service-worker!
service-worker!
127 service-worker!

```

```
cd dist  
http-server -p 8080
```



```
npm install -g http-server
```

or you can use a simple python server that comes by default on yo Mac...

```
python -m SimpleHTTPServer 8000
```

(I have an alias to it in my .zshrc file: alias simple_server='python -m SimpleHTTPServer 8000')

Low and behold, It worked!!

```
dist — python -m SimpleHTTPServer 8000 — simple_server — python -m SimpleHTTPServer 8000 — 141x29
[alyssanicoll@zip ~/D/ngDocIO> cd dist
[alyssanicoll@zip ~/D/n/dist> http-server -p 8080
zsh: command not found: http-server
[alyssanicoll@zip ~/D/n/dist> simple_server
127 service-worker! ? ]
Serving HTTP on 0.0.0.0 port 8000 ...
127.0.0.1 - - [19/Jan/2018 12:43:11] "GET / HTTP/1.1" 200 -
127.0.0.1 - - [19/Jan/2018 12:43:11] "GET /assets/theme/css/omega/theme.css HTTP/1.1" 200 -
127.0.0.1 - - [19/Jan/2018 12:43:11] "GET /assets/theme/css/primeng.min.css HTTP/1.1" 200 -
127.0.0.1 - - [19/Jan/2018 12:43:11] "GET /assets/theme/fontawesome/css/font-awesome.min.css HTTP/1.1" 200 -
127.0.0.1 - - [19/Jan/2018 12:43:11] "GET /styles.e025092956b44002b463.bundle.css HTTP/1.1" 200 -
127.0.0.1 - - [19/Jan/2018 12:43:11] "GET /inline.5f8a34cdf4d2623f54c3.bundle.js HTTP/1.1" 200 -
127.0.0.1 - - [19/Jan/2018 12:43:11] "GET /polyfills.53ddd34bdf9d1b97acae.bundle.js HTTP/1.1" 200 -
127.0.0.1 - - [19/Jan/2018 12:43:11] "GET /main.92c33f2cf86e5325f45c.bundle.js HTTP/1.1" 200 -
127.0.0.1 - - [19/Jan/2018 12:43:12] code 404, message File not found
127.0.0.1 - - [19/Jan/2018 12:43:12] "GET /api/currentIdentity HTTP/1.1" 404 -
127.0.0.1 - - [19/Jan/2018 12:43:12] code 404, message File not found
127.0.0.1 - - [19/Jan/2018 12:43:12] "GET /api/auth/type HTTP/1.1" 404 -
127.0.0.1 - - [19/Jan/2018 12:43:12] code 404, message File not found
127.0.0.1 - - [19/Jan/2018 12:43:12] "GET /api/articles/recent HTTP/1.1" 404 -
127.0.0.1 - - [19/Jan/2018 12:43:12] code 404, message File not found
127.0.0.1 - - [19/Jan/2018 12:43:12] "GET /api/tags/ HTTP/1.1" 404 -
127.0.0.1 - - [19/Jan/2018 12:43:12] "GET /assets/images/temp-logo.png HTTP/1.1" 200 -
127.0.0.1 - - [19/Jan/2018 12:43:12] "GET /assets/images/angular_whiteTransparent.png HTTP/1.1" 200 -
127.0.0.1 - - [19/Jan/2018 12:43:12] "GET /assets/theme/fontawesome/fonts/fontawesome-webfont.woff2?v=4.7.0 HTTP/1.1" 200 -
127.0.0.1 - - [19/Jan/2018 12:43:12] "GET /ngsw-worker.js HTTP/1.1" 200 -
127.0.0.1 - - [19/Jan/2018 12:43:12] "GET /favicon.ico HTTP/1.1" 200 -
127.0.0.1 - - [19/Jan/2018 12:43:13] "GET /ngsw.json?ngsw-cache-bust=0.8642596564123408 HTTP/1.1" 200 -
127.0.0.1 - - [19/Jan/2018 12:43:13] "GET /index.html HTTP/1.1" 200 -
```

Search...



AngularJS (1.x)

Angular (2+)

search yo tags



ALL TAGS

RESET FILTERS



Put it in offline mode

The screenshot shows the 'The Unofficial Angular Docs' website interface. At the top, a dark green navigation bar contains the logo 'NG DOC THE UNOFFICIAL ANGULAR DOCS' on the left and links for 'ADD RESOURCE', 'FOLLOW US' (with a Twitter icon), 'THE OFFICIAL DOCS' (with an 'A' icon), 'HELP', and 'LOGIN' on the right. Below the navigation bar, the main content area is mostly blank, featuring a large, light blue loading spinner in the center. On the left side, there is a search and filter sidebar with a 'Search...' input field, a search button, and two filter buttons: 'AngularJS (1.x)' and 'Angular (2+)'. Below these are another search field with the text 'search yo tags' and two buttons: 'ALL TAGS' and 'RESET FILTERS'. At the bottom, a browser's developer tools interface is visible, with the 'Network' tab selected. The toolbar shows various icons for network analysis, and the status bar at the bottom indicates 'Offline' mode is active, with a dropdown menu showing 'Offline' selected.

OK Cool, but is this *actually* doing anything?!



What is it really doing? Is it doing anything? Time to test:

```
dist — alyssanicoll@zip — ../ngDocIO/dist — -zsh — 141x29
File "/System/Library/Frameworks/Python.framework/Versions/2.7/lib/python2.7/SimpleHTTPServer.py", line 235, in <module>
  test()
File "/System/Library/Frameworks/Python.framework/Versions/2.7/lib/python2.7/SimpleHTTPServer.py", line 231, in test
  BaseHTTPServer.test(HandlerClass, ServerClass)
File "/System/Library/Frameworks/Python.framework/Versions/2.7/lib/python2.7/BaseHTTPServer.py", line 599, in test
  httpd.serve_forever()
File "/System/Library/Frameworks/Python.framework/Versions/2.7/lib/python2.7/SocketServer.py", line 236, in serve_forever
  poll_interval)
File "/System/Library/Frameworks/Python.framework/Versions/2.7/lib/python2.7/SocketServer.py", line 155, in _eintr_retry
  return func(*args)
KeyboardInterrupt
alyssanicoll@zip ~/D/n/dist> git st                                     1 service-worker!?
```

On branch service-worker

Changes not staged for commit:
(use "git add <file>..." to update what will be committed)
(use "git checkout -- <file>..." to discard changes in working directory)

```
   modified:   ../angular-cli.json
   modified:   ../package-lock.json
   modified:   ../package.json
   modified:   ../src/app/app.module.ts
```

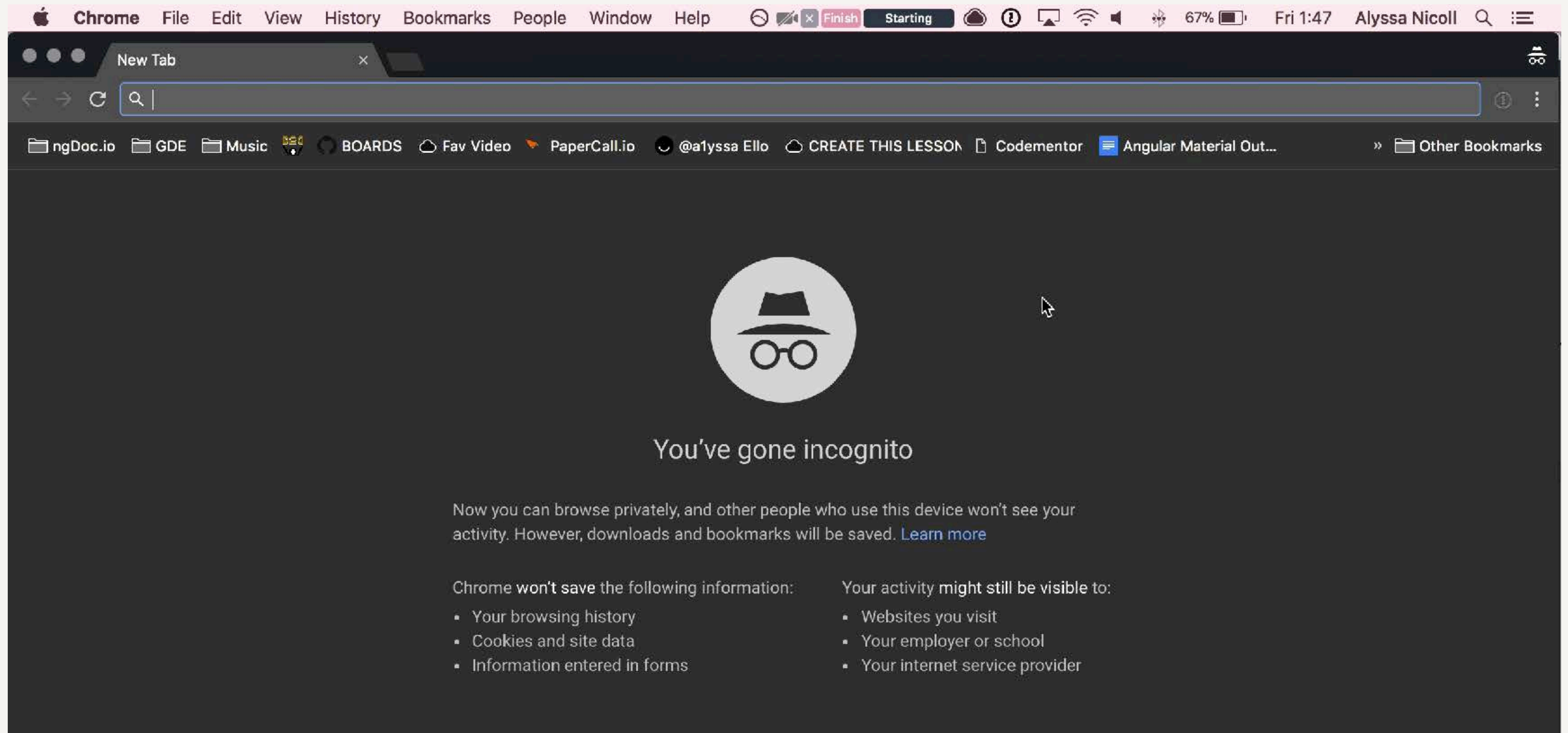
Untracked files:
(use "git add <file>..." to include in what will be committed)

```
   ../src/ngsw-config.json
```

no changes added to commit (use "git add" and/or "git commit -a")
alyssanicoll@zip ~/D/n/dist> _ service-worker!?

Proof that it *WAS* doing something!

If we go to our localhost:8000 now with the `develop` branch (the one sans-serviceworker) we will now see this:



How do updates to me code work tho?

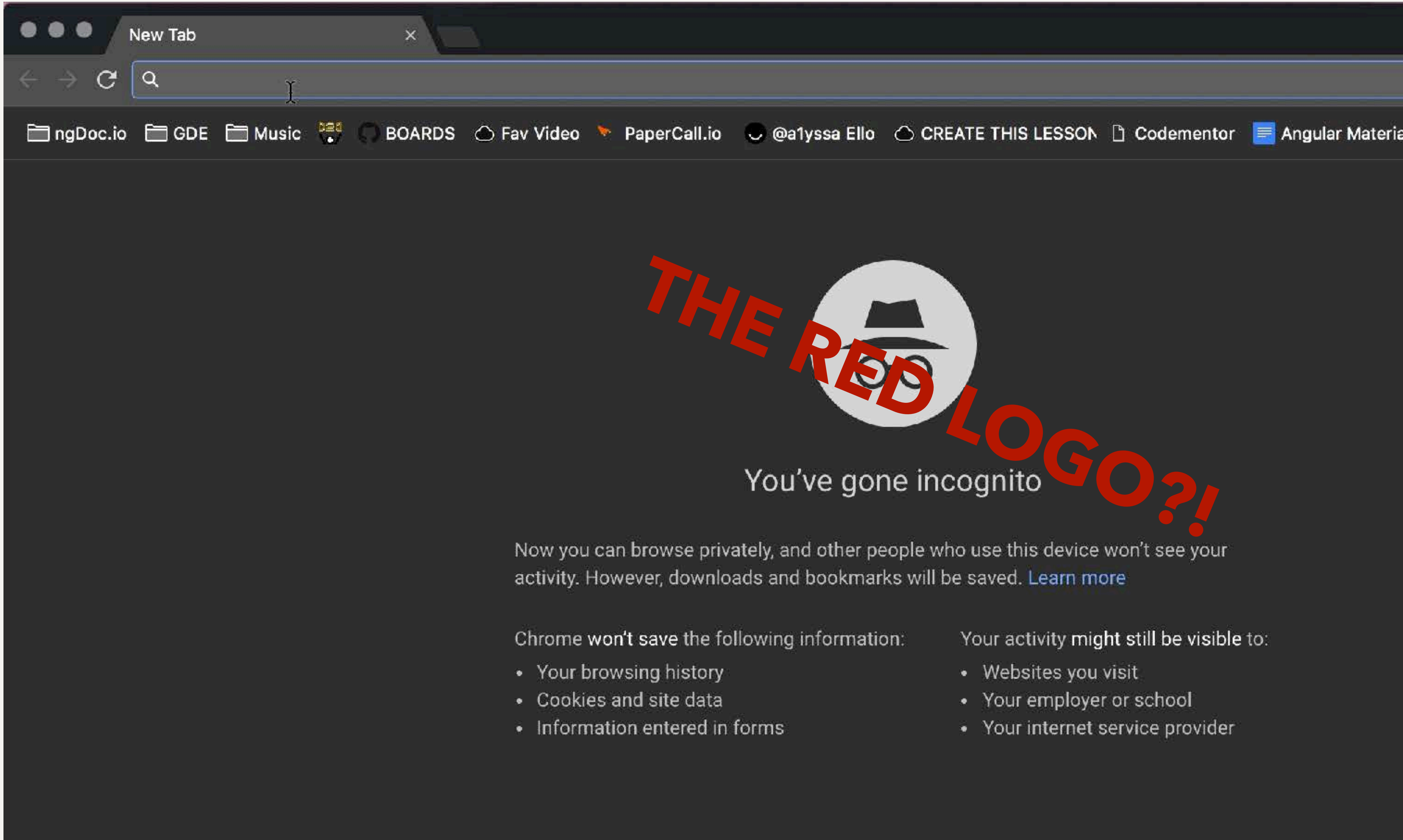
Well, as you would assume, changing the code and `cmd + shift + r` no longer does the trick.

updating the logo

```
<span class="logo-wrapper">
  <a class="logo" [routerLink]="['/']">
    
    <h1>The Unofficial Angular Docs</h1>
  </a>
</span>
```

Now, the important step, we are going to need to rebuild! So stop the `http-server`, run `ng build --prod` again, and then start up the `http-server` again.

NOW WHEN WE INITIALLY LOAD OUR APP, WE SEE:



New Tab

← → ↻ 🔍

ngDoc.io GDE Music BOARDS Fav Video PaperCall.io @a1yssa Ello CREATE THIS LESSON Codementor Angular Material



THE RED LOGO?!

You've gone incognito

Now you can browse privately, and other people who use this device won't see your activity. However, downloads and bookmarks will be saved. [Learn more](#)

Chrome **won't** save the following information:

- Your browsing history
- Cookies and site data
- Information entered in forms

Your activity might **still** be visible to:

- Websites you visit
- Your employer or school
- Your internet service provider

This is OK! Breathe! No panicking!



If we rebuild and refresh now, we should see our green logo, since we have given it time to download the new logo:

```
dist — alyssanicoll@zip — -zsh — 141x16
../ngDocIO/dist
node • npm TERM_PROGRAM=Apple_Terminal SHELL=/b...
ecko) Chrome/63.0.3239.132 Safari/537.36"
[Mon Jan 22 2018 17:35:24 GMT-0600 (CST)] "GET /api/tags/" Error (404): "Not found"
[Mon Jan 22 2018 17:35:30 GMT-0600 (CST)] "GET /ngsw.json?ngsw-cache-bust=0.9341441930053951" "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_13_2
) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/63.0.3239.132 Safari/537.36"
^Chttp-server stopped.
alyssanicoll@zip ~/D/n/dist> cd ..
alyssanicoll@zip ~/D/ngDocIO> ng build --prod
Date: 2018-01-22T23:41:06.725Z
Hash: eaf9db8980657f04b8be
Time: 140442ms
chunk {0} polyfills.53ddd34bdf9d1b97acae.bundle.js (polyfills) 99.4 kB [initial] [rendered]
chunk {1} main.56ec0cc641aea0ad742d.bundle.js (main) 1.29 MB [initial] [rendered]
chunk {2} styles.e025092956b44002b463.bundle.css (styles) 6.17 kB [initial] [rendered]
chunk {3} inline.66ac87df0ce09bb09d98.bundle.js (inline) 1.45 kB [entry] [rendered]
alyssanicoll@zip ~/D/ngDocIO> cd dist
alyssanicoll@zip ~/D/n/dist> _

13 <a [routerLink]="['/resources/new']" *ngIf="auth.authenticated">Add Resource</a>
14 <a target="_blank" href="https://twitter.com/ngdocio" *ngIf="!auth.hasRole('admin')">Follow Us <i class
15 <a href="https://angular.io/docs" target="_blank" *ngIf="!auth.hasRole('admin')">The Official Docs <img
16 <a [routerLink]="['/admin/resources']" *ngIf="auth.hasRole('admin')">Resource List</a>
17 <a [routerLink]="['/admin/tags']" *ngIf="auth.hasRole('admin')">Tags</a>
18 <a [routerLink]="['/admin/approve']" *ngIf="auth.hasRole('admin')">Review Submissions</a>
19 <a href="https://github.com/joeames/ngDocIO_Issues" *ngIf="!auth.hasRole('admin')" target="_blank">He
20 <a href="#" *ngIf="loginTypeLocal && !auth.authenticated" (click)="localLogin()">Local Login</a>
```



Alyssa Nicoll

@AlyssaNicoll



Why you so slow, CHUNK ASSET OPTIMIZATION?!

```
alyssanicoll@zip ~/D/ngDocIO> ng build --prod  
92% chunk asset optimization
```

7:50 PM - 22 Jan 2018

2 Retweets 16 Likes



9



2



16



Alyssa Nicoll @AlyssaNicoll · Jan 22

Mike! Mike PLEASE! @Brocco



GIF



1



1



Using a proxied server

So I'm not sure if you noticed or not, but there are errors GALORE. We aren't getting our tags or our articles. Well, I've been running our npm server this whole time, and it serves data up at localhost:8801. (Show going to see tags <http://localhost:8801/api/tags/>)

In order to get this data while running this http-server, we need to set a proxy URL. This URL will be used when the default one finds no data. Here is how we set it with http-server:

<https://github.com/indexzero/http-server>

localhost:4200

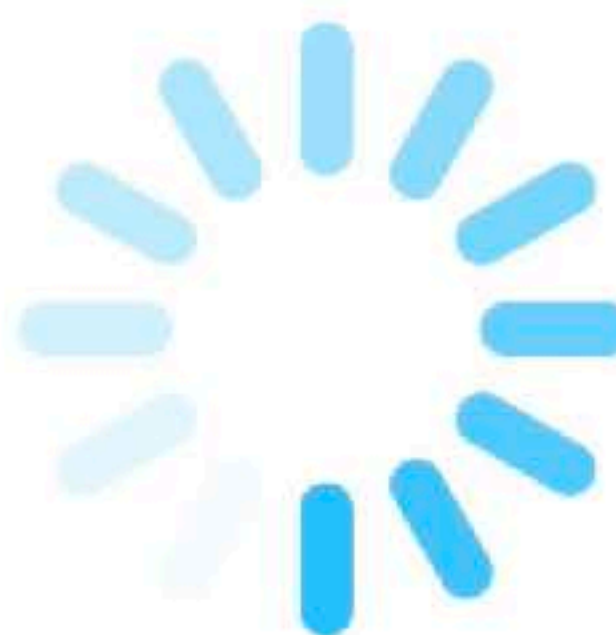
THE UNOFFICIAL ANGULAR DOCS

ADD RESOURCE FOLLOW US THE OFFICIAL DOCS HELP LOGIN

Search... AngularJS (1.x) Angular (2+)

search yo tags

ALL TAGS RESET FILTERS



Elements Console Sources Network Performance Memory Application Security Audits

View: Group by frame Preserve log Disable cache Offline Online

Filter Hide data URLs All XHR JS CSS Img Media Font Doc WS Manifest Other

Name	Method	Status	Type	Initiator	Size	Time	Waterfall
<input type="checkbox"/> currentIdentity	GET	404	xhr	polyfills.53ddd34....bundle.js:1	(from ServiceWorker)	440 ms	
<input checked="" type="checkbox"/> currentIdentity	GET	404	fetch	ngsw-worker.js:2464	130 B	33 ms	
<input type="checkbox"/> type	GET	404	xhr	polyfills.53ddd34....bundle.js:1	(from ServiceWorker)	488 ms	
<input checked="" type="checkbox"/> type	GET	404	fetch	ngsw-worker.js:2464	130 B	32 ms	

Errors GALORE. We aren't getting our tags or our articles.

Available Options:

`-p` Port to use (defaults to 8080)

`-a` Address to use (defaults to 0.0.0.0)

`-d` Show directory listings (defaults to 'True')

`-i` Display autoIndex (defaults to 'True')

`-g` or `--gzip` When enabled (defaults to 'False') it will serve `./public/some-file.js.gz` in place of `./public/some-file.js` when a gzipped version of the file exists and the request accepts gzip encoding.

`-e` or `--ext` Default file extension if none supplied (defaults to 'html')

`-s` or `--silent` Suppress log messages from output

`--cors` Enable CORS via the `Access-Control-Allow-Origin` header

`-o` Open browser window after starting the server

`-c` Set cache time (in seconds) for cache-control max-age header, e.g. `-c10` for 10 seconds (defaults to '3600'). To disable caching, use `-c-1`.

`-U` or `--utc` Use UTC time format in log messages.

`-P` or `--proxy` Proxies all requests which can't be resolved locally to the given url. e.g.: `-P http://someurl.com`

`-S` or `--ssl` Enable https.

`-C` or `--cert` Path to ssl cert file (default: cert.pem).

`-K` or `--key` Path to ssl key file (default: key.pem).



So running `http-server --proxy http://localhost:8801/` gives us exactly what we are looking for:

The screenshot shows a web browser at `localhost:8080` displaying the Angular Docs website. The page features a dark green header with the Angular logo and navigation links: "ADD RESOURCE", "FOLLOW US", "THE OFFICIAL DOCS", "HELP", and "LOGIN". The main content area displays a list of articles, including "A Night of Angular" by Jesse Sanders (Dec 2017), "test" by Nrwl (Dec 2017), and "UI Router FAQ" by Angular-Ui (Apr 2017). A search bar and a sidebar with tags like "animations", "aot", "cli", "components", "firebase", "forms", "getting-started", and "ng-module" are also visible.

The browser's developer tools are open to the Network tab, showing a list of requests. The first three requests are for `recaptcha_en.js`, `collect?v=1&_v=j66&a=972545381&t=pageview&_s=...`, and `buffer-hover-icon@2x.png`. A tooltip is visible over the `safeFetch` method call in the `ngsw-worker.js:2464` file, showing the following stack trace:

```
safeFetch @ ngsw-worker.js:2464
handleFetch @ ngsw-worker.js:1975
async function (async)
handleFetch @ ngsw-worker.js:1915
onFetch @ ngsw-worker.js:1810
Driver.scope.addEventListener @ ngsw-worker.js:1773
```

The console shows the following log messages:

```
XHR finished loading: GET "http://localhost:8080/api/articles/recent".
Fetch finished loading: GET "http://localhost:8080/api/articles/recent".
Fetch finished loading: GET "https://www.gstatic.com/recaptcha/api2/v1515997865826/recaptcha_en.js".
Fetch finished loading: GET "https://www.google-analytics.com/r/collect?v=1&_v=j66&a=972545381&t=pagevie...85.1486747517&tid=UA-97437242-1&gid=999977109.1516604609&r=1&z=766639842".
```

and of course, the offline test:

The screenshot shows the 'The Unofficial Angular Docs' website. The top navigation bar includes 'ADD RESOURCE', 'FOLLOW US' (with a Twitter icon), 'THE OFFICIAL DOCS' (with an 'A' icon), 'HELP', and 'LOGIN'. The left sidebar contains a search bar, filters for 'AngularJS (1.x)' and 'Angular (2+)', a 'search yo tags' input, and buttons for 'ALL TAGS' and 'RESET FILTERS'. The main content area is obscured by a blue loading spinner and the text 'FaiLs MiSeRaBLY' in a red, serif font. The browser's developer tools are open at the bottom, with the 'Network' tab selected. The 'Offline' mode is enabled, and there are 10 error notifications in the top right corner of the developer tools.



**But that's OK, we just
have one final step to
caching VICTORY!**

#7 CACHING CUSTOM BUDS

...

```
"dataGroups": [{  
  }]
```



ngDocIO/src/ngsw-config.json

#7 CACHING CUSTOM BUDS

...

```
"dataGroups": [{
```



ngDocIO/src/ngsw-config.json

```
}]
```

#7 CACHING CUSTOM BUDS

...

```
"dataGroups": [{  
  "name": "api-performance",  
  "urls": [  
    "/api/articles/**",  
    "/api/tags/**",  
    "/api/currentIdentity",  
    "/api/auth/type",  
    "api/articles/recent"  
  ],  
  "cacheConfig": {  
    "strategy": "performance",  
    "maxSize": 100,  
    "maxAge": "3d"  
  }  
}]
```

ngDocIO/src/ngsw-config.json

We need to add these routes to be cached!

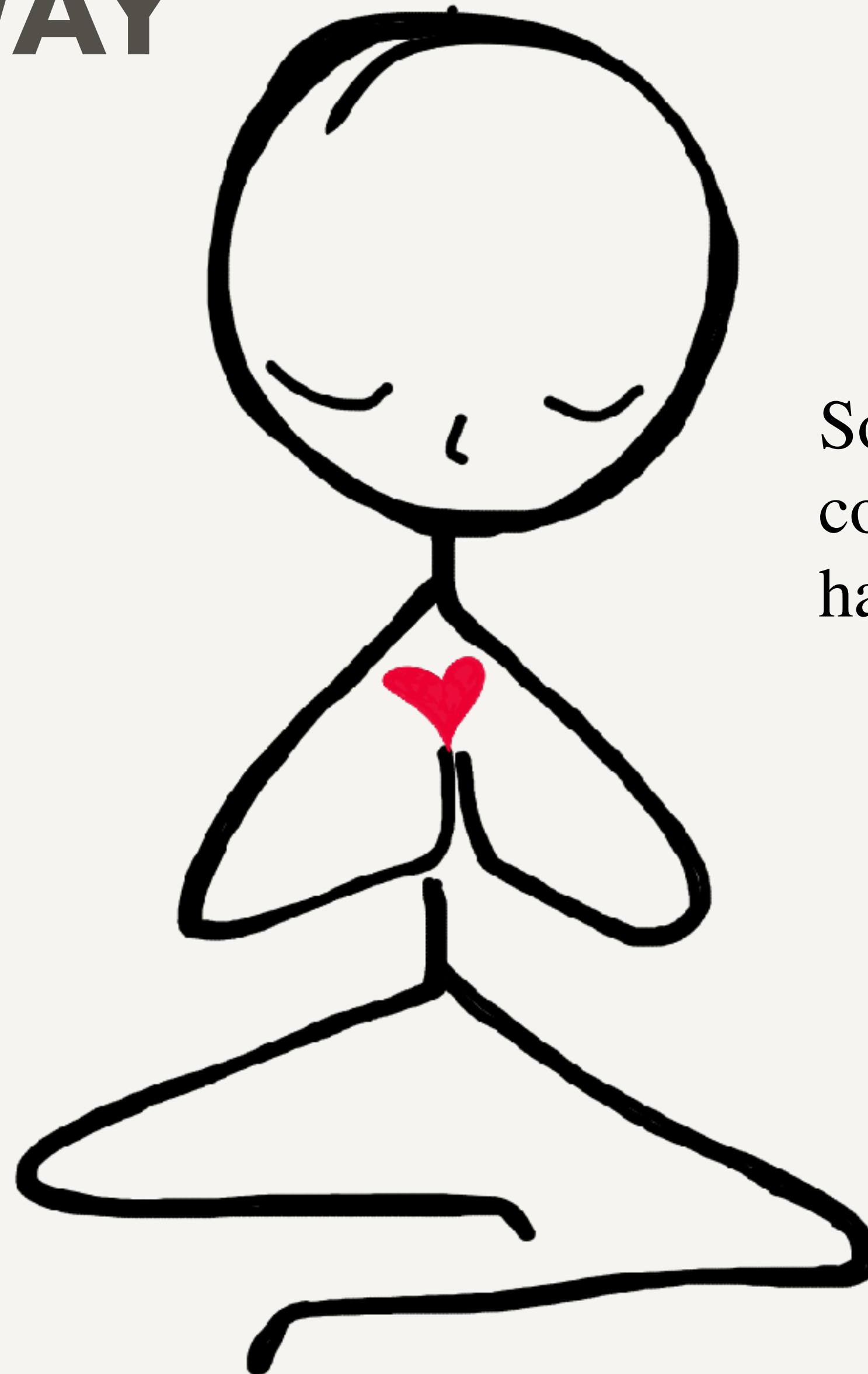
And now you can see the **Offline GLORY**

The screenshot shows a web browser window with the NgDoclo website. The browser's developer tools are open to the Network tab, which is filtered to show XHR requests. The status bar at the bottom indicates that the browser is in offline mode and provides performance metrics.

Name	Met...	Stat...	Type	Initiator	Size	Time	Waterfall
<input type="checkbox"/> currentIdentity	GET	200	xhr	polyfills.53ddd34....bundl...	(from Servic...	416 ms	
<input type="checkbox"/> type	GET	200	xhr	polyfills.53ddd34....bundl...	(from Servic...	448 ms	
<input type="checkbox"/> tags/	GET	200	xhr	polyfills.53ddd34....bundl...	(from Servic...	412 ms	
<input type="checkbox"/> recent	GET	200	xhr	polyfills.53ddd34....bundl...	(from Servic...	402 ms	
<input type="checkbox"/> buffer-hover-icon@2x.png	GET	200	fetch	ngsw-worker.js:2464	(from disk c...	20 ms	

8 / 27 requests | 0 B / 2.3 KB transferred | Finish: 3.15 s | **DOMContentLoaded: 1.61 s** | **Load: 2.06 s**

THE TAKEAWAY



Some would even say that if not for cows, Service workers would never have been invented.

**SO WHEN YOU ARE THINKING, SHOULD I
SERVICE WORKER? IS IT WORTH THE 30
MINUTES TO SET UP?**

Just remember...

It's for the cow-puppies <3





@AlyssaNicoll