



Best Practices



PWA

PWA SEO



Performance

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



50-89

90-100



METRICS Expand view

- First Contentful Paint
 - 5.7 s
- Speed Index
 - 5.7 s
- Largest Contentful Paint
 - 7.0 s

Time to Interactive

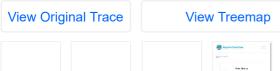
 $7.0 \, s$

Total Blocking Time

70 ms

Cumulative Layout Shift

0























Show audits relevant to: All FCP TBT LCP CLS

OPPORTUNITIES

Estimated Savings Opportunity

Enable text compression

4.96 s ^

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

3.12 s 🔨

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	2,487.5 KiB
@ng-bootstrap/ng-bootstrap/fesm2015/ng-bootstrap.mjs	605.9 KiB	395.1 KiB
@angular/core/fesm2015/core.mjs	1,128.5 KiB	373.2 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	680.2 KiB
datatables.net\js\jquery.dataTables.js	443.1 KiB	225.6 KiB
jquery\dist\jquery.js	279.9 KiB	200.3 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	304.4 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/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	74.4 KiB
node_modules/zone.js/fesm2015/zone.js	124.9 KiB	34.9 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 2.2 s ^

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

0.62 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/font-awesome.min.css (cdnjs.cloudflare.com)	6.2 KiB	270 ms
/styles.css (localhost)	358.2 KiB	1,440 ms
standard/ckeditor.js (cdn.ckeditor.com)	190.8 KiB	1,010 ms

Reduce unused CSS

0.4 s ^

Reduce unused rules from stylesheets and defer CSS not used for above-the-fold content to decrease bytes consumed by network activity. <u>Learn more</u>. [FCP] [LCP]

URL	Transfer Size	Potential Savings
/styles.css (localhost)	358.2 KiB	346.3 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
/polyfills.js (localhost)	75.50 KiB	
/vendor.js (localhost)	73.85 KiB	

Source	Transfer Size	Potential Savings
/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

Serve static assets with an efficient cache policy — 9 resources found A long cache lifetime can speed up repeat visits to your page. Learn more. ✓ Show 3rd-party resources (1) Cache Transfer URL TTL Size /vendor.js (localhost) 5,040 KiB None 1,067 KiB /scripts.js (localhost) None /main.js (localhost) None 680 KiB

URL	Cache TTL	Transfer Size
/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

▲ Avoid enormous network payloads — Total size was 7,847 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
standard/ckeditor.js (cdn.ckeditor.com)	190.8 KiB
/styles.js (localhost)	174.1 KiB
/assets/Logo.png (localhost)	24.5 KiB
/runtime.js (localhost)	6.8 KiB
css/font-awesome.min.css (cdnjs.cloudflare.com)	6.2 KiB

O Avoid chaining critical requests — 8 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: 490 ms

Initial Navigation

/RaiseQuery (localhost)

- ...css/bootstrap.min.css (localhost) 10 ms, 0.00 KiB
- ...css/font-awesome.min.css (cdnjs.cloudflare.com) 70 ms, 6.23 KiB

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

...standard/ckeditor.js (cdn.ckeditor.com) - 150 ms, 190.83 KiB

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

/polyfills.js (localhost) - 30 ms, 297.30 KiB

/vendor.js (localhost) - 90 ms, 5,039.86 KiB

/main.js (localhost) - 50 ms, 679.60 KiB

User Timing marks and measures — 31 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	725.86 ms	0.34 ms
Zone:ZoneAwarePromise	Measure	726.23 ms	0.57 ms
Zone:util	Measure	726.92 ms	0.18 ms
Zone:timers	Measure	727.31 ms	0.09 ms
Zone:blocking	Measure	727.52 ms	0.08 ms
Zone:EventTarget	Measure	727.58 ms	0.52 ms
Zone:MutationObserver	Measure	728.19 ms	0.11 ms
Zone:FileReader	Measure	728.39 ms	0.01 ms
Zone:on_property	Measure	728.45 ms	14.55 ms
Zone:customElements	Measure	743.06 ms	0.14 ms
Zone:XHR	Measure	743.26 ms	0.14 ms

Name	Туре	Start Time	Duration
Zone:geolocation	Measure	743.53 ms	0.07 ms
Zone:PromiseRejectionEvent	Measure	743.63 ms	0.07 ms
Zone	Mark	725.88 ms	
Zone:ZoneAwarePromise	Mark	726.23 ms	
Zone:toString	Mark	726.82 ms	
Zone:util	Mark	726.92 ms	
Zone:legacy	Mark	727.21 ms	
Zone:queueMicrotask	Mark	727.23 ms	
Zone:timers	Mark	727.31 ms	
Zone:requestAnimationFrame	Mark	727.47 ms	
Zone:blocking	Mark	727.52 ms	
Zone:EventTarget	Mark	727.58 ms	
Zone:MutationObserver	Mark	728.19 ms	
Zone:IntersectionObserver	Mark	728.31 ms	
Zone:FileReader	Mark	728.4 ms	
Zone:on_property	Mark	728.45 ms	
Zone:customElements	Mark	743.08 ms	
Zone:XHR	Mark	743.27 ms	
Zone:geolocation	Mark	743.54 ms	
Zone:PromiseRejectionEvent	Mark	743.64 ms	

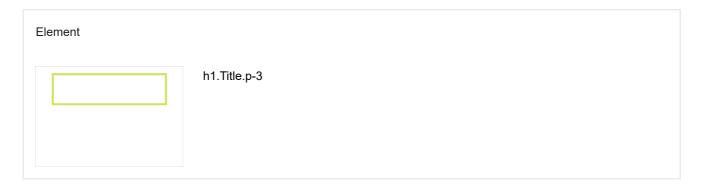
O Keep request counts low and transfer sizes small — 12 requests • 7,846 KiB

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	12	7,845.7 KiB
Script	7	7,455.4 KiB
Stylesheet	3	364.4 KiB
Image	1	24.5 KiB
Document	1	1.4 KiB
Media	0	0.0 KiB
Font	0	0.0 KiB
Other	0	0.0 KiB
Third-party	2	197.1 KiB

O Largest Contentful Paint element — 1 element found

This is the largest contentful element painted within the viewport. Learn More [LCP]



O Avoid long main-thread tasks — 3 long tasks found

Lists the longest tasks on the main thread, useful for identifying worst contributors to input delay. Learn more [TBT]

URL	Start Time	Duration
/scripts.js (localhost)	6,985 ms	120 ms
Unattributable	192 ms	79 ms
/runtime.js (localhost)	887 ms	66 ms

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

Property size images —	Potential savings of 23 KiB		
Serve images that are appro	opriately-sized to save cellular data and improve load time.	<u>Learn more</u> .	
	URL	Resource Size	Potentia Savings
	img. Log olm /assets/Logo.png (localhost) g	24.2 KiB	23.5 KiE
Defer offscreen images Consider lazy-loading offscrinteractive. Learn more.	reen and hidden images after all critical resources have finis	shed loading to lower til	me to
Minify CSS Minifying CSS files can redu	uce network payload sizes. <u>Learn more</u> . FCP [LCP]		
Minifying CSS files can redu			
Minifying CSS files can redu Efficiently encode images Optimized images load fast			
Minifying CSS files can reduce the second se	er and consume less cellular data. <u>Learn more</u> . In formats — Potential savings of 13 KiB Ind AVIF often provide better compression than PNG or JPE	G, which means faster	downloads
Minifying CSS files can redu Efficiently encode images Optimized images load faste Serve images in next-gen	er and consume less cellular data. <u>Learn more</u> . In formats — Potential savings of 13 KiB Ind AVIF often provide better compression than PNG or JPE	G, which means faster Resource Size	downloads Potentia Savings
Minifying CSS files can reduce the second images. Efficiently encode images. Optimized images load faste. Serve images in next-gen.	er and consume less cellular data. <u>Learn more</u> . In formats — Potential savings of 13 KiB Ind AVIF often provide better compression than PNG or JPE	Resource	Potentia

Preconnect to required origins		^
Consider adding `preconnect` or `dns-prefe	etch` resource hints to establish early co	onnections to important third-party origins.
Initial server response time was short —	- Root document took 0 ms	^
Keep the server response time for the main (LCP)	document short because all other requ	ests depend on it. <u>Learn more</u> . FCP
URL		Time Spent
/RaiseQuery (localhost)		0 ms
Avoid multiple page redirects		^
Redirects introduce additional delays before	e the page can be loaded. <u>Learn more</u> .	FCP LCP
O Preload key requests		^
Consider using ` <link rel="preload"/> ` to priori more. FCP LCP	itize fetching resources that are currentl	ly requested later in page load. <u>Learn</u>
Use HTTP/2		^
HTTP/2 offers many benefits over HTTP/1.	1, including binary headers and multiple	exing. <u>Learn more</u> .
Use video formats for animated content		^
Large GIFs are inefficient for delivering anir PNG/WebP for static images instead of GIF	•	
Avoid serving legacy JavaScript to model	rn browsers — Potential savings of 27	KiB
Polyfills and transforms enable legacy brow modern browsers. For your bundled JavaSo detection to reduce the amount of code ship More TBT	cript, adopt a modern script deployment	strategy using module/nomodule feature
URL		Potential Savings
/scripts.js (localhost)		26.1 KiB
scripts is:117	Arrav.isArrav	

URL		Potential Savings
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 KiB
polyfills.js:1054	@babel/plugin-transform-classes	
/vendor.js (localhost)		0.2 KiB
vendor.js:25705	@babel/plugin-transform-classes	

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 — 80 elements	^

A large DOM will increase memory usage, cause longer $\underline{\text{style calculations}}$, and produce costly $\underline{\text{layout reflows}}$. $\underline{\text{Learn more}}$.

Statistic	Element	Value
Total DOM Elements		80
Maximum DOM Depth	a.dropdown-item	13
	body	
Maximum Child Elements		7

JavaScript execution time — 0.3 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
	Time		

URL	Total CPU Time	Script Evaluation	Script Parse
/scripts.js (localhost)	235 ms	213 ms	13 ms
Unattributable	151 ms	5 ms	0 ms
/RaiseQuery (localhost)	147 ms	31 ms	0 ms

Minimizes main-thread work — 0.6 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	261 ms
Other	179 ms
Parse HTML & CSS	58 ms
Script Parsing & Compilation	41 ms
Style & Layout	38 ms
Garbage Collection	3 ms
Rendering	2 ms

All text remains visible during webfont loads

Leverage the font-display CSS feature to ensure text is user-visible while webfonts are loading. Learn more. FCP [LCP]

Minimize third-party usage — Third-party code blocked the main thread for 0 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	6 KiB	0 ms
css/font-awesome.min.css (cdnjs.cloudflare.com)	6 KiB	0 ms

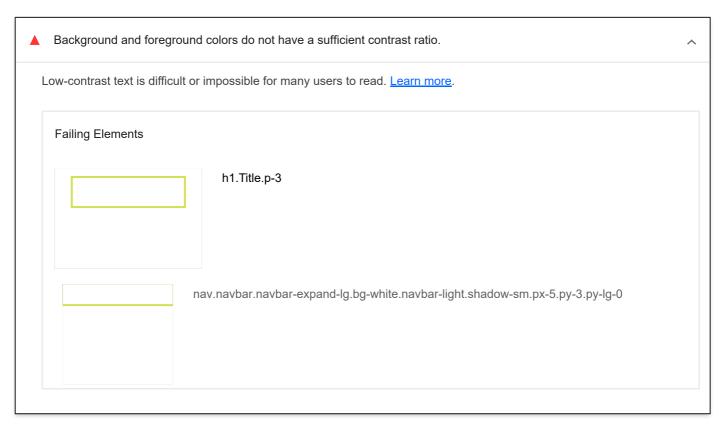
Lazy load third-party resources with facades	^
Some third-party embeds can be lazy loaded. Consider replacing them with a facade until they are required. Lea	arn more.
Largest Contentful Paint image was not lazily loaded	^
Above-the-fold images that are lazily loaded render later in the page lifecycle, which can delay the largest contended the largest contended images.	ntful paint.
Avoid large layout shifts	^
These DOM elements contribute most to the CLS of the page. CLS	
Uses passive listeners to improve scrolling performance	^
Consider marking your touch and wheel event listeners as `passive` to improve your page's scroll performance. more.	<u>Learn</u>
Avoids document.write()	^
For users on slow connections, external scripts dynamically injected via `document.write()` can delay page load seconds. <u>Learn more</u> .	by tens of
Avoid non-composited animations	^
Animations which are not composited can be janky and increase CLS. <u>Learn more</u> CLS	
Image elements have explicit width and height	^
Set an explicit width and height on image elements to reduce layout shifts and improve CLS. <u>Learn more</u> <u>CLS</u>	
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 millise</u> to user input. <u>Learn more</u> . TBT	econd delay
Avoids unload event listeners	^
The `unload` event does not fire reliably and listening for it can prevent browser optimizations like the Back-Ford Use `pagehide` or `visibilitychange` events instead. Learn more	vard Cache.



Accessibility

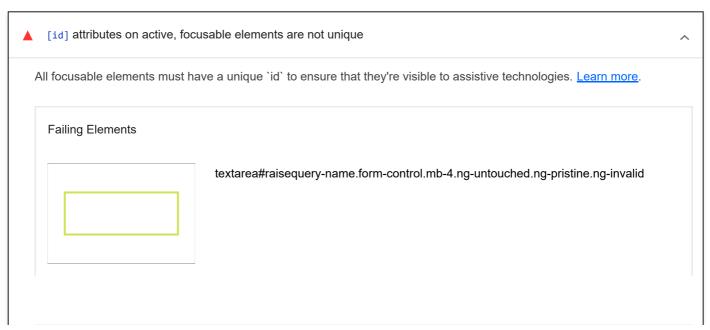
These checks highlight opportunities to improve the accessibility of your web app. Only a subset of accessibility issues can be automatically detected so manual testing is also encouraged.

CONTRAST



These are opportunities to improve the legibility of your content.

NAVIGATION



Failing Elements	
	textarea#raisequery-name.form-control.mb-4.ng-untouched.ng-pristine.ng-invalid

These are opportunities to improve keyboard navigation in your application.

ADDITIONAL ITEMS TO MANUALLY CHECK (10)

Hide

The page has a logical tab order	^
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. <u>Learn more</u> .	
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.	
Custom controls have associated labels	^
Custom interactive controls have associated labels, provided by aria-label or aria-labelledby. <u>Learn more</u> .	
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. <u>Learn more</u> .	
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 tech. Learn more.</nav></main>	nology.
These items address areas which an automated testing tool cannot cover. Learn more in our guide on conducting an accereview.	<u>ssibility</u>
PASSED AUDITS (16)	Hide
[aria-*] attributes match their roles	^
Each ARIA `role` supports a specific subset of `aria-*` attributes. Mismatching these invalidates the `aria-*` attributes. more.	<u>Learn</u>
[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 ` <u>Learn more</u> .	ody>`.
[aria-*] attributes have valid values	^
Assistive technologies, like screen readers, can't interpret ARIA attributes with invalid values. <u>Learn more</u> .	
[aria-*] attributes are valid and not misspelled	^
Assistive technologies, like screen readers, can't interpret ARIA attributes with invalid names. <u>Learn more</u> .	
Buttons have an accessible name	^
When a button doesn't have an accessible name, screen readers announce it as "button", making it unusable for user rely on screen readers. <u>Learn more</u> .	rs who
Image elements have [alt] attributes	^
Informative elements should aim for short, descriptive alternate text. Decorative elements can be ignored with an empattribute. <u>Learn more</u> .	oty alt
Form elements have associated labels	^

Labels ensure that form controls are announced properly by assistive technologies, like screen readers. 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. 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. <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 BCP 47 language helps screen readers announce text properly. Learn more. 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. 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 (26)	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 more</u> .	
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
O [aria-hidden="true"] elements do not contain focusable descendents	^
Focusable descendents within an `[aria-hidden="true"]` element prevent those interactive elements from being available users of assistive technologies like screen readers. <u>Learn more</u> .	to
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 unusa 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, making it unusable for users who rely on screen readers. <u>Learn more</u> .	ing
O [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> .	
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 functions <u>Learn more</u> .	÷.
O [role] values are valid	^
ARIA roles must have valid values in order to perform their intended accessibility functions. Learn more.	
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 unusabl for users who rely on screen readers. <u>Learn more</u> .	e
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 unusable for users who rely on screen readers. <u>Learn more</u> .	
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 unusable for users who rely on screen readers. <u>Learn more</u> .	
<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. <u>Learn more</u></td><td>1-</td></tr><tr><td>O Definition list items are wrapped in <d1> 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 can properly announce them. Learn more.</td><td></td></tr><tr><td>O ARIA IDs are unique</td><td>^</td></tr><tr><td>The value of an ARIA ID must be unique to prevent other instances from being overlooked by assistive technologies. <u>Lear more</u>.</td><td><u>n</u></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 which use either the first, the last, or all of the labels. <u>Learn more</u>.</td><td></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. <u>Learn more</u>.</td><td></td></tr></tbody></table></script></dd></dt></dl>	

<pre><input type="image"/> elements have [alt] text</pre>	^
When an image is being used as an ` <input/> ` button, providing alternative text can help screen reader users understand the purpose of the button. Learn more.	
The document does not use <meta http-equiv="refresh"/>	^
Users do not expect a page to refresh automatically, and doing so will move focus back to the top of the page. This may create a frustrating or confusing experience. <u>Learn more</u> .	
O <object> elements have alternate text</object>	^
Screen readers cannot translate non-text content. Adding alternate text to ` <object>` elements helps screen readers convened meaning to users. Learn more.</object>	vey
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. <u>Learn more</u> .	
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. <u>Learn more</u> .	
O [lang] attributes have a valid value	^
Specifying a valid BCP 47 language on elements helps ensure that text is pronounced correctly by a screen reader. Lear more.	<u>'n</u>
	^
When a video provides a caption it is easier for deaf and hearing impaired users to access its information. <u>Learn more</u> .	



Best Practices

GENERAL

A

Browser errors were logged to the console

nd other browser

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
Raise Query: 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.
Raise Query: 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

▲ Missing source maps for large first-party JavaScript

Source maps translate minified code to the original source code. This helps developers debug in production. In addition, Lighthouse is able to provide further insights. Consider deploying source maps to take advantage of these benefits. <u>Learn more</u>.

✓ Show 3rd-party resources (1)

URL Map URL

...standard/ckeditor.js (cdn.ckeditor.com)

Large JavaScript file is missing a source map

URL	Map URL
/runtime.js (localhost)	/runtime.js.map (localhost)
Warning: missing 3 items in `.sourcesContent`	
/vendor.js (localhost)	/vendor.js.map (localhost)
/styles.js (localhost)	/styles.js.map (localhost)
/scripts.js (localhost)	/scripts.js.map (localhost)
/polyfills.js (localhost)	/polyfills.js.map (localhost)
/main.js (localhost)	/main.js.map (localhost)

TRUST AND SAFETY

Ensure CSP is effective against XSS attacks

A strong Content Security Policy (CSP) significantly reduces the risk of cross-site scripting (XSS) attacks. Learn more

Description	Directive	Severity
No CSP found in enforcement mode		High

PASSED AUDITS (11) Hide

Uses HTTPS

All sites should be protected with HTTPS, even ones that don't handle sensitive data. This includes avoiding <u>mixed content</u>, 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. <u>Learn more</u>.

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. <u>Learn more</u>.

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 user gestures instead. <u>Learn more</u> .	st to
	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. <u>Learn more.</u>	
	Allows users to paste into password fields	^
	Preventing password pasting undermines good security policy. <u>Learn more</u> .	
	Displays images with correct aspect ratio	^
	Image display dimensions should match natural aspect ratio. <u>Learn more</u> .	
	Serves images with appropriate resolution	^
	Image natural dimensions should be proportional to the display size and the pixel ratio to maximize image clarity. <u>Learn more</u> .	
	Page has the HTML doctype	^
	Specifying a doctype prevents the browser from switching to quirks-mode. <u>Learn more</u> .	
	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.	n
	Avoids deprecated APIs	^
	Deprecated APIs will eventually be removed from the browser. <u>Learn more</u> .	
	No issues in the Issues panel in Chrome Devtools	^
	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 DevToo for more details on each issue.	ols
NO	T APPLICABLE (1)	Hide
	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
a.dropdown-toggle.dropbtn
a.dropdown-toggle.dropbtn
a.dropdown
To appear in search results, crawlers need access to your app.

ADDITIONAL ITEMS TO MANUALLY CHECK (1)

Hide

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 mill</u> to user input. <u>Learn more</u> . <u>TBT</u>	isecond delay
Document has a <title> element</td><td>^</td></tr><tr><td>The title gives screen reader users an overview of the page, and search engine users rely on it heavily to dete page is relevant to their search. <u>Learn more</u>.</td><td>rmine if a</td></tr><tr><td>Page has successful HTTP status code</td><td>^</td></tr><tr><td>Pages with unsuccessful HTTP status codes may not be indexed properly. <u>Learn more</u>.</td><td></td></tr><tr><td>Links have descriptive text</td><td>^</td></tr><tr><td>Descriptive link text helps search engines understand your content. <u>Learn more</u>.</td><td></td></tr><tr><td>Page isn't blocked from indexing</td><td>^</td></tr><tr><td>Search engines are unable to include your pages in search results if they don't have permission to crawl them.</td><td>. <u>Learn more</u>.</td></tr><tr><td>Image elements have [alt] attributes</td><td>^</td></tr><tr><td>Informative elements should aim for short, descriptive alternate text. Decorative elements can be ignored with attribute. <u>Learn more</u>.</td><td>an empty alt</td></tr><tr><td>Document has a valid hreflang</td><td>^</td></tr><tr><td>hreflang links tell search engines what version of a page they should list in search results for a given language
Learn more.</td><td>or region.</td></tr><tr><td>Document avoids plugins</td><td>^</td></tr><tr><td>Search engines can't index plugin content, and many devices restrict plugins or don't support them. Learn mor</td><td><u>·e</u>.</td></tr><tr><td>NOT APPLICABLE (4)</td><td>Hide</td></tr><tr><td>O robots.txt is valid</td><td></td></tr></tbody></table></title>	

Page has no manifest <link> URL

▲ Does not register a service worker that controls page and start_url

PWA OPTIMIZED

2/22, 11:54 AM	
If your robots.txt file is malformed, crawlers may not be able to understand how you want your website to be crawled o indexed. <u>Learn more</u> .	r
O Document has a valid rel=canonical	^
Canonical links suggest which URL to show in search results. <u>Learn more</u> .	
O 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. Stri have >60% of page text ≥12px. <u>Learn more</u> .	ve to
Tap targets are sized appropriately	^
Interactive elements like buttons and links should be large enough (48x48px), and have enough space around them, to easy enough to tap without overlapping onto other elements. <u>Learn more</u> .	be
PWA	
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, and homescreen, and push notifications. With proper service worker and manifest implementations, browsers can proactive prompt users to add your app to their homescreen, which can lead to higher engagement. <u>Learn more</u> .	
Failure reason	

27/29

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. <u>Learn more</u>.

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. 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. Learn more.

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, 11:53 AM GMT+5:30 Initial page load Emulated Desktop with
Lighthouse 9.6.1
Custom throttling

Single page load

Using Chromium 103.0.0.0 with devtools

Generated by **Lighthouse** 9.6.1 | File an issue