

Desarrollo front-end avanzado

PEC 5

Gerson Esquembri Moreno

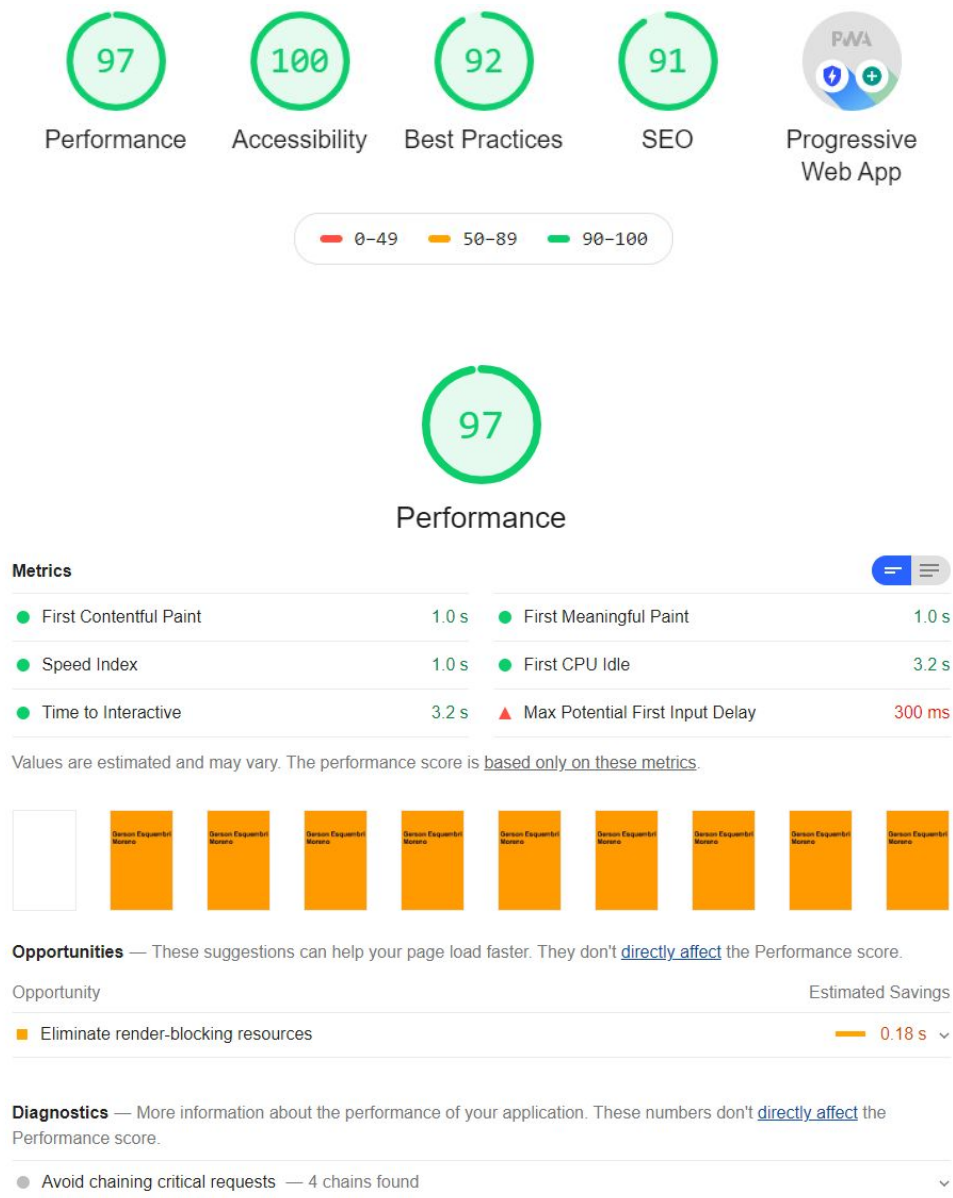
12 de enero de 2020

Ejercicio 1

Link de la PWA

<https://gersonpwa1.firebaseio.com/>

Capturas LightHouse





Accessibility

These checks highlight opportunities to [improve the accessibility of your web app](#). Only a subset of accessibility issues can be automatically detected so manual testing is also encouraged.

Additional items to manually check (11) — These items address areas which an automated testing tool cannot cover. [Learn more in our guide on conducting an accessibility review.](#)

Passed audits (5)	
● Background and foreground colors have a sufficient contrast ratio	▼
● Document has a <title> element	▼
● <html> element has a [lang] attribute	▼
● <html> element has a valid value for its [lang] attribute	▼
● [user-scalable="no"] is not used in the <meta name="viewport"> element and the [maximum-scale] attribute is not less than 5.	▼



Best Practices







▲ Requests the notification permission on page load	▼
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Passed audits (13)	
● Avoids Application Cache	▼
● Uses HTTPS	▼
● Uses passive listeners to improve scrolling performance	▼
● Avoids document.write()	▼
● Links to cross-origin destinations are safe	▼
● Avoids requesting the geolocation permission on page load	▼
● Page has the HTML doctype	▼
● Avoids front-end JavaScript libraries with known security vulnerabilities	▼
● Detected JavaScript libraries	▼
● Avoids deprecated APIs	▼
● Allows users to paste into password fields	▼
● No browser errors logged to the console	▼
● Displays images with correct aspect ratio	▼






Progressive Web App

These checks validate the aspects of a Progressive Web App. [Learn more.](#)

Fast and reliable

-  Page load is fast enough on mobile networks 
-  Current page responds with a 200 when offline 
-  `start_url` responds with a 200 when offline 

Installable

-  Uses HTTPS 
-  Registers a service worker that controls page and `start_url` 
-  Web app manifest meets the installability requirements 

PWA Optimized

-  Redirects HTTP traffic to HTTPS 
-  Configured for a custom splash screen 
-  Sets a theme color for the address bar. 
-  Content is sized correctly for the viewport 
-  Has a `<meta name="viewport">` tag with `width` or `initial-scale` 
-  Contains some content when JavaScript is not available 
-  Does not provide a valid `apple-touch-icon` 

Elaboración del Service Worker

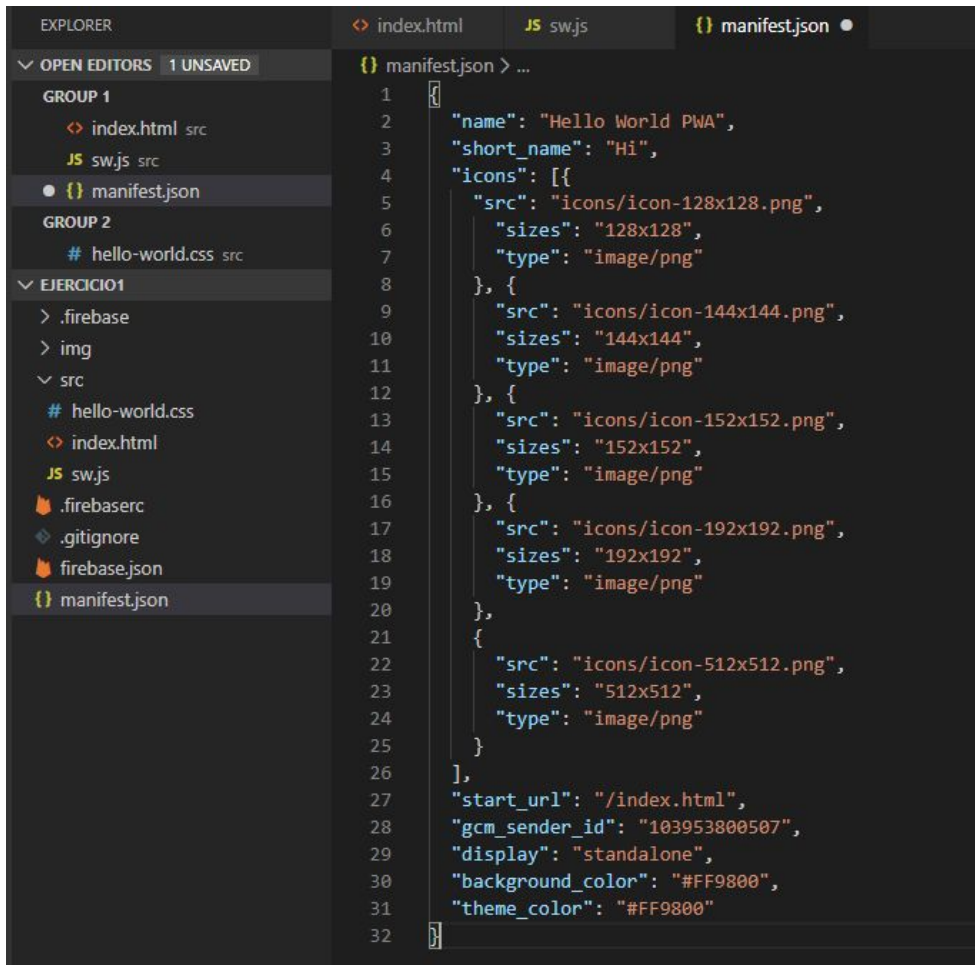
```
<script>
  if('serviceWorker' in navigator) {
    navigator.serviceWorker.register('/sw.js')
      .then(function() {
        console.log('Service Worker Registered');
      });
  }
</script>
```

The screenshot displays the development environment for a Service Worker. The Explorer panel on the left shows the project structure with files like `index.html`, `sw.js`, and `hello-world.css`. The main editor shows the content of `sw.js`, which registers the worker and caches assets. The bottom console panel shows the execution logs, including "Service Worker Registered", "[ServiceWorker] Install", and "[ServiceWorker] Caching app shell".

```
src > JS sw.js > ...
1  var cacheName = 'hello-world-page';
2  var filesToCache = [
3    '/',
4    '/index.html',
5    '/hello-world.css'
6  ];
7  self.addEventListener('install', function(e) {
8    console.log('[ServiceWorker] Install');
9    e.waitUntil(
10     caches.open(cacheName).then(function(cache) {
11       console.log('[ServiceWorker] Caching app shell');
12       return cache.addAll(filesToCache);
13     })
14   );
15 });
16 self.addEventListener('activate', event => {
17   event.waitUntil(self.clients.claim());
18 });
19 self.addEventListener('fetch', event => {
20   event.respondWith(
21     caches.match(event.request, {ignoreSearch:true}).then(response => {
22       return response || fetch(event.request);
23     })
24   );
25 });
```

Service Worker Registered gersonpwal.firebaseio.com/:39
[ServiceWorker] Install sw.js:8
[ServiceWorker] Caching app shell sw.js:11
Navigated to https://gersonpwal.firebaseio.com/
Service Worker Registered gersonpwal.firebaseio.com/:39
Navigated to https://gersonpwal.firebaseio.com/
Service Worker Registered (index):39

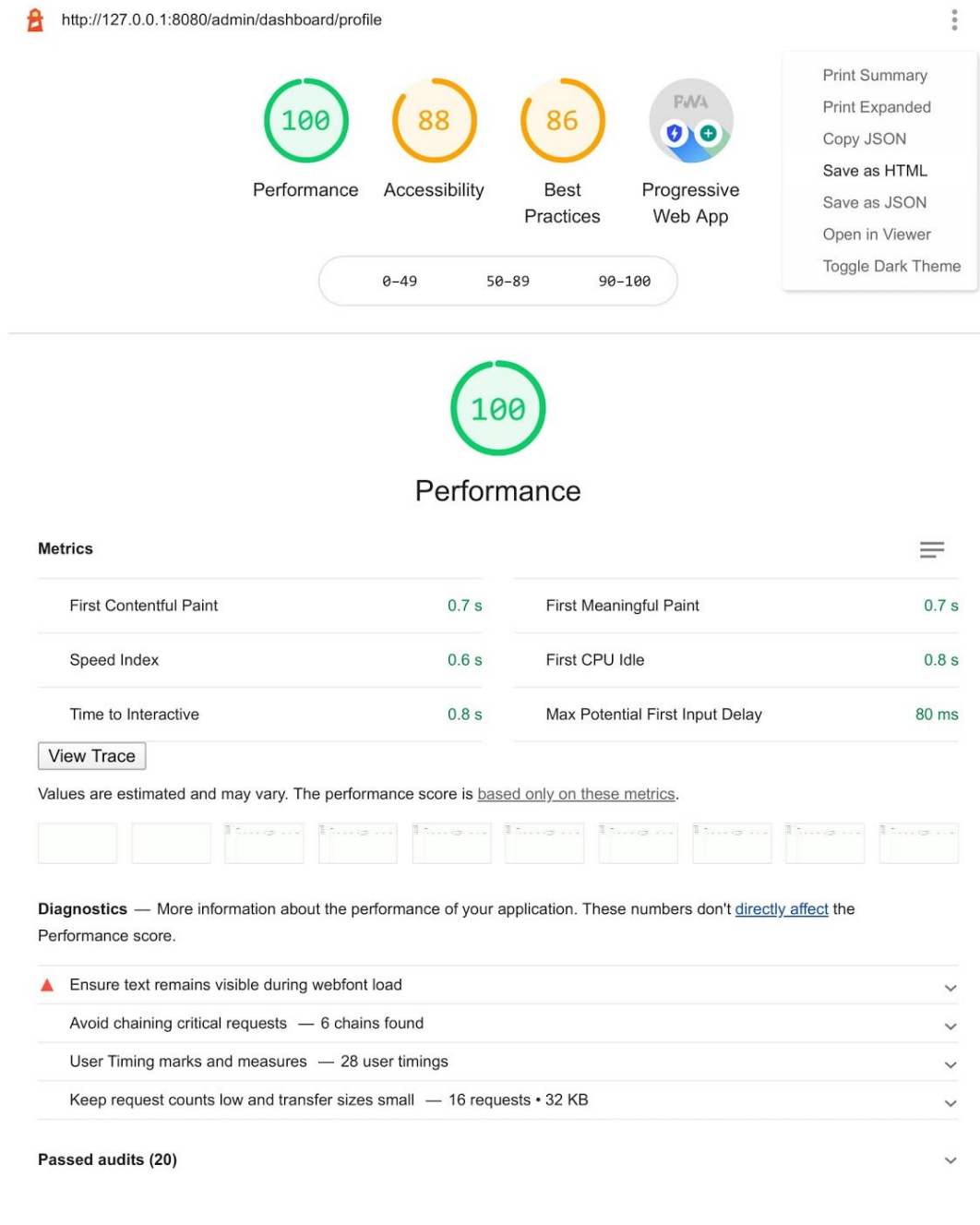
Manifest.json



```
1 {
2   "name": "Hello World PWA",
3   "short_name": "Hi",
4   "icons": [{
5     "src": "icons/icon-128x128.png",
6     "sizes": "128x128",
7     "type": "image/png"
8   }, {
9     "src": "icons/icon-144x144.png",
10    "sizes": "144x144",
11    "type": "image/png"
12  }, {
13    "src": "icons/icon-152x152.png",
14    "sizes": "152x152",
15    "type": "image/png"
16  }, {
17    "src": "icons/icon-192x192.png",
18    "sizes": "192x192",
19    "type": "image/png"
20  },
21  {
22    "src": "icons/icon-512x512.png",
23    "sizes": "512x512",
24    "type": "image/png"
25  }
26 ],
27 "start_url": "/index.html",
28 "gcm_sender_id": "103953800507",
29 "display": "standalone",
30 "background_color": "#FF9800",
31 "theme_color": "#FF9800"
32 }
```

```
<html>
<head>
  <meta charset="utf-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1">
  <title>My hello world page</title>
  <link rel="stylesheet" type="text/css" href="hello-world.css" media="all">
  <link rel="manifest" href="../manifest.json">
</head>
<body>
  <h1 class="vertical-container">Gerson Esquemбри Moreno</h1>
```

Ejercicio 2





Accessibility

These checks highlight opportunities to [improve the accessibility of your web app](#). Only a subset of accessibility issues can be automatically detected so manual testing is also encouraged.

Names and labels — These are opportunities to improve the semantics of the controls in your application. This may enhance the experience for users of assistive technology, like a screen reader.

▲ Buttons do not have an accessible name ▼

Additional items to manually check (11) — These items address areas which an automated testing tool cannot cover. [Learn more](#) in our guide on [conducting an accessibility review](#). ▼

Passed audits (13) ▼

Not applicable (21) ▼



Best Practices

▲ Does not use HTTP/2 for all of its resources — 2 requests not served via HTTP/2 ▼

▲ Browser errors were logged to the console ▼

Passed audits (13) ▼



Progressive Web App

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Fast and reliable

Page load is fast enough on mobile networks ▼

Current page responds with a 200 when offline	▼
start_url responds with a 200 when offline	▼
Installable	
Uses HTTPS	▼
Registers a service worker that controls page and start_url	▼
Web app manifest meets the installability requirements	▼
PWA Optimized	
▲ Does not redirect HTTP traffic to HTTPS	▼
Configured for a custom splash screen	▼
Sets a theme color for the address bar.	▼
Content is sized correctly for the viewport	▼
Has a <meta name="viewport"> tag with width or initial-scale	▼
Contains some content when JavaScript is not available	▼
▲ Does not provide a valid apple-touch-icon	▼
Additional items to manually check (3) — These checks are required by the baseline PWA Checklist but are not automatically checked by Lighthouse. They do not affect your score but it's important that you verify them manually.	

Runtime Settings	
URL	http://127.0.0.1:8080/admin/dashboard/profile
Fetch time	Jan 12, 2020, 5:47 PM GMT+1
Device	Emulated Desktop
Network throttling	Provided by environment
CPU throttling	Provided by environment
User agent (host)	Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/79.0.3945.117 Safari/537.36
User agent (network)	Mozilla/5.0 (Macintosh; Intel Mac OS X 10_13_6) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/74.0.3694.0 Safari/537.36 Chrome-Lighthouse
CPU/Memory Power	364

Ejercicio 3

- **Package.json:** se añaden varias dependencias, y las configuraciones:

```
"compile:server": "webpack --config webpack.server.config.js --progress --colors",

"serve:ssr": "node dist/server",

"build:ssr": "npm run build:client-and-server-bundles && npm run compile:server",

"build:client-and-server-bundles": "ng build --prod && ng run UOCJob:server:production --bundleDependencies all"
```

- **Server.ts:** servidor NodeJS Express.
- **Webpack.server.config.js:** configuración de webpack para empaquetar el servidor de Angular Universal.
- **Main.ts:** se modifica para que el navegador no haga *bootstrapping* de la aplicación hasta que las páginas renderizadas por Universal no estén cargadas del todo.

```
document.addEventListener('DOMContentLoaded', () => {

    platformBrowserDynamic().bootstrapModule(AppModule)

    .catch(err => console.error(err));

});
```

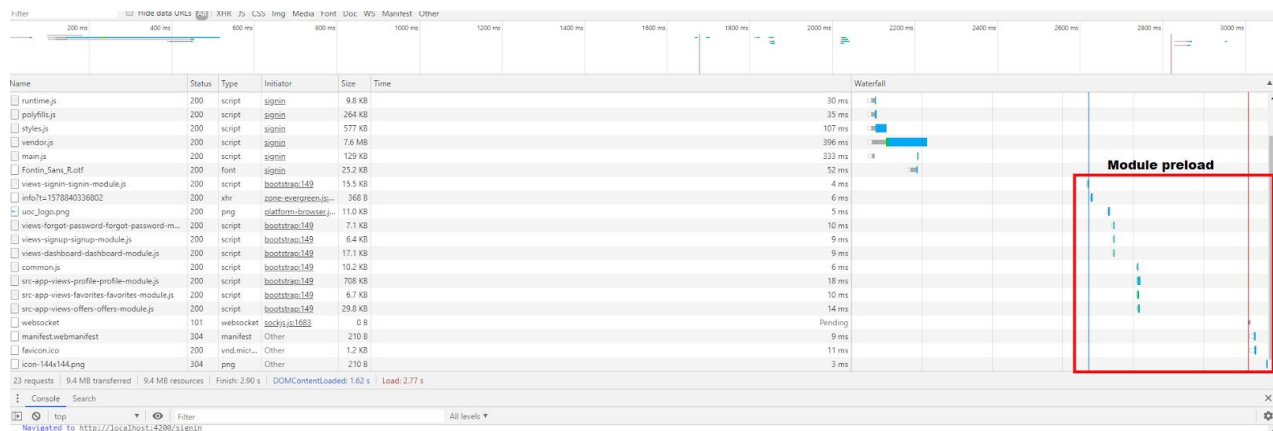
- **Main.server.ts:** en este fichero se exporta **AppServerModule**, que es el punto de entrada para Angular Universal.
- **Tsconfig.server.json:** le indica al compilador dónde puede encontrar el módulo de entrada de la aplicación de Universal.

- **App.module.ts:** se ha modificado para que ejecute el método estático **.withServerTransition**, del módulo importado **BrowserModule**. Esta llamada le indica al navegador que el cliente será modificado con la versión del servidor en algún momento.
- **App.server.module.ts:** este es el módulo raíz de la versión del servidor. Importa **AppModule** y el **ServerModule** de *@angular/platform-server*. Arranca el mismo **AppComponent** que AppModule. Es el punto de entrada para la aplicación de Angular Universal.

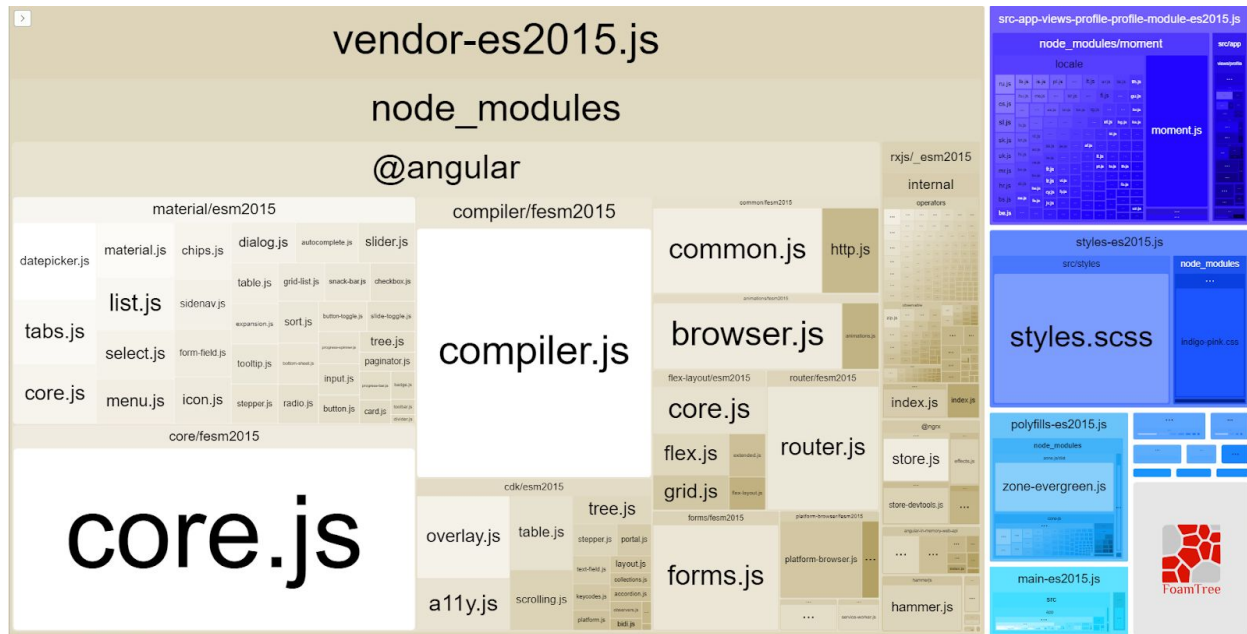
Ejercicio 4

Link a la página en GitHub: <https://gersonesmo.github.io/PEC5PWA/signin>

Ejercicio 6



Ejercicio 7



Como podemos observar, el módulo que más espacio ocupa es **core.js** (1.51MB). El paquete de módulos de **@angular** ocupa en total 6.11MB, que dada la envergadura de la aplicación, es un tamaño bastante razonable. Dentro de los módulos de **@angular**, también se observa que **angular material** es de los módulos que más ocupa (1.27MB). Fuera de los módulos de **@angular**, lo que más ocupa son los estilos scss, que tal vez, después de analizar los estilos, se podrían simplificar bastante, aunque el tamaño del fichero transpilado es de 400KB, que no es demasiado grande. Esto también se debe a que la mayoría de los estilos utilizados en la aplicación se toman de *angular material*.