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Modernizr

Feature Detection

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Modernizr

What is it?



- Modernizr is an open-source JavaScript library that helps you build the next generation of HTML5 and CSS3-powered websites by detecting the features your visitor's browser supports.
- No more user agent sniffing.
- It's feature detection!



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Why is it great?

- In detecting feature support, it allows developers to test for some of the new technologies and then provide fallbacks for browsers that do not support them. This is called feature detection and is much more efficient than browser sniffing

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How does it work?

- It tests for over 40 next-generation features, all in a matter of milliseconds
- It creates a JavaScript object (named Modernizr) that contains the results of these tests as boolean properties
- It adds classes to the html element that explain precisely what features are and are not natively supported
- It provides a script loader so you can pull in polyfills to backfill functionality in old browsers



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Where Does It GO?

- Drop the script tags in the `<head>` of your HTML.
- Must run before the body tag.
- Lightweight
- For best performance, you should have them follow after your stylesheet references.
- HTML5 Shiv (that enables HTML5 elements in IE) must execute before the `<body>`
- If you're using any of the CSS classes that Modernizr adds, you'll want to prevent a FOUC (Flash Of Unstyled Content).



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What Features?

Download Modernizr 2.6.3

Use the [Development version](#) to develop with and learn from. Then, when you're ready for production, use the build tool below to pick only the tests you need.

CSS3

TOGGLE

- ☐ @font-face
- ☐ background-size
- ☐ border-image
- ☐ border-radius
- ☐ box-shadow
- ☐ Flexible Box Model (flexbox)
- ☐ Flexbox Legacy
- ☐ hsla()
- ☐ multiple backgrounds
- ☐ opacity
- ☐ rgba()
- ☐ text-shadow
- ☐ CSS Animations
- ☐ CSS Columns
- ☐ CSS Generated Content (:before/:after)
- ☐ CSS Gradients
- ☐ CSS Reflections
- ☐ CSS 2D Transforms
- ☐ CSS 3D Transforms
- ☐ CSS Transitions

HTML5

TOGGLE

- ☐ applicationCache
- ☐ Canvas
- ☐ Canvas Text
- ☐ Drag 'n Drop
- ☐ hashchange
- ☐ History (pushState)
- ☐ HTML5 Audio
- ☐ HTML5 Video
- ☐ IndexedDB
- ☐ Input Attributes
Note: does not add classes
- ☐ Input Types
Note: does not add classes
- ☐ localStorage
- ☐ postMessage
- ☐ sessionStorage
- ☐ Web Sockets
- ☐ Web SQL Database
- ☐ Web Workers

Misc.

TOGGLE

- ☐ Geolocation API
- ☐ Inline SVG
- ☐ SMIL
- ☐ SVG
- ☐ SVG clip paths
- ☐ Touch Events
- ☐ WebGL

Extra

- ☒ html5shiv v3.6
- ☐ html5shiv v3.6 w/ printshiv
- ☒ Modernizr.load ([yepnope.js](#))
- ☐ Media Queries
- ☒ Add CSS Classes

className prefix:

► Extensibility

► Non-core detects

GENERATE!



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What Does It Do?

Modernizr.

video	TRUE
audio	TRUE
canvas	TRUE
localstorage	TRUE
webworkers	TRUE
websockets	TRUE
...	...

- Creates a new JS Object called Modernizr
- Has 40+ Properties - each a Boolean value to tell you if that feature is supported



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Using Modernizr

```
if( Modernizr.video) {  
    // Yes - You Can use HTML5 video  
} else {  
    //Use something else, maybe flash  
    video  
}
```

- Progressive Enhancement
 - If the user has that feature, we use it. If not, then what?



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So it will fix everything?

- NO!
- Modernizr does not fill in the gaps for you. It only detects whether a feature is supported.
- This is where shim or polyfills come in

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Polyfill

What is it?

- A polyfill is a JavaScript shim that replicates the standard API for older browsers.
- They exists for nearly every HTML5 feature that Modernizr detects
- Let's take a look at some:
- <https://github.com/Modernizr/Modernizr/wiki/HTML5-Cross-browser-Polyfills>



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Yep? Nope?

- So Modernizr is only a part of the polyfilling process.
 - It tells you what is missing.
- Modernizr.load or as a standalone it's called....
- **yepnope** is an asynchronous **conditional resource loader** that's **super-fast**, and allows you to load **only the scripts that your users need**.
- <http://yepnopejs.com/>



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Example #1

Is canvas supported?

- In this example we check if the browser supports the canvas element.

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Example #2

Is HTML5 input date supported?

- In this example we check if the browser supports the HTML5 input date type. If not we use the jQuery UI version as a fallback.