

Performance Accessibility



**Best Practices** 



**SEO** 



**PWA** 



# Performance

Values are estimated and may vary. The performance score is calculated directly from these metrics. See calculator.

▲ 0-49

50-89

90-100



**METRICS** Expand view

First Contentful Paint

5.8 s

▲ Time to Interactive

7.1 s

Speed Index

5.8 s

**Total Blocking Time** 

90 ms

Largest Contentful Paint

7.1 s

**Cumulative Layout Shift** 

0















Show audits relevant to: ΑII FCP TBT LCP CLS

**OPPORTUNITIES** 

**Estimated Savings** Opportunity

Enable text compression

4.92 s ^

Text-based resources should be served with compression (gzip, deflate or brotli) to minimize total network bytes. <u>Learn</u> <u>more</u>. <u>FCP</u> <u>LCP</u>

Transfer Size	Potential Savings
5,039.6 KiB	4,052.8 KiB
1,066.6 KiB	776.5 KiB
679.3 KiB	573.4 KiB
357.9 KiB	306.8 KiB
297.0 KiB	223.6 KiB
173.8 KiB	126.1 KiB
6.5 KiB	4.8 KiB
	Size 5,039.6 KiB 1,066.6 KiB 679.3 KiB 357.9 KiB 297.0 KiB

# ▲ Reduce unused JavaScript 2.88 s ヘ

Reduce unused JavaScript and defer loading scripts until they are required to decrease bytes consumed by network activity. <u>Learn more</u>. <u>[LCP]</u>

# ✓ Show 3rd-party resources (1)

URL	Transfer Size	Potential Savings
/vendor.js (localhost)	5,039.9 KiB	2,428.9 KiB
@ng-bootstrap/ng-bootstrap/fesm2015/ng-bootstrap.mjs	605.9 KiB	395.1 KiB
@angular/core/fesm2015/core.mjs	1,128.5 KiB	354.0 KiB
chart.js/dist/chart.esm.js	358.6 KiB	334.5 KiB
@angular/animations/fesm2015/browser.mjs	164.3 KiB	141.8 KiB
@angular/cdk/fesm2015/overlay.mjs	133.1 KiB	93.7 KiB
/scripts.js (localhost)	1,066.9 KiB	487.4 KiB
jquery\dist\jquery.js	279.9 KiB	131.6 KiB
datatables.net\js\jquery.dataTables.js	443.1 KiB	102.0 KiB
bootstrap\dist\js\bootstrap.js	144.4 KiB	97.0 KiB
datatables.net\js\jquery.dataTables.min.js	88.2 KiB	73.4 KiB
jquery\dist\jquery.min.js	87.4 KiB	63.7 KiB

URL	Transfer Size	Potential Savings
/main.js (localhost)	679.6 KiB	306.1 KiB
src/app/Shared Pages/register/register.component.html	18.4 KiB	18.4 KiB
src/app/User Pages/homepage/homepage.component.html	12.8 KiB	12.8 KiB
src/app/User Pages/create-article-page/create-article-page.component.html	10.6 KiB	10.6 KiB
src/app/User Pages/my-articles/my-articles.component.html	9.4 KiB	9.4 KiB
src/app/User Pages/update-article-page/update-article-page.component.html	9.2 KiB	9.2 KiB
/styles.js (localhost)	174.1 KiB	167.2 KiB
/node_modules/html-entities/lib/named-references.js	68.4 KiB	68.4 KiB
/node_modules/webpack-dev-server/client/modules/logger/index.js	26.8 KiB	26.8 KiB
/node_modules/events.js	15.1 KiB	15.1 KiB
/node_modules/webpack-dev-server/client/index.js	8.3 KiB	8.3 KiB
/node_modules/html-entities/lib/index.js	8.0 KiB	8.0 KiB
standard/ckeditor.js (cdn.ckeditor.com)	190.8 KiB	165.8 KiB
/polyfills.js (localhost)	297.3 KiB	65.0 KiB
node_modules/zone.js/fesm2015/zone.js	124.9 KiB	25.6 KiB
node_modules/events/events.js	14.8 KiB	11.5 KiB
node_modules/webpack-dev-server/client/modules/logger/index.js	26.3 KiB	7.7 KiB
node_modules/html-entities/lib/index.js	7.8 KiB	5.5 KiB
node_modules/webpack-dev-server/client/overlay.js	6.7 KiB	5.2 KiB

▲ Minify JavaScript 2.24 s ヘ

Minifying JavaScript files can reduce payload sizes and script parse time. <u>Learn more</u>. FCP <u>LCP</u>

URL	Transfer Size	Potential Savings
/vendor.js (localhost)	5,039.9 KiB	2,092.2 KiB
/scripts.js (localhost)	1,066.9 KiB	508.6 KiB
/polyfills.js (localhost)	297.3 KiB	98.8 KiB
/main.js (localhost)	679.6 KiB	74.7 KiB

URL	Transfer Size	Potential Savings
/styles.js (localhost)	174.1 KiB	36.4 KiB
/runtime.js (localhost)	6.8 KiB	3.8 KiB

## Eliminate render-blocking resources

0.76 s ^

Resources are blocking the first paint of your page. Consider delivering critical JS/CSS inline and deferring all non-critical JS/styles. Learn more. (FCP) (LCP)

# ✓ Show 3rd-party resources (2)

URL	Transfer Size	Potential Savings
css/bootstrap.min.css (localhost)	0.0 KiB	80 ms
css/font-awesome.min.css (cdnjs.cloudflare.com)	6.2 KiB	220 ms
/styles.css (localhost)	358.2 KiB	1,480 ms
standard/ckeditor.js (cdn.ckeditor.com)	190.8 KiB	1,200 ms

# Reduce unused CSS 0.32 s ^

Reduce unused rules from stylesheets and defer CSS not used for above-the-fold content to decrease bytes consumed by network activity. Learn more. FCP (LCP)

URL	Transfer Size	Potential Savings
/styles.css (localhost)	358.2 KiB	332.1 KiB

# Remove duplicate modules in JavaScript bundles

0.24 s ^

Remove large, duplicate JavaScript modules from bundles to reduce unnecessary bytes consumed by network activity. [TBT]

Source	Transfer Size	Potential Savings
node_modules/html-entities		150.75 KiB

Source	Transfer Size	Potential Savings
/polyfills.js (localhost)	75.50 KiB	
/vendor.js (localhost)	73.85 KiB	
/styles.js (localhost)	76.90 KiB	
node_modules/webpack-dev-server		119.00 KiB
/polyfills.js (localhost)	59.60 KiB	
/vendor.js (localhost)	58.30 KiB	
/styles.js (localhost)	60.70 KiB	
node_modules/events		29.60 KiB
/polyfills.js (localhost)	14.85 KiB	
/vendor.js (localhost)	14.50 KiB	
/styles.js (localhost)	15.10 KiB	
node_modules/ansi-html-community		8.45 KiB
/polyfills.js (localhost)	4.25 KiB	
/vendor.js (localhost)	4.15 KiB	
/styles.js (localhost)	4.30 KiB	
node_modules/webpack		2.75 KiB
/polyfills.js (localhost)	1.35 KiB	
/vendor.js (localhost)	1.35 KiB	
/styles.js (localhost)	1.40 KiB	

These suggestions can help your page load faster. They don't <u>directly affect</u> the Performance score.

# DIAGNOSTICS

A long cache lifetime can speed up repeat visits to your page. Learn more.

Show 3rd-party resources (1)

URL

Cache
Transfer
TTL
Size

/vendor.js (localhost)

None 5,040 KiB

URL	Cache TTL	Transfer Size
/main.js (localhost)	None	680 KiB
/styles.css (localhost)	None	358 KiB
/polyfills.js (localhost)	None	297 KiB
/styles.js (localhost)	None	174 KiB
/assets/Logo.png (localhost)	None	24 KiB
/runtime.js (localhost)	None	7 KiB
standard/ckeditor.js (cdn.ckeditor.com)	7 d	191 KiB

▲ Ensure text remains visible during webfont load

Leverage the font-display CSS feature to ensure text is user-visible while webfonts are loading. <u>Learn more</u>. FCP <u>LCP</u>

URL Potential Savings

...fonts/fontawesome-webfont.woff2?v=4.7.0 (cdnjs.cloudflare.com) 60 ms

▲ Avoid enormous network payloads — Total size was 7,923 KiB

Large network payloads cost users real money and are highly correlated with long load times. <u>Learn more</u>. <u>[LCP]</u>

Show 3rd-party resources (2)

URL	Transfer Size
/vendor.js (localhost)	5,039.9 KiB
/scripts.js (localhost)	1,066.9 KiB
/main.js (localhost)	679.6 KiB
/styles.css (localhost)	358.2 KiB
/polyfills.js (localhost)	297.3 KiB

URL	Transfer Size
standard/ckeditor.js (cdn.ckeditor.com)	190.8 KiB
/styles.js (localhost)	174.1 KiB
fonts/fontawesome-webfont.woff2?v=4.7.0 (cdnjs.cloudflare.com)	76.1 KiB
/assets/Logo.png (localhost)	24.5 KiB
/runtime.js (localhost)	6.8 KiB

O Avoid chaining critical requests — 9 chains found

The Critical Request Chains below show you what resources are loaded with a high priority. Consider reducing the length of chains, reducing the download size of resources, or deferring the download of unnecessary resources to improve page load. Learn more. FCP LCP

Maximum critical path latency: 1,580 ms

Initial Navigation

/Employee (localhost)

- ...css/bootstrap.min.css (localhost) 20 ms, 0.00 KiB
- $... css/font-awe some.min.css \ (\texttt{cdnjs.cloudflare.com})$ 
  - ...fonts/fontawesome-webfont.woff2?v=4.7.0 (cdnjs.cloudflare.com) 60 ms, 76.08 KiB

/styles.css (localhost) - 20 ms, 358.22 KiB

- ...css/bootstrap.min.css (localhost) 20 ms, 0.00 KiB
- ...standard/ckeditor.js (cdn.ckeditor.com) 670 ms, 190.83 KiB

/runtime.js (localhost) - 10 ms, 6.82 KiB

/polyfills.js (localhost) - 20 ms, 297.30 KiB

/vendor.js (localhost) - 80 ms, 5,039.86 KiB

/main.js (localhost) - 40 ms, 679.63 KiB

User Timing marks and measures — 33 user timings

Consider instrumenting your app with the User Timing API to measure your app's real-world performance during key user experiences. <u>Learn more</u>.

Name	Туре	Start Time	Duration
Zone	Measure	1,192.63 ms	0.27 ms

Name	Туре	Start Time	Duration
Zone:ZoneAwarePromise	Measure	1,192.96 ms	0.44 ms
Zone:toString	Measure	1,193.41 ms	0.09 ms
Zone:util	Measure	1,193.51 ms	0.29 ms
Zone:legacy	Measure	1,193.78 ms	0.02 ms
Zone:timers	Measure	1,193.84 ms	0.16 ms
Zone:blocking	Measure	1,194.05 ms	0.05 ms
Zone:EventTarget	Measure	1,194.1 ms	0.5 ms
Zone:MutationObserver	Measure	1,194.68 ms	0.12 ms
Zone:IntersectionObserver	Measure	1,194.81 ms	0.09 ms
Zone:FileReader	Measure	1,194.89 ms	0.01 ms
Zone:on_property	Measure	1,194.95 ms	13.95 ms
Zone:customElements	Measure	1,209.03 ms	0.07 ms
Zone:XHR	Measure	1,209.2 ms	0.2 ms
Zone:geolocation	Measure	1,209.43 ms	0.07 ms
Zone	Mark	1,192.65 ms	
Zone:ZoneAwarePromise	Mark	1,192.96 ms	
Zone:toString	Mark	1,193.41 ms	
Zone:util	Mark	1,193.51 ms	
Zone:legacy	Mark	1,193.78 ms	
Zone:queueMicrotask	Mark	1,193.81 ms	
Zone:timers	Mark	1,193.84 ms	
Zone:requestAnimationFrame	Mark	1,194.01 ms	

Name	Туре	Start Time Duration
Zone:blocking	Mark	1,194.05 ms
Zone:EventTarget	Mark	1,194.11 ms
Zone:MutationObserver	Mark	1,194.69 ms
Zone:IntersectionObserver	Mark	1,194.81 ms
Zone:FileReader	Mark	1,194.9 ms
Zone:on_property	Mark	1,194.95 ms
Zone:customElements	Mark	1,209.03 ms
Zone:XHR	Mark	1,209.2 ms
Zone:geolocation	Mark	1,209.43 ms
Zone:PromiseRejectionEvent	Mark	1,209.53 ms

O Keep request counts low and transfer sizes small — 16 requests • 7,922 KiB

To set budgets for the quantity and size of page resources, add a budget.json file. <u>Learn more</u>.

Resource Type	Requests	Transfer Size
Total	16	7,922.3 KiB
Script	7	7,455.4 KiB
Stylesheet	4	364.4 KiB
Font	1	76.1 KiB
Image	1	24.5 KiB
Document	1	1.4 KiB
Other	2	0.5 KiB
Media	0	0.0 KiB
Third-party	3	273.1 KiB

his is the largest co	ntentful element painted within the viewport. <u>Learn More</u> <u>LCP</u>	
Element	h1.text	
	shifts — 3 elements found s contribute most to the CLS of the page. CLS	
Element		CLS Contribut
]	a#hid.nav-item.nav-link.active	
]	a#hideMe.nav-item.nav-link	
]	a#hideMen.nav-item.nav-link	
	read tasks — 2 long tasks found	TO MORO (TDT)
	s on the main thread, useful for identifying worst contributors to input delay. <u>Lea</u> l	II IIIOIE (IBI)

URL	Start Time	Duration
/styles.js (localhost)	7,056 ms	138 ms
Unattributable	200 ms	51 ms

More information about the performance of your application. These numbers don't <u>directly affect</u> the Performance score.

PASSED AUDITS (25)

Properly size images — Potential savings of 23 KiB

Serve images that are appropriately-sized to save cellular data and improve load time. Learn more.

	URL	Resource Size	Potential Savings
img. Log olm g	/assets/Logo.png (localhost)	24.2 KiB	23.5 KiB

Consider lazy loading offscreen and hidden images after all critical resources have finished loading to lower time to

Consider lazy-loading offscreen and hidden images after all critical resources have finished loading to lower time to interactive. <u>Learn more</u>.

Minify CSS

Minifying CSS files can reduce network payload sizes. Learn more. FCP LCP

Defer offscreen images

Efficiently encode images

Optimized images load faster and consume less cellular data. Learn more.

Serve images in next-gen formats — Potential savings of 13 KiB

Image formats like WebP and AVIF often provide better compression than PNG or JPEG, which means faster downloads and less data consumption. <u>Learn more</u>.

	URL	Resource Size	Potentia Savings
	img.  Log olm /assets/Logo.png (localhost) g	24.2 KiB	13.0 KiE
Preconnect to required or	igins		
Consider adding `preconnect  Learn more. FCP LCP	ct` or `dns-prefetch` resource hints to establish early co	onnections to important third	l-party origi
Initial server response tim	ne was short — Root document took 0 ms		
Keep the server response til	me for the main document short because all other requ	uests depend on it. <u>Learn m</u>	ore. FCP
URL			Time Spen
/Employee (localhost)			0 m
Avoid multiple page redire	ects		
Redirects introduce addition	nal delays before the page can be loaded. <u>Learn more</u> .	FCP LCP	
Preload key requests			
Consider using ` <link fcp="" lcp<="" rel="promore." td=""/> <td>eload&gt;` to prioritize fetching resources that are current</td> <td>tly requested later in page lo</td> <td>oad. <u>Learn</u></td>	eload>` to prioritize fetching resources that are current	tly requested later in page lo	oad. <u>Learn</u>
Use HTTP/2			
		exing. <u>Learn more</u> .	
	s over HTTP/1.1, including binary headers and multiple		
HTTP/2 offers many benefits  Use video formats for anir  Large GIFs are inefficient fo			ns and

Polyfills and transforms enable legacy browsers to use new JavaScript features. However, many aren't necessary for modern browsers. For your bundled JavaScript, adopt a modern script deployment strategy using module/nomodule feature detection to reduce the amount of code shipped to modern browsers, while retaining support for legacy browsers. <a href="Learn More"><u>Learn More (TBT)</u></a>

URL		Potential Savings
/scripts.js (localhost)		26.1 KiB
scripts.js:117	Array.isArray	
scripts.js:117	Array.prototype.includes	
scripts.js:31709	@babel/plugin-transform-classes	
/styles.js (localhost)		0.2 KiB
styles.js:944	@babel/plugin-transform-classes	
polyfills.js (localhost)		0.2 KiE
polyfills.js:1054	@babel/plugin-transform-classes	
vendor.js (localhost)		0.2 KiE
vendor.js:25705	<pre>@babel/plugin-transform-classes</pre>	

Preload Largest Contentful Paint image	^
Preload the image used by the LCP element in order to improve your LCP time. Learn more. LCP	
Avoids an excessive DOM size — 117 elements	^

A large DOM will increase memory usage, cause longer <u>style calculations</u>, and produce costly <u>layout reflows</u>. <u>Learn more</u>. <u>TBT</u>

Statistic	Element	\	/alue
Total DOM Elements			117
		button.btn.btn-danger	
Maximum DOM Depth			12

Statistic	Element	Value
	body	
Maximum Child Elements		7

JavaScript execution time — 0.2 s

Consider reducing the time spent parsing, compiling, and executing JS. You may find delivering smaller JS payloads helps with this. <u>Learn more</u>. (TBT)

URL	Total CPU Time	Script Evaluation	Script Parse
/styles.js (localhost)	267 ms	237 ms	2 ms
/Employee (localhost)	163 ms	2 ms	1 ms
Unattributable	116 ms	4 ms	0 ms

Minimizes main-thread work — 0.7 s

Consider reducing the time spent parsing, compiling and executing JS. You may find delivering smaller JS payloads helps with this. Learn more (TBT)

Category	Time Spent
Script Evaluation	293 ms
Other	176 ms
Style & Layout	85 ms
Parse HTML & CSS	41 ms
Script Parsing & Compilation	39 ms
Rendering	23 ms
Garbage Collection	2 ms

Third-party code can significantly impact load performance. Limit the number of redundant third-party providers and try to load third-party code after your page has primarily finished loading. <u>Learn more</u>. (TBT)

Third-Party	Transfer Size	Main-Thread Blocking Time
Cloudflare CDN	82 KiB	0 ms
fonts/fontawesome-webfont.woff2?v=4.7.0 (cdnjs.cloudflare.com)	76 KiB	0 ms
css/font-awesome.min.css (cdnjs.cloudflare.com)	6 KiB	0 ms

Lazy load third-party resources with facades

Some third-party embeds can be lazy loaded. Consider replacing them with a facade until they are required. <u>Learn more</u>. <u>TBT</u>

Largest Contentful Paint image was not lazily loaded

Above-the-fold images that are lazily loaded render later in the page lifecycle, which can delay the largest contentful paint. Learn more.

Uses passive listeners to improve scrolling performance

Consider marking your touch and wheel event listeners as `passive` to improve your page's scroll performance. <u>Learn</u> <u>more</u>.

Avoids document.write()

For users on slow connections, external scripts dynamically injected via `document.write()` can delay page load by tens of seconds. <u>Learn more</u>.

Avoid non-composited animations

Animations which are not composited can be janky and increase CLS. Learn more CLS

Image elements have explicit width and height

Set an explicit width and height on image elements to reduce layout shifts and improve CLS. Learn more CLS

Has a <meta name="viewport"> tag with width or initial-scale

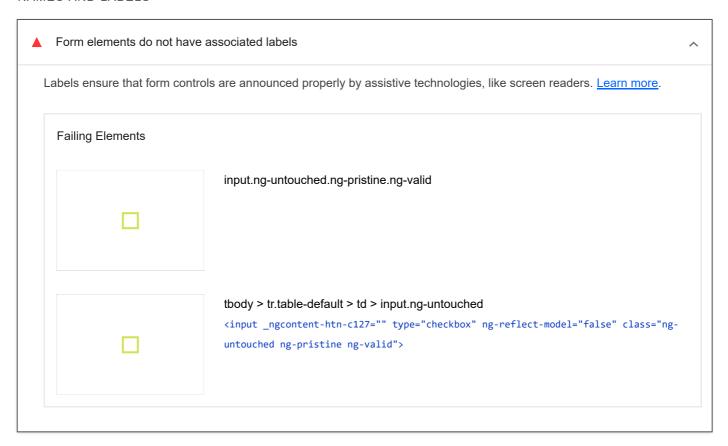
A `<meta name="viewport">` not only optimizes your app for mobile screen sizes, but also prevents <u>a 300 millisecond delay</u> to user input. <u>Learn more</u>. (TBT)

The `unload` event does not fire reliably and listening for it can prevent browser optimizations like the Back-Forward Cache. Use `pagehide` or `visibilitychange` events instead. <u>Learn more</u>



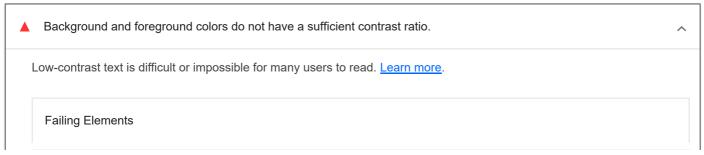
These checks highlight opportunities to improve the accessibility of your web app. Only a subset of accessibility issues can be automatically detected so manual testing is also encouraged.

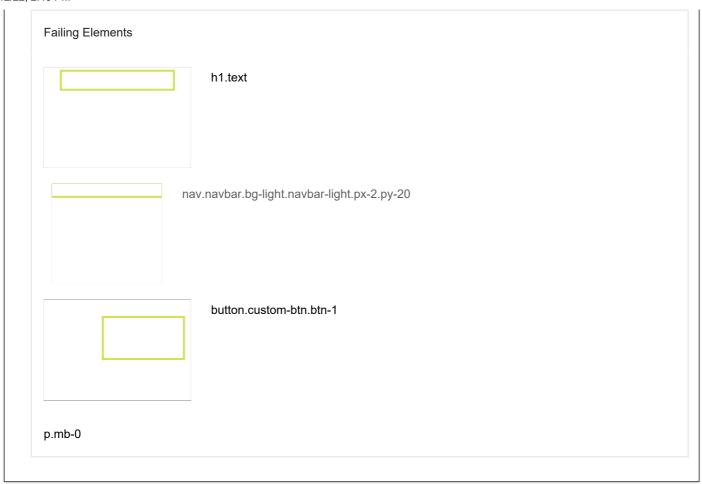
#### NAMES AND LABELS



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.

#### CONTRAST





These are opportunities to improve the legibility of your content.

## ADDITIONAL ITEMS TO MANUALLY CHECK (10)

Hide

Tabbing through the page follows the visual layout. Users cannot focus elements that are offscreen. Learn more.

Interactive controls are keyboard focusable

Custom interactive controls are keyboard focusable and display a focus indicator. Learn more.

Interactive elements indicate their purpose and state

Interactive elements, such as links and buttons, should indicate their state and be distinguishable from non-interactive elements. Learn more.

The user's focus is directed to new content added to the page

If new content, such as a dialog, is added to the page, the user's focus is directed to it. Learn more.

User focus is not accidentally trapped in a region

A user can tab into and out of any control or region without accidentally trapping their focus. Learn more.

O Custom controls have associated labels
Custom interactive controls have associated labels, provided by aria-label or aria-labelledby. <u>Learn more</u> .
O Custom controls have ARIA roles
Custom interactive controls have appropriate ARIA roles. <u>Learn more</u> .
Visual order on the page follows DOM order
DOM order matches the visual order, improving navigation for assistive technology. <u>Learn more</u> .
Offscreen content is hidden from assistive technology
Offscreen content is hidden with display: none or aria-hidden=true. Learn more.
HTML5 landmark elements are used to improve navigation
Landmark elements ( <main>, <nav>, etc.) are used to improve the keyboard navigation of the page for assistive technology.  <u>Learn more</u>.</nav></main>
These items address areas which an automated testing tool cannot cover. Learn more in our guide on <u>conducting an accessibility</u> <u>review</u> .
PASSED AUDITS (23)
[aria-*] attributes match their roles
Each ARIA `role` supports a specific subset of `aria-*` attributes. Mismatching these invalidates the `aria-*` attributes. <a href="Learn more"><u>Learn more</u></a> .
[aria-hidden="true"] is not present on the document <body></body>
Assistive technologies, like screen readers, work inconsistently when `aria-hidden="true"` is set on the document ` <body>`.  <u>Learn more</u>.</body>
[role]s have all required [aria-*] attributes
Some ARIA roles have required attributes that describe the state of the element to screen readers. <u>Learn more</u> .
[role] values are valid

ARIA roles must have valid values in order to perform their intended accessibility functions. <u>Learn more</u>.

[aria-\*] attributes have valid values Assistive technologies, like screen readers, can't interpret ARIA attributes with invalid values. Learn more. [aria-\*] attributes are valid and not misspelled Assistive technologies, like screen readers, can't interpret ARIA attributes with invalid names. Learn more. Buttons have an accessible name When a button doesn't have an accessible name, screen readers announce it as "button", making it unusable for users who rely on screen readers. Learn more. ARIA IDs are unique The value of an ARIA ID must be unique to prevent other instances from being overlooked by assistive technologies. Learn more. Image elements have [alt] attributes Informative elements should aim for short, descriptive alternate text. Decorative elements can be ignored with an empty alt attribute. Learn more. [user-scalable="no"] is not used in the <meta name="viewport"> element and the [maximum-scale] attribute is not less than 5. Disabling zooming is problematic for users with low vision who rely on screen magnification to properly see the contents of a web page. Learn more. [aria-hidden="true"] elements do not contain focusable descendents ^ Focusable descendents within an `[aria-hidden="true"]` element prevent those interactive elements from being available to users of assistive technologies like screen readers. Learn more. The page contains a heading, skip link, or landmark region Adding ways to bypass repetitive content lets keyboard users navigate the page more efficiently. Learn more. Document has a <title> element ^ The title gives screen reader users an overview of the page, and search engine users rely on it heavily to determine if a page is relevant to their search. Learn more. [id] attributes on active, focusable elements are unique

All focusable elements must have a unique 'id' to ensure that they're visible to assistive technologies. Learn more. <html> element has a [lang] attribute If a page doesn't specify a lang attribute, a screen reader assumes that the page is in the default language that the user chose when setting up the screen reader. If the page isn't actually in the default language, then the screen reader might not announce the page's text correctly. Learn more. <html> element has a valid value for its [lang] attribute Specifying a valid <u>BCP 47 language</u> helps screen readers announce text properly. <u>Learn more</u>. Links have a discernible name Link text (and alternate text for images, when used as links) that is discernible, unique, and focusable improves the navigation experience for screen reader users. Learn more. Lists contain only elements and script supporting elements (<script> and <template>). Screen readers have a specific way of announcing lists. Ensuring proper list structure aids screen reader output. Learn more. List items () are contained within or parent elements Screen readers require list items (`') to be contained within a parent '' or '' to be announced properly. Learn more. No element has a [tabindex] value greater than 0 A value greater than 0 implies an explicit navigation ordering. Although technically valid, this often creates frustrating experiences for users who rely on assistive technologies. Learn more. Cells in a element that use the [headers] attribute refer to table cells within the same table. Screen readers have features to make navigating tables easier. Ensuring `` cells using the `[headers]` attribute only refer to other cells in the same table may improve the experience for screen reader users. Learn more. elements and elements with [role="columnheader"/"rowheader"] have data cells they describe. Screen readers have features to make navigating tables easier. Ensuring table headers always refer to some set of cells may improve the experience for screen reader users. Learn more. Heading elements appear in a sequentially-descending order

Properly ordered headings that do not skip levels convey the semantic structure of the page, making it easier to navigate and understand when using assistive technologies. <u>Learn more</u>.

NOT APPLICABLE (19)	Hide
O [accesskey] values are unique	^
Access keys let users quickly focus a part of the page. For proper navigation, each access key must be unique. <u>Learn</u> more.	
O button, link, and menuitem elements have accessible names	^
When an element doesn't have an accessible name, screen readers announce it with a generic name, making it unusable for users who rely on screen readers. <u>Learn more</u> .	е
ARIA input fields have accessible names	^
When an input field doesn't have an accessible name, screen readers announce it with a generic name, making it unusal for users who rely on screen readers. <u>Learn more</u> .	ble
ARIA meter elements have accessible names	^
When an element doesn't have an accessible name, screen readers announce it with a generic name, making it unusable for users who rely on screen readers. <u>Learn more</u> .	е
ARIA progressbar elements have accessible names	^
When a `progressbar` element doesn't have an accessible name, screen readers announce it with a generic name, maki it unusable for users who rely on screen readers. <u>Learn more</u> .	ng
Elements with an ARIA [role] that require children to contain a specific [role] have all required children.	^
Some ARIA parent roles must contain specific child roles to perform their intended accessibility functions. <u>Learn more</u> .	
[role]s are contained by their required parent element	^
Some ARIA child roles must be contained by specific parent roles to properly perform their intended accessibility function <a href="Learn more"><u>Learn more</u></a> .	าร.
ARIA toggle fields have accessible names	^
When a toggle field doesn't have an accessible name, screen readers announce it with a generic name, making it unusal for users who rely on screen readers. <u>Learn more</u> .	ble

ARIA tooltip elements have accessible names	^
When an element doesn't have an accessible name, screen readers announce it with a generic name, making it for users who rely on screen readers. <u>Learn more</u> .	unusable
ARIA treeitem elements have accessible names	^
When an element doesn't have an accessible name, screen readers announce it with a generic name, making it for users who rely on screen readers. <u>Learn more</u> .	unusable
O <dl>'s contain only properly-ordered <dt> and <dd> groups, <script>, <template> or <div> elements.</td><td>^</td></tr><tr><td>When definition lists are not properly marked up, screen readers may produce confusing or inaccurate output. Le</td><td><u>arn more</u>.</td></tr><tr><td>O Definition list items are wrapped in <dl> elements</td><td>^</td></tr><tr><td>Definition list items (`<dt>` and `<dd>`) must be wrapped in a parent `<dl>` element to ensure that screen readers properly announce them. <u>Learn more</u>.</td><td>s can</td></tr><tr><td>No form fields have multiple labels</td><td>^</td></tr><tr><td>Form fields with multiple labels can be confusingly announced by assistive technologies like screen readers whic either the first, the last, or all of the labels. <u>Learn more</u>.</td><td>h use</td></tr><tr><td>O <frame> or <iframe> elements have a title</td><td>^</td></tr><tr><td>Screen reader users rely on frame titles to describe the contents of frames. Learn more.</td><td></td></tr><tr><td>O <input type="image"> elements have [alt] text</td><td>^</td></tr><tr><td>When an image is being used as an `<input>` button, providing alternative text can help screen reader users und the purpose of the button. <u>Learn more</u>.</td><td>erstand</td></tr><tr><td>O The document does not use <meta http-equiv="refresh"></td><td>^</td></tr><tr><td>Users do not expect a page to refresh automatically, and doing so will move focus back to the top of the page. The create a frustrating or confusing experience. <u>Learn more</u>.</td><td>iis may</td></tr><tr><td>O <object> elements have alternate text</td><td>^</td></tr><tr><td>Screen readers cannot translate non-text content. Adding alternate text to `<object>` elements helps screen read meaning to users. Learn more.</td><td>ers convey</td></tr><tr><td>O [lang] attributes have a valid value</td><td>^</td></tr></tbody></table></script></dd></dt></dl>	

Specifying a valid <u>BCP 47 language</u> on elements helps ensure that text is pronounced correctly by a screen reader. <u>Learn</u> more.

<video> elements contain a <track> element with [kind="captions"]

When a video provides a caption it is easier for deaf and hearing impaired users to access its information. Learn more.



# **Best Practices**

#### **GENERAL**

▲ Browser errors were logged to the console

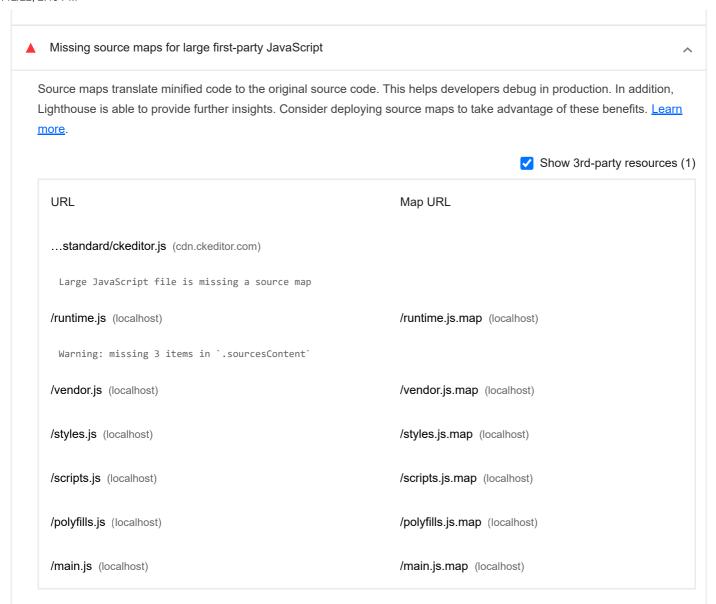
Errors logged to the console indicate unresolved problems. They can come from network request failures and other browser concerns. <u>Learn more</u>

Source	Description
Emplo yee:1	Refused to apply style from 'http://localhost:4200/bootstrap/css/bootstrap.min.css' because its MIME type ('text/html') is not a supported stylesheet MIME type, and strict MIME checking is enabled.
Emplo yee:1	Refused to apply style from 'http://localhost:4200/bootstrap/css/bootstrap.min.css' because its MIME type ('text/html') is not a supported stylesheet MIME type, and strict MIME checking is enabled.
Emplo yee:1	Refused to apply style from 'http://localhost:4200/bootstrap/css/bootstrap.min.css' because its MIME type ('text/html') is not a supported stylesheet MIME type, and strict MIME checking is enabled.

Detected JavaScript libraries

All front-end JavaScript libraries detected on the page. Learn more.

Name	Version
Bootstrap	5.1.3
jQuery	3.6.0
Angular	13.3.11



#### TRUST AND SAFETY



PASSED AUDITS (11)

Uses HTTPS

All sites should be protected with HTTPS, even ones that don't handle sensitive data. This includes avoiding mixed content,

where some resources are loaded over HTTP despite the initial request being served over HTTPS. HTTPS prevents

intruders from tampering with or passively listening in on the communications between your app and your users, and is a prerequisite for HTTP/2 and many new web platform APIs. Learn more. Avoids requesting the geolocation permission on page load Users are mistrustful of or confused by sites that request their location without context. Consider tying the request to a user action instead. Learn more. Avoids requesting the notification permission on page load Users are mistrustful of or confused by sites that request to send notifications without context. Consider tying the request to user gestures instead. Learn more. Avoids front-end JavaScript libraries with known security vulnerabilities Some third-party scripts may contain known security vulnerabilities that are easily identified and exploited by attackers. Learn more. Allows users to paste into password fields ^ Preventing password pasting undermines good security policy. Learn more. Displays images with correct aspect ratio Image display dimensions should match natural aspect ratio. Learn more. Serves images with appropriate resolution Image natural dimensions should be proportional to the display size and the pixel ratio to maximize image clarity. Learn more. Page has the HTML doctype Specifying a doctype prevents the browser from switching to quirks-mode. Learn more. Properly defines charset A character encoding declaration is required. It can be done with a `<meta>` tag in the first 1024 bytes of the HTML or in the Content-Type HTTP response header. Learn more. Avoids deprecated APIs Deprecated APIs will eventually be removed from the browser. Learn more. No issues in the Issues panel in Chrome Devtools

NOT APPLICABLE (1)

Issues logged to the `Issues` panel in Chrome Devtools indicate unresolved problems. They can come from network request failures, insufficient security controls, and other browser concerns. Open up the Issues panel in Chrome DevTools for more details on each issue.

# Fonts with font-display: optional are preloaded Preload 'optional' fonts so first-time visitors may use them. Learn more These checks ensure that your page is following basic search engine optimization advice. There are many additional factors Lighthouse does not score here that may affect your search ranking, including performance on Core Web Vitals. Learn more. CONTENT BEST PRACTICES Document does not have a meta description Meta descriptions may be included in search results to concisely summarize page content. Learn more. Format your HTML in a way that enables crawlers to better understand your app's content. CRAWLING AND INDEXING Links are not crawlable Search engines may use 'href' attributes on links to crawl websites. Ensure that the 'href' attribute of anchor elements links to an appropriate destination, so more pages of the site can be discovered. Learn More Uncrawlable Link

Hide

Uncrawlable Link	
	Disable <a _ngcontent-htn-c127=""></a>
	a#DataTables_Table_0_first.paginate_button.first.disabled
	a#DataTables_Table_0_previous.paginate_button.previous.disabled
	1 <a aria-controls="DataTables_Table_0" class="paginate_button current" data-dt-idx="2" tabindex="0"></a>
	a#DataTables_Table_0_next.paginate_button.next.disabled
	a#DataTables_Table_0_last.paginate_button.last.disabled
a.text-white.border-bottom	
a.text-white	
a.text-white	
a.text-white	
a.text-white.border-bottom	

To appear in search results, crawlers need access to your app.

ADDITIONAL ITEMS TO MANUALLY CHECK (1)	Hide
O Structured data is valid	^
Run the <u>Structured Data Testing Tool</u> and the <u>Structured Data Linter</u> to validate structured data. <u>Learn more</u> .	
Run these additional validators on your site to check additional SEO best practices.	
PASSED AUDITS (8)	Hide
Has a <meta name="viewport"/> tag with width or initial-scale	^
A ` <meta name="viewport"/> ` not only optimizes your app for mobile screen sizes, but also prevents <u>a 300 millisecond of to user input</u> . <u>Learn more</u> . <u>TBT</u>	<u>delay</u>
Document has a <title> element&lt;/td&gt;&lt;td&gt;^&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;The title gives screen reader users an overview of the page, and search engine users rely on it heavily to determine if a page is relevant to their search. &lt;u&gt;Learn more&lt;/u&gt;.&lt;/td&gt;&lt;td&gt;l&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;Page has successful HTTP status code&lt;/td&gt;&lt;td&gt;^&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;Pages with unsuccessful HTTP status codes may not be indexed properly. Learn more.&lt;/td&gt;&lt;td&gt;&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;Links have descriptive text&lt;/td&gt;&lt;td&gt;^&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;Descriptive link text helps search engines understand your content. &lt;u&gt;Learn more&lt;/u&gt;.&lt;/td&gt;&lt;td&gt;&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;Page isn't blocked from indexing&lt;/td&gt;&lt;td&gt;^&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;Search engines are unable to include your pages in search results if they don't have permission to crawl them. Learn m&lt;/td&gt;&lt;td&gt;&lt;u&gt;iore&lt;/u&gt;.&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;Image elements have [alt] attributes&lt;/td&gt;&lt;td&gt;^&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;Informative elements should aim for short, descriptive alternate text. Decorative elements can be ignored with an empty attribute. &lt;u&gt;Learn more&lt;/u&gt;.&lt;/td&gt;&lt;td&gt;/ alt&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;Document has a valid hreflang&lt;/td&gt;&lt;td&gt;^&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;hreflang links tell search engines what version of a page they should list in search results for a given language or region Learn more.&lt;/td&gt;&lt;td&gt;٦.&lt;/td&gt;&lt;/tr&gt;&lt;/tbody&gt;&lt;/table&gt;</title>	

Search engines can't index plugin content, and many devices restrict plugins or don't support them. Learn more.

NOT APPLICABLE (4)

robots.txt is valid

If your robots.txt file is malformed, crawlers may not be able to understand how you want your website to be crawled or indexed. <u>Learn more</u>.

Document has a valid rel=canonical

Canonical links suggest which URL to show in search results. Learn more.

Document uses legible font sizes

Font sizes less than 12px are too small to be legible and require mobile visitors to "pinch to zoom" in order to read. Strive to have >60% of page text ≥12px. <u>Learn more</u>.

Tap targets are sized appropriately

Interactive elements like buttons and links should be large enough (48x48px), and have enough space around them, to be easy enough to tap without overlapping onto other elements. <u>Learn more</u>.



# **PWA**

These checks validate the aspects of a Progressive Web App. Learn more.

#### **INSTALLABLE**

▲ Web app manifest or service worker do not meet the installability requirements — 1 reason

Service worker is the technology that enables your app to use many Progressive Web App features, such as offline, add to homescreen, and push notifications. With proper service worker and manifest implementations, browsers can proactively prompt users to add your app to their homescreen, which can lead to higher engagement. <u>Learn more</u>.

Failure reason

Page has no manifest <link> URL

PWA OPTIMIZED Does not register a service worker that controls page and start\_url The service worker is the technology that enables your app to use many Progressive Web App features, such as offline, add to homescreen, and push notifications. Learn more. Is not configured for a custom splash screen Failures: No manifest was fetched. A themed splash screen ensures a high-quality experience when users launch your app from their homescreens. Learn more. Does not set a theme color for the address bar. Failures: No manifest was fetched, No `<meta name="theme-color">` tag found. The browser address bar can be themed to match your site. Learn more. Content is sized correctly for the viewport If the width of your app's content doesn't match the width of the viewport, your app might not be optimized for mobile screens. Learn more. Has a <meta name="viewport"> tag with width or initial-scale A `<meta name="viewport">` not only optimizes your app for mobile screen sizes, but also prevents a 300 millisecond delay to user input. Learn more. TBT Does not provide a valid apple-touch-icon For ideal appearance on iOS when users add a progressive web app to the home screen, define an 'apple-touch-icon'. It must point to a non-transparent 192px (or 180px) square PNG. Learn More. Manifest doesn't have a maskable icon No manifest was fetched A maskable icon ensures that the image fills the entire shape without being letterboxed when installing the app on a device. Learn more. ADDITIONAL ITEMS TO MANUALLY CHECK (3) Hide Site works cross-browser

To reach the most number of users, sites should work across every major browser. Learn more.

O Page transitions don't feel like they block on the network

Transitions should feel snappy as you tap around, even on a slow network. This experience is key to a user's perception of performance. <u>Learn more</u>.

Each page has a URL

Ensure individual pages are deep linkable via URL and that URLs are unique for the purpose of shareability on social media. <u>Learn more</u>.

These checks are required by the baseline <u>PWA Checklist</u> but are not automatically checked by Lighthouse. They do not affect your score but it's important that you verify them manually.

Captured at Jul 12, 2022, 2:42 PM GMT+5:30

Initial page load

Emulated Desktop with Lighthouse 9.6.1
Custom throttling

Single page load

<u>Using Chromium 103.0.0.0</u> with devtools

Generated by Lighthouse 9.6.1 | File an issue