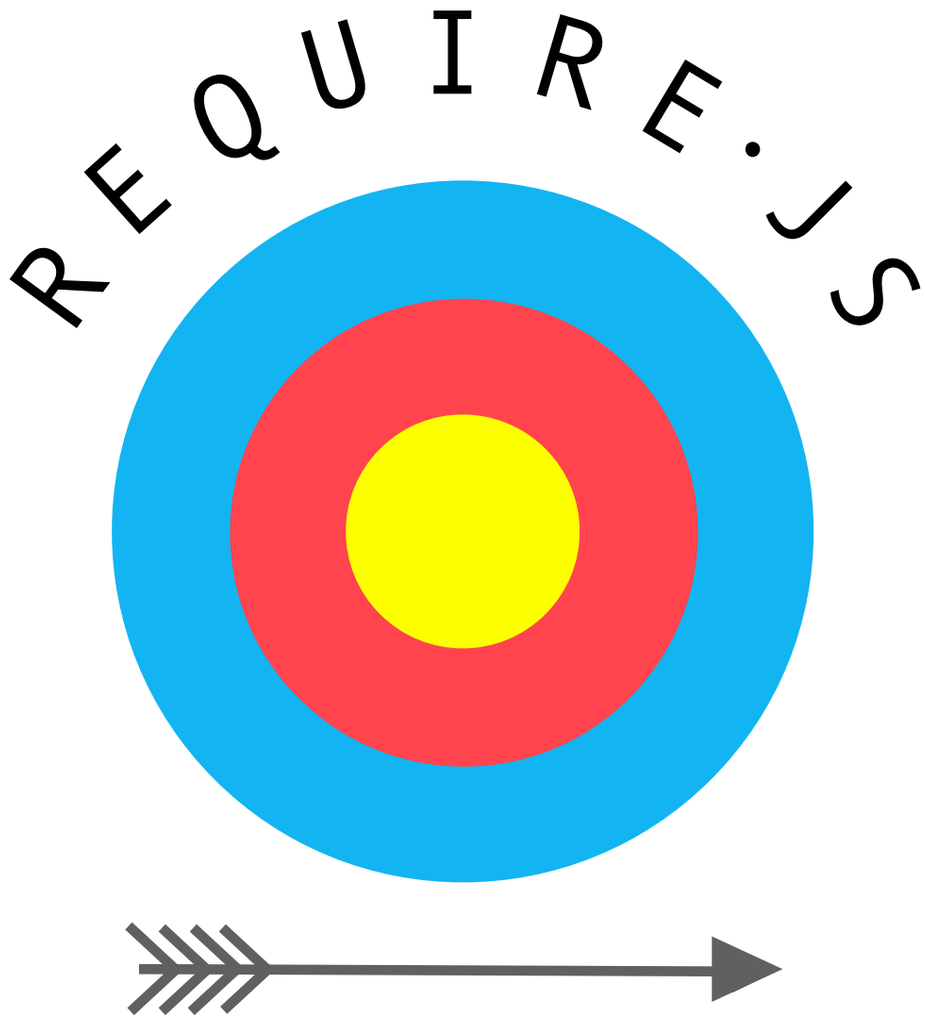


A JAVASCRIPT MODULE LOADER

JUSTIN LOVE

slides@wondible.com

http://wondible.com

@wondible

http://pinboard.in/
u:wondible/t:requirejs/

OUTLINE

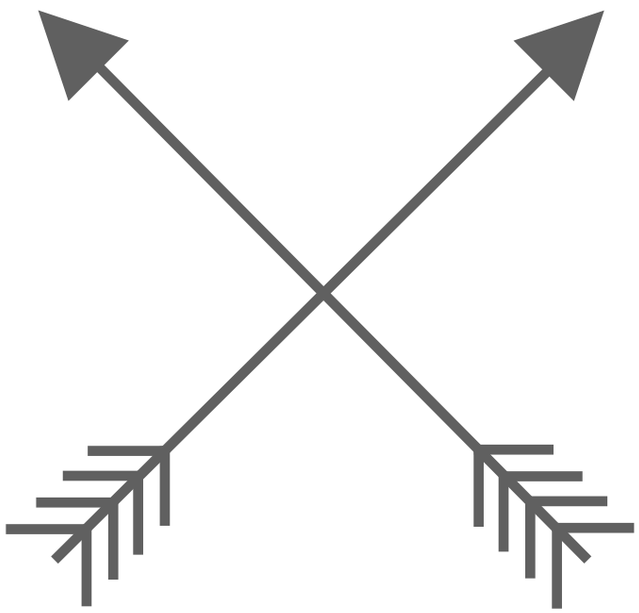
- The Problem
- Loader
- Encapsulation
- Optimizer
- Compatibility

version

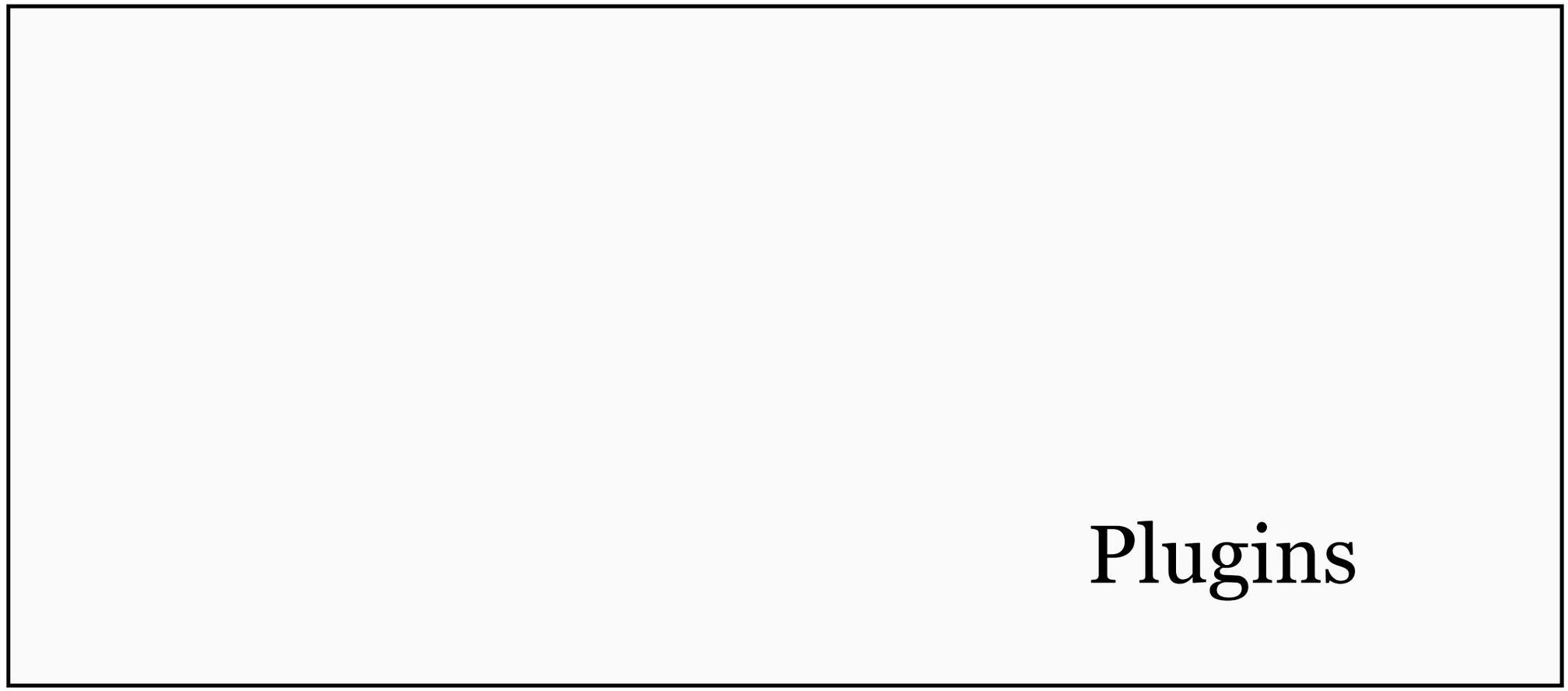
0.24

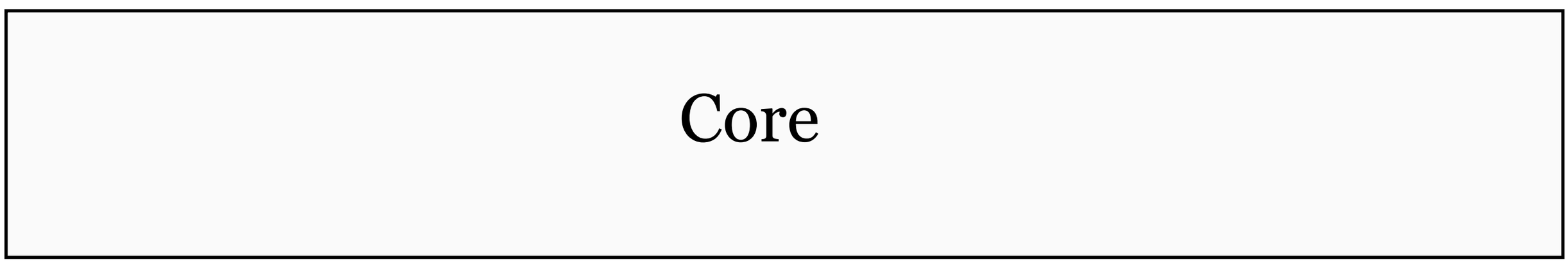
1.0 Candidate

THE PROBLEM



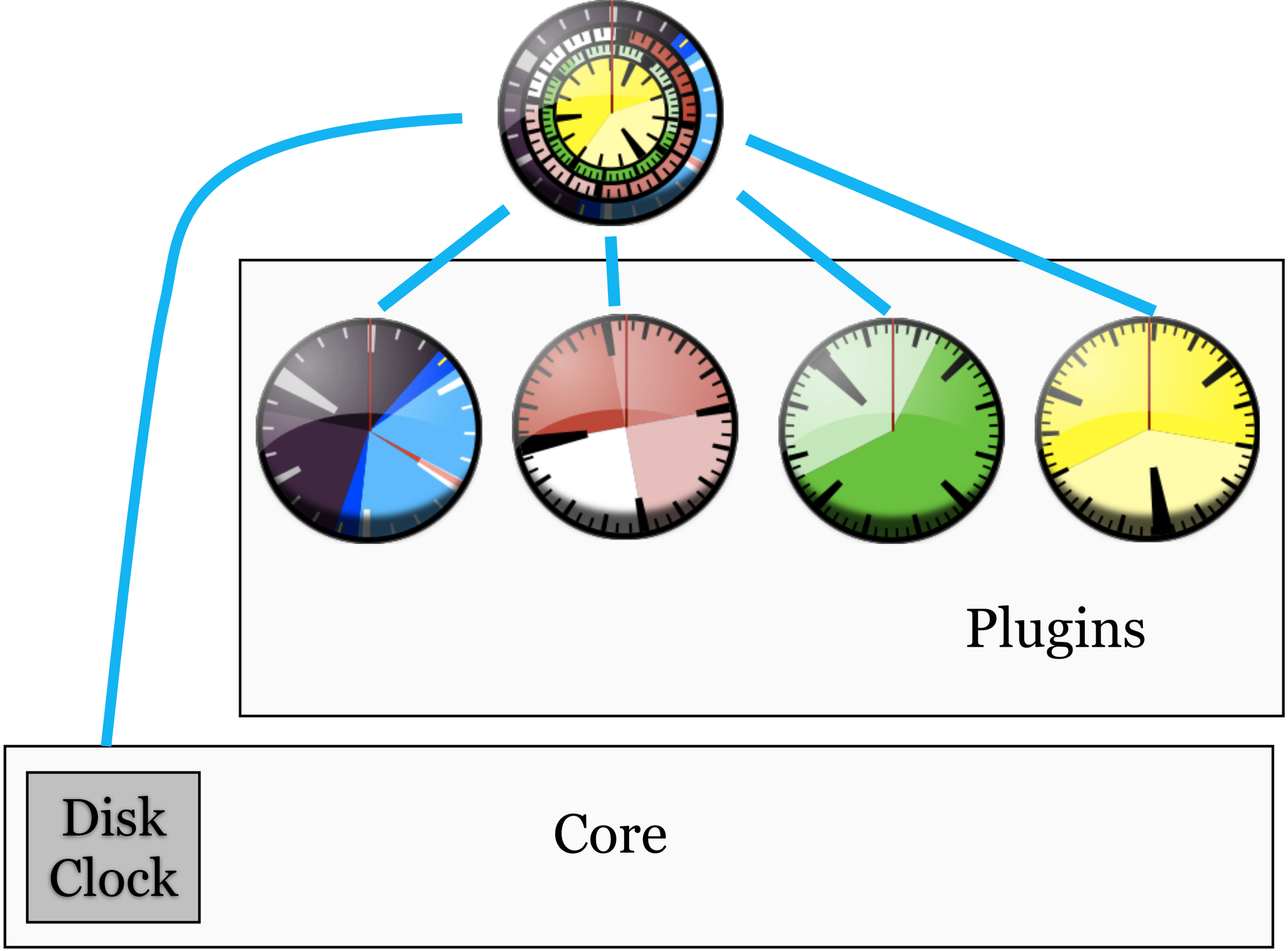
Program Javascript?


Plugins

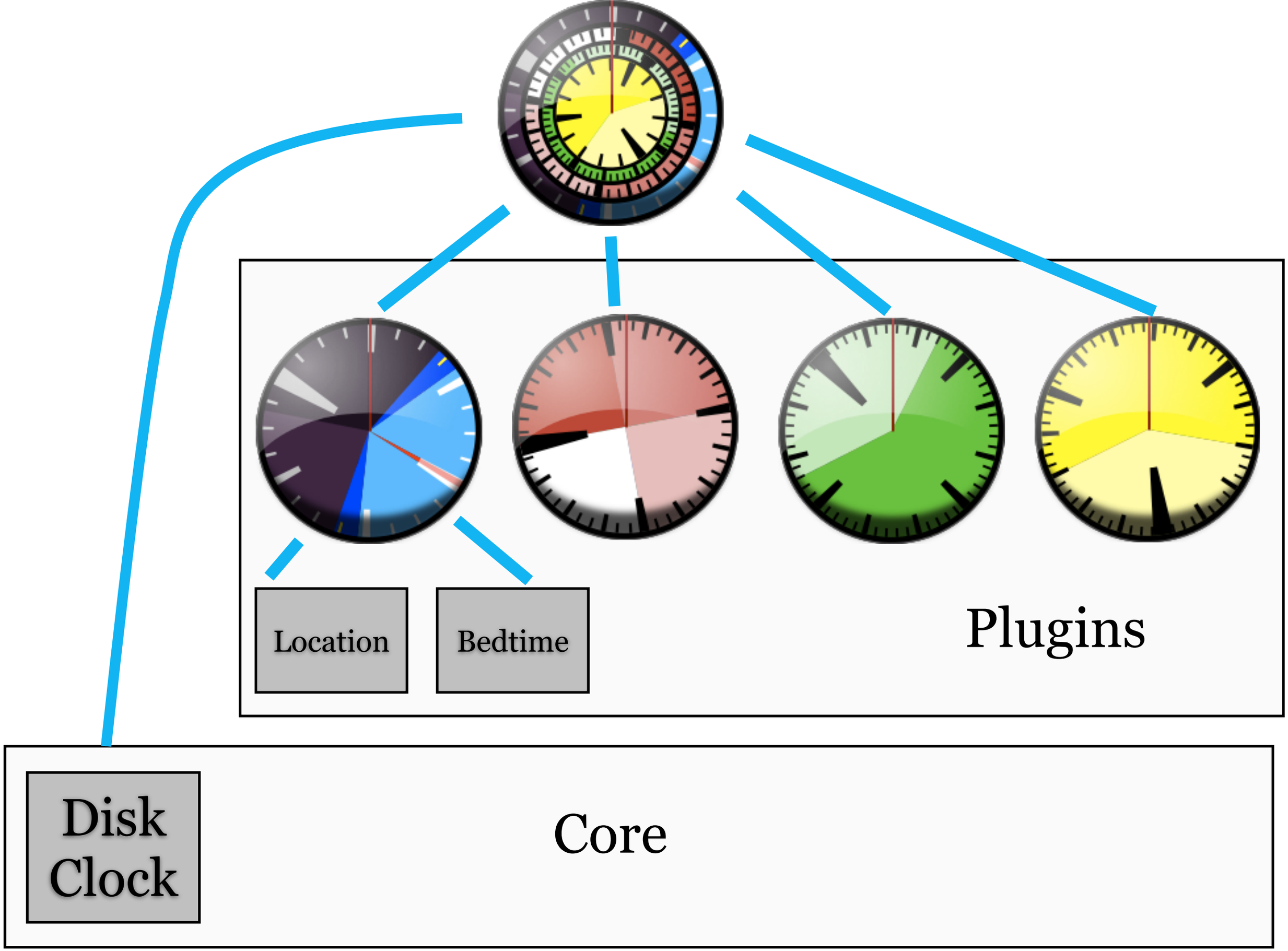

Core

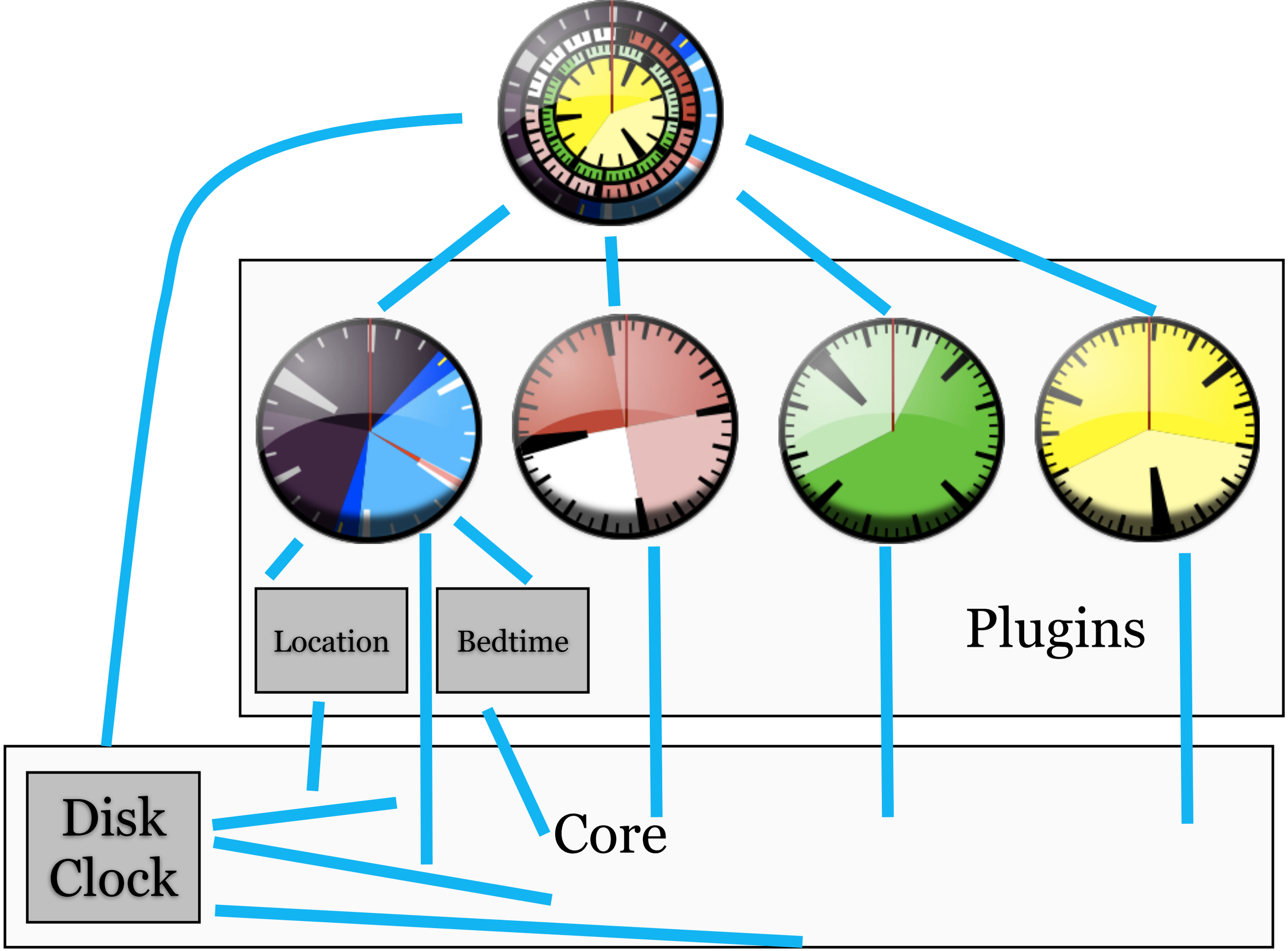
Plugins

Core


Plugins
Disk Clock
Core

```
define([
   'plugins/Day',
   'plugins/4_Hour',
   'plugins/Hour',
   'plugins/15_Minute',
   'DiskClock'
]);
```


Location
Bedtime
Plugins
Disk Clock
Core


Location
Bedtime
Plugins
Disk Clock
Core

Javascript cannot express this

Use <script> ?

Like <script> ?

C

#include

Ruby

require

PHP

require
include

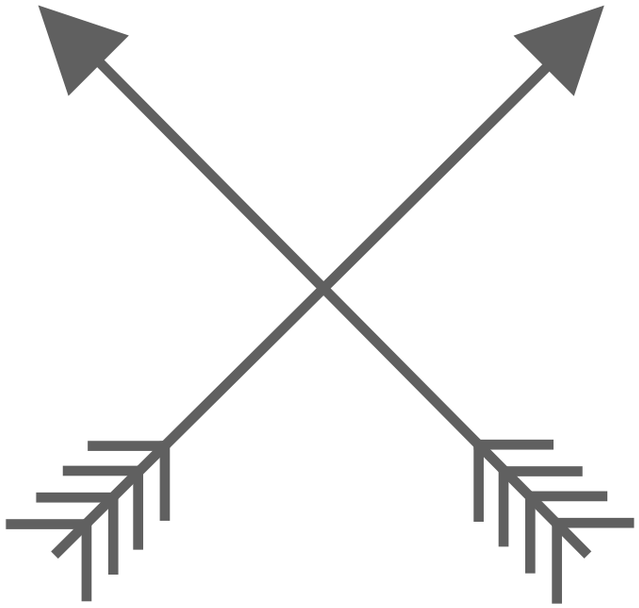
Even CSS Has @IMPORT

CSS is not a Programming Language

Javascript

FAIL

LOADER



Use a Loader?

Javascript loaders Go to spreadsheet view – Hide colors 1-108 of 108 Rows per page: 250 Go

New data Warnings OLD community data

		LABjs	HeadJS	ControlJS	RequireJS	Load.js	YepNope.js	$script.js	LazyLoad	curl.js
		http://labjs.com/	http://headjs.com/	http://stevesouders.	http://requirejs.org/	https://github.com/c	http://yepnopejs.cor	http://www.dustindia	https://github.com/r	https://gi
	Automated test id	labjs	headjs	Column F	Column G	Column H	Column I	Column J	Column K	Column
	(All)	(All)	(All)	(All)	(All)	(All)	(All)	(All)	(All)	(All)
		MIT	MIT	Apache 2.0	BSD or MIT	MIT	WTFPL	CC-BY 3.0	MIT	
		Y	Y	Y	Y	Y	Y	Y	Y	
	parallel	Y (tested)	Y (tested)	Y (tested)	Y	Y	Y	Y	Y	
	callback	Y (tested)	Y (tested)	Y (tested)	Y	Y	Y	Y	Y	
	no-order	Y (tested)	Y (tested)	Y [5]	Y [6]	?	N	?	N	
	no-order	N (tested)	N (tested)	Y [5]	Y [6]	?	N	?	N	
afari, ie)	*load-twice*	Y (tested)	N (tested)	N	N	?	N	N ?	Y	
ifari, ie)	*load-twice-x*	N (tested)	N (tested)	N	N	?	N	N ?	Y	
era) [7]	*load-twice-x*	Y (tested)	Y (tested)	N	N	?	N	N ?	Y	
	noexe-twice	Y (tested) [9]	Y (tested)	Y	?	?	Y	?	N	
	exe-twice	Y (tested) [10]	N (tested)	N	?	?	Y	?	Y	
	dep	Y (tested) [12]	Y (tested)	Y [13]	Y [14]	Y	Y [15]	Y	Partially [16]	
	dep-parallel	Y (tested)	Y (tested)	Y	Y	Y	Y	Y ?	Y	In Pr
	external	Y (tested)	Y (tested)	Y	Y	?	Y	?	Y	
		Y	N ?	N	Y	?	Y	?	N	
		Y	N	N/A	Partialy	N	N/A	N	Y	

Go to spreadsheet view – Hide colors – Powered by Google Docs – Report Abuse 1-108 of 108 Rows per page: 250 Go

https://spreadsheets.google.com/lv?key=tDdcrv9wNQRCNCRCflWxhYQ&f=true&gid=0

COMMONJS MODULES

```
mod = require('mod')
```

```
exports.x = ...
```

Server

vs.

Browser

RequireJS is not CommonJS

AMD

A is for asynchronous

XHR + EVAL

<SCRIPT>

XHR + EVAL

Synchronous

Stop the world

(I want to get off)

Line Numbers

Cross Domain

<SCRIPT>

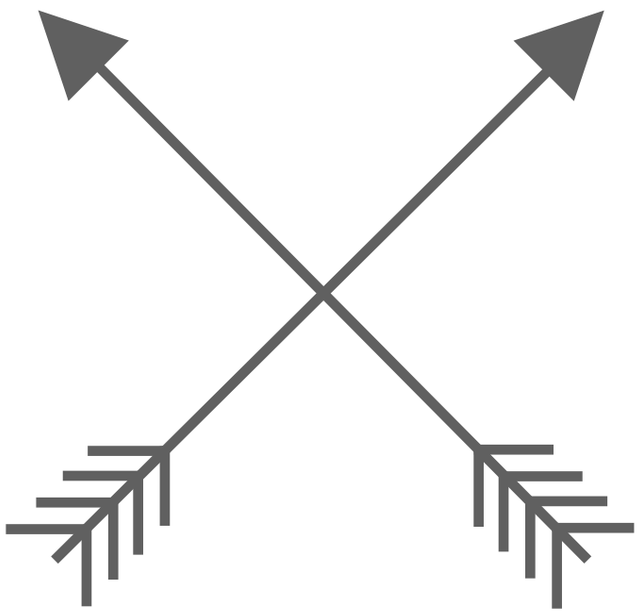
Run.JS

```
run(function() {
  your code;
});
```

Module.js

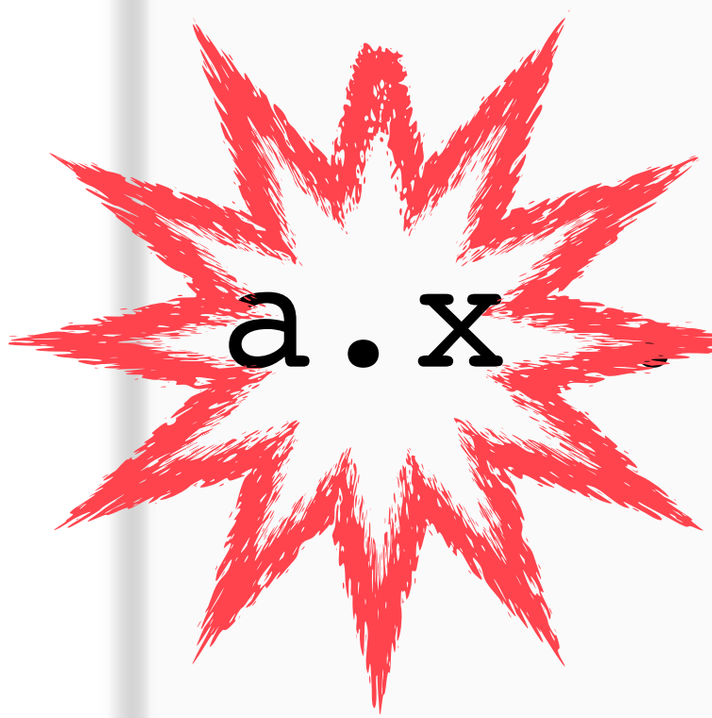
```
new Module(...);
```

ENCAPSULATION



REQUIRE

```
a = require('a');
```



Async
the first time

```
require('a',
  function(a) {
      a.x ...
});
```

```
<script
  type='text/javascript'
  src='script/require.js'
  data-main='a'>
</script>
```

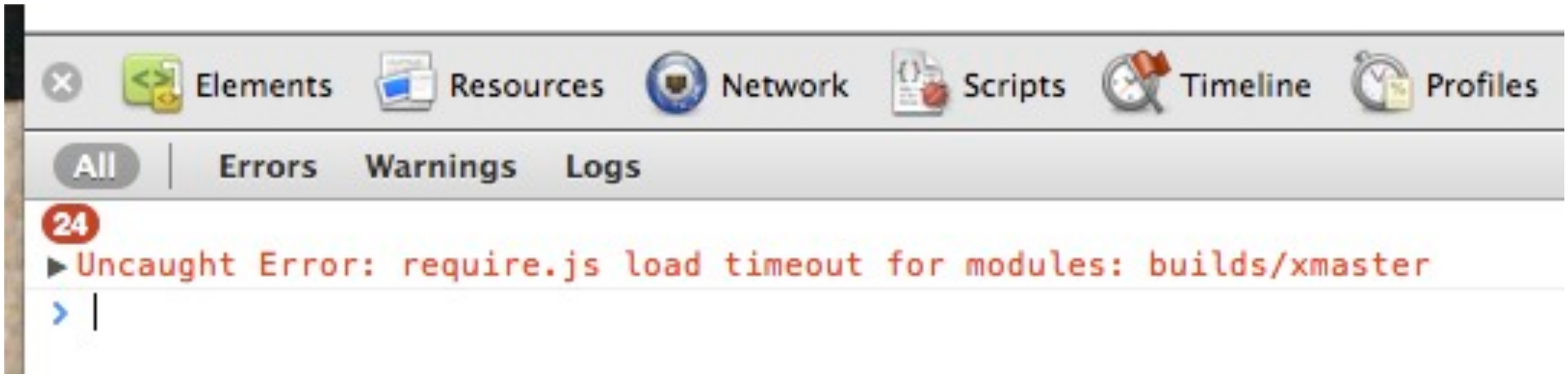
```
require(
  ['a', 'b', 'sub/c'],
  function(a, b, c) {
      a.x ...
});
```

DEFINE

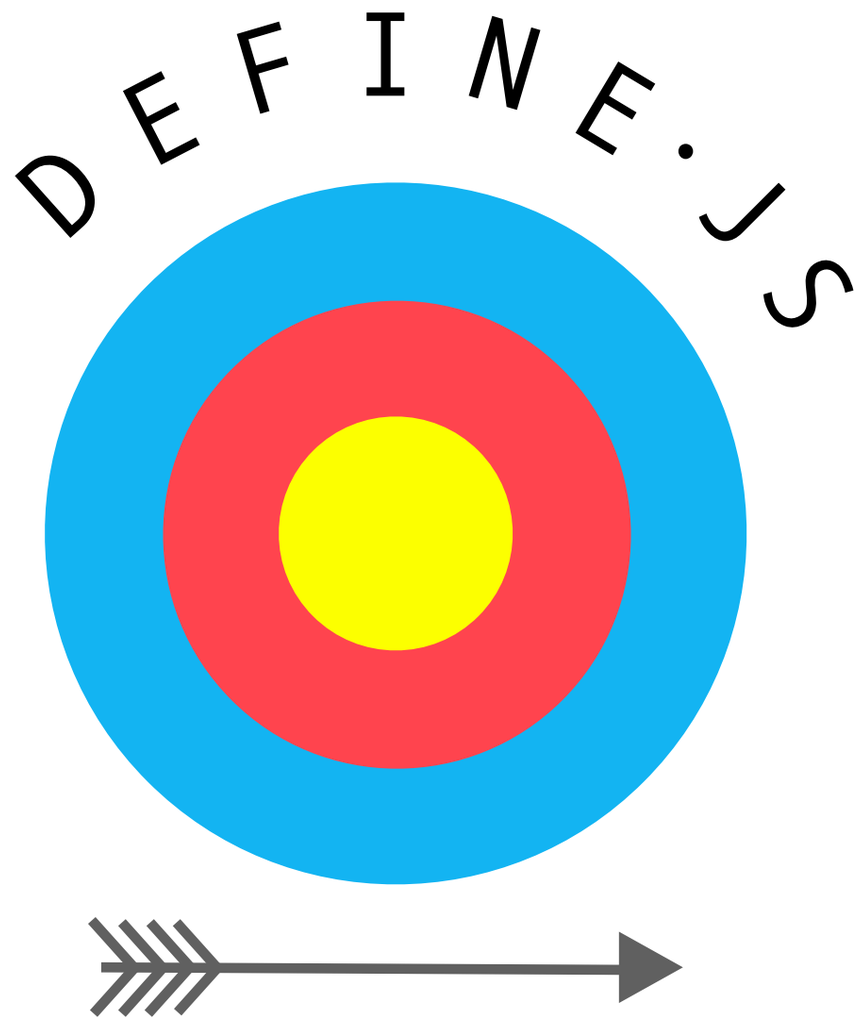
```
define(
  function() {
    return {x: ...};
});
```

```
define(
  function() {
    return {x: ...};
});
```

```
define(
  ['a', 'b', 'sub/c'],
  function(a, b, c) {
      a.x ...
});
```

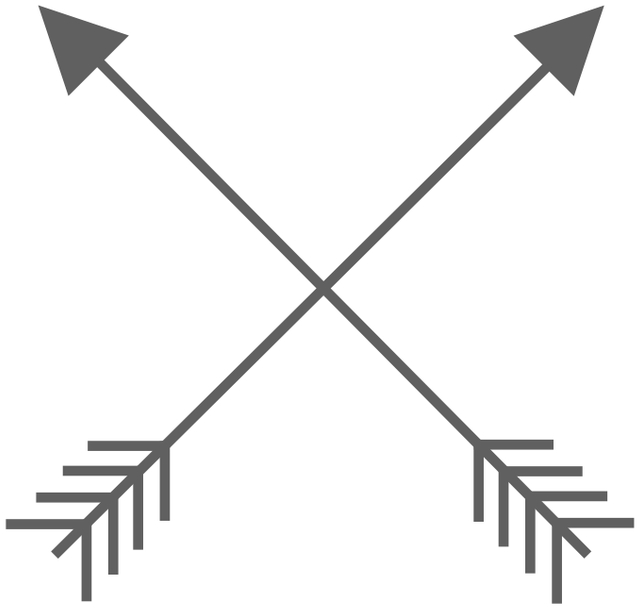

Elements
Resources
Network
Scripts
Timeline
Profiles
All
Errors
Warnings
Logs
24
Uncaught Error: require.js load timeout for modules: builds/xmaster

require



A JAVASCRIPT MODULE LOADER

OPTIMIZER

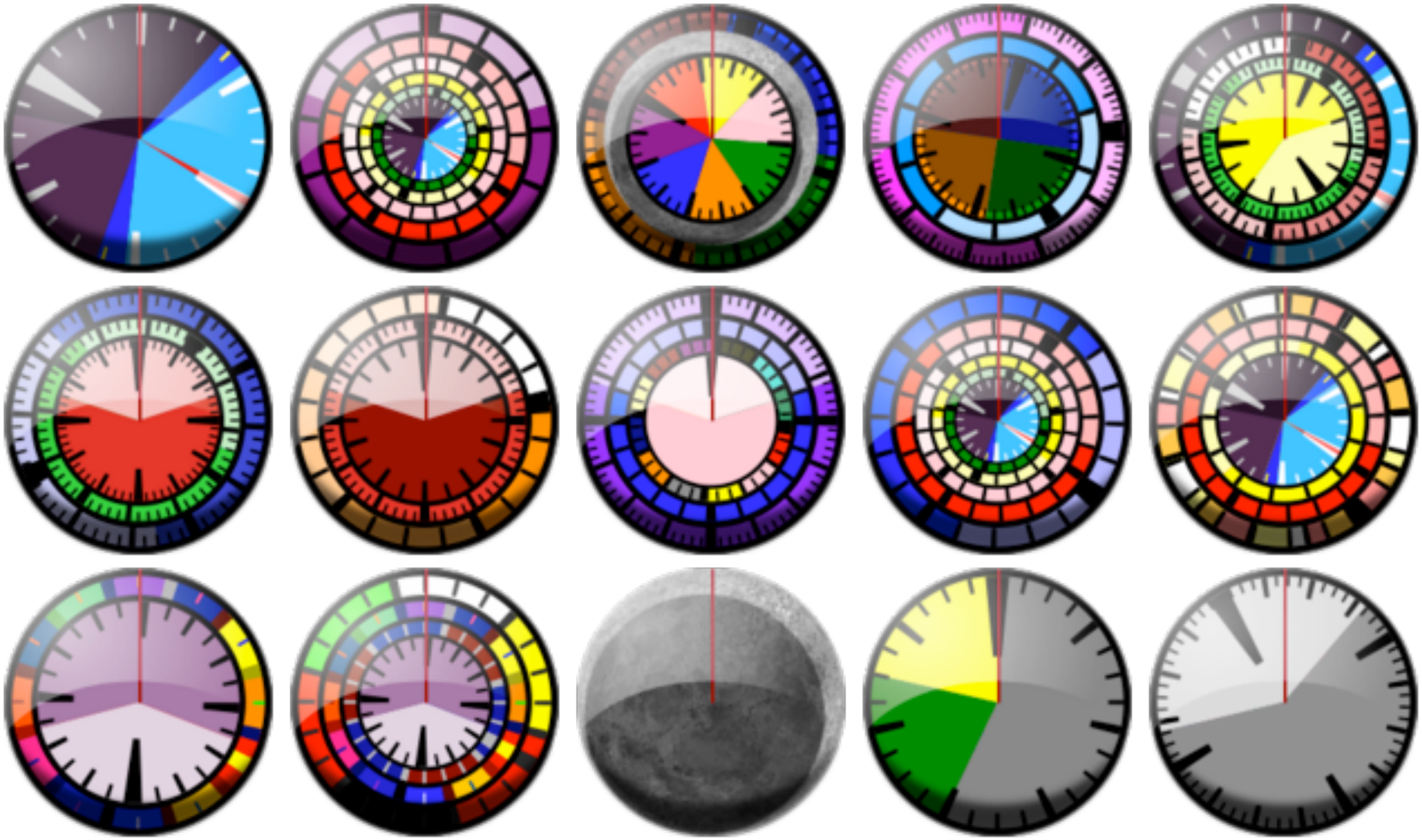


Debug

Production

Optimize?

Uglify.js



```
define([
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   'plugins/4_Hour',
   'plugins/Hour',
   'plugins/15_Minute',
   'DiskClock'
]);
```
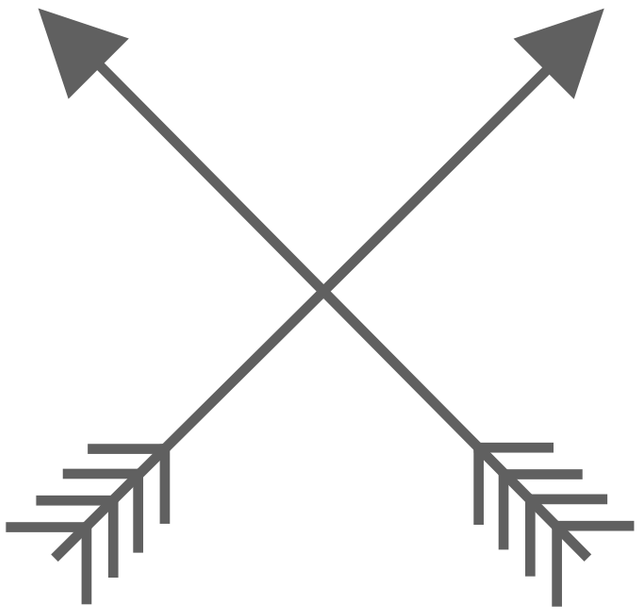

COMPATIBILITY



jQuery?

Node.js?

Server

Browser

CommonJS Modules

AMD

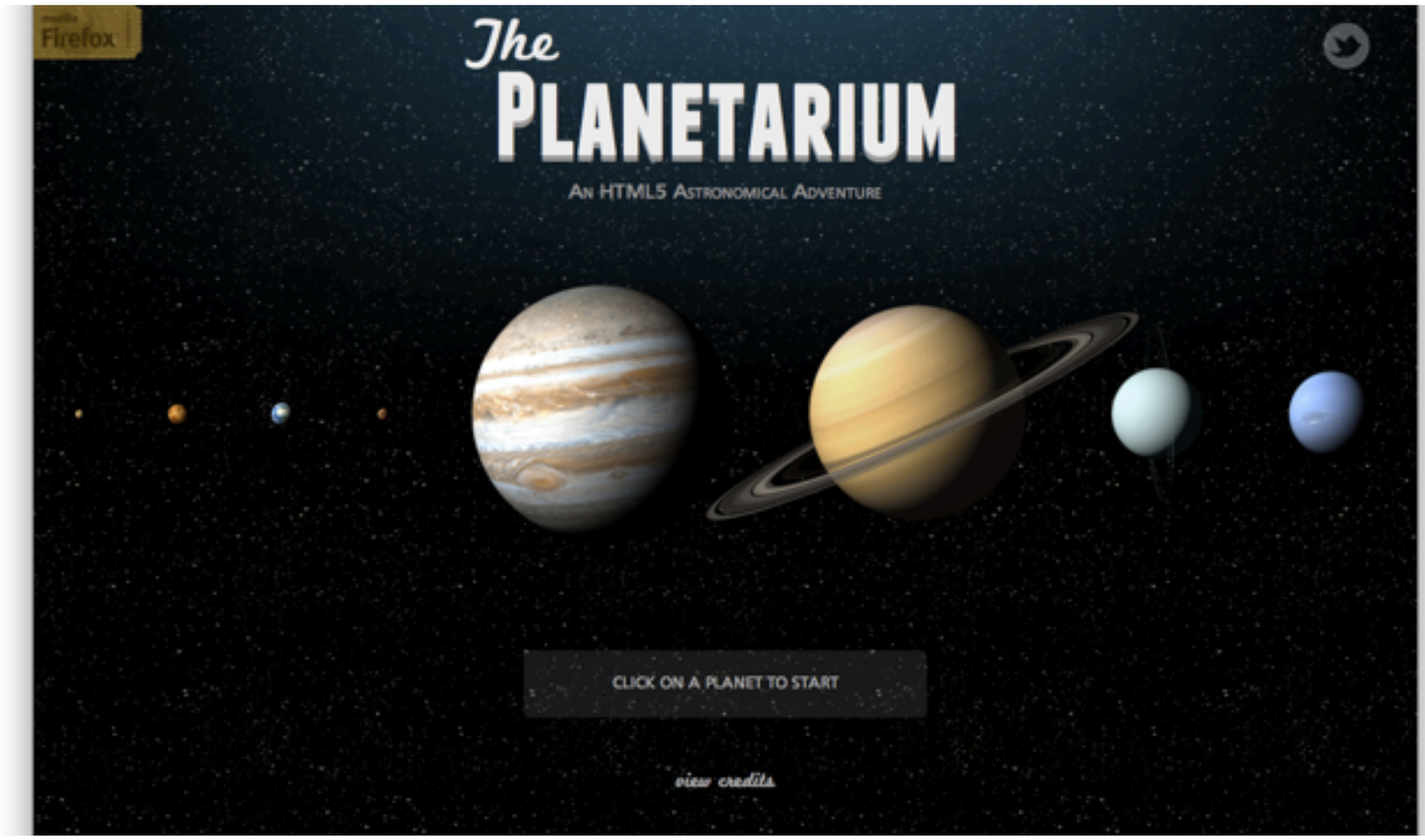
Plugins

PLUGINS

- text
- order
- cs (CoffeeScript)
- i18n

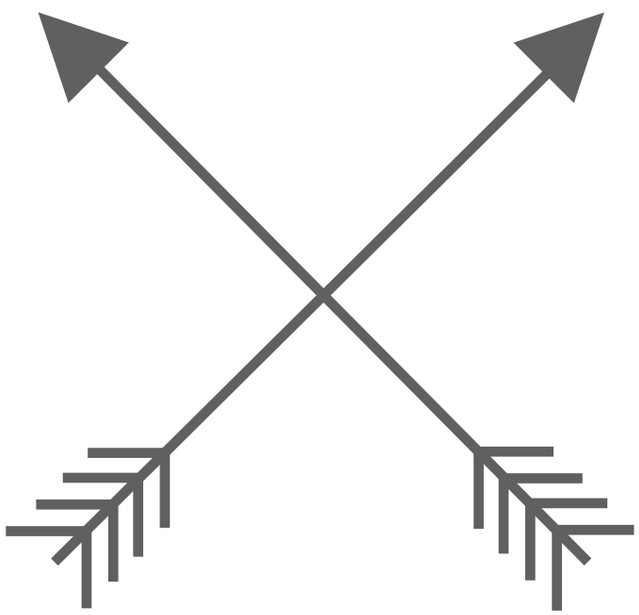
James Burke

Dojo

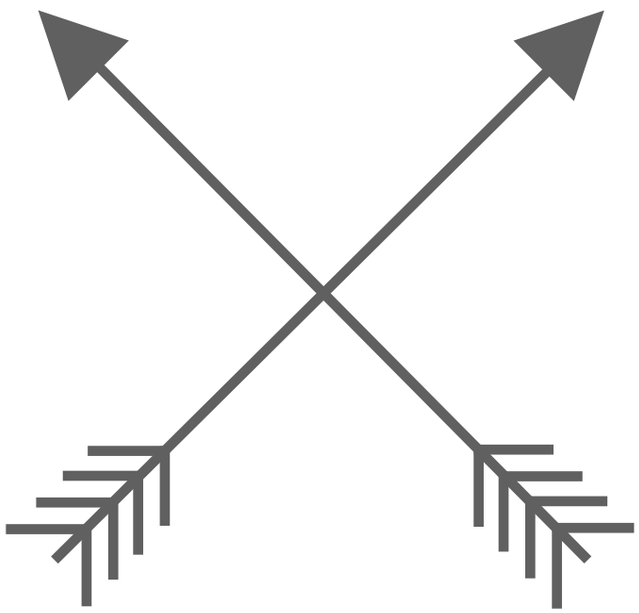


http://mozillademos.org/demos/planetarium/

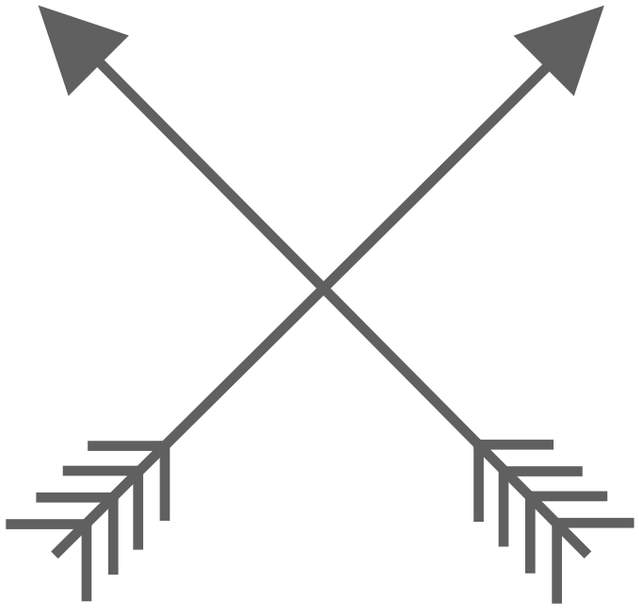
REVIEW



THE PROBLEM



LOADER



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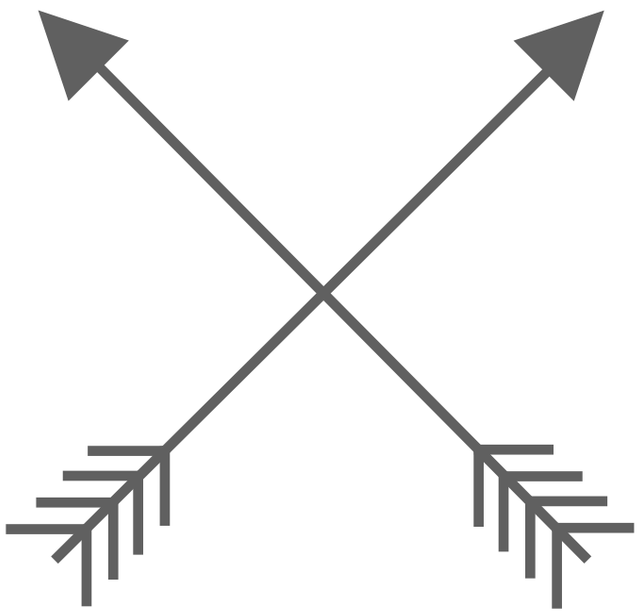
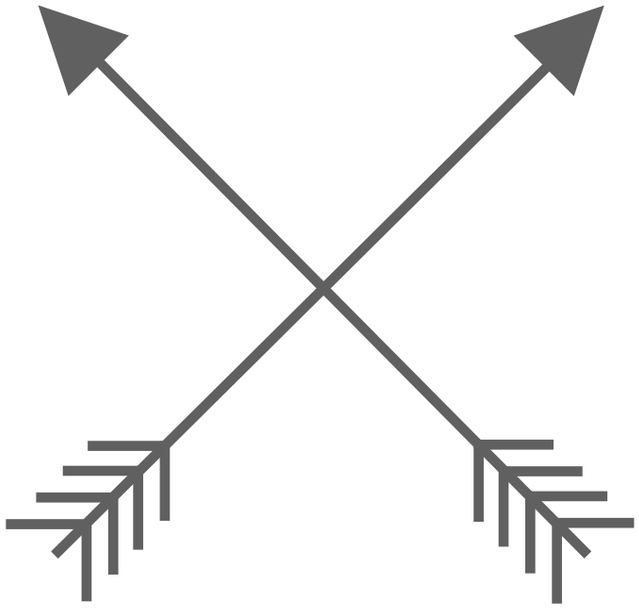
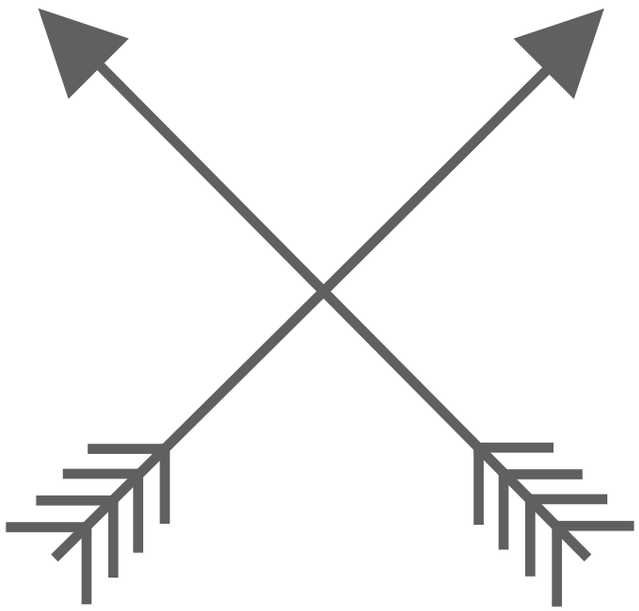


OPTIMIZER



COMPATIBILITY



JUSTIN LOVE

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http://wondible.com

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http://pinboard.in/u:wondible/t:requirejs/