



# THE PROGRESSION OF WEB APPS

NLHTML5 @ DE VOORHOEDE, 20TH OCTOBER 2016



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NLHTML5 @ DE VOORHOEDE, 20TH OCTOBER 2016

# HTML 5 TEST

HTML 5 TEST how well does your browser support html5?

your browser other browsers compare news device lab about the test

YOUR BROWSER SCORES **400** OUT OF 555 POINTS

You are using Safari 9.0.1 on OS X El Capitan 10.11

JavaScript Diagrams  
Click here for GoJS

Correct? ✓ ✕

Save results Compare to... Share Donate

semantics multimedia

<b>Parsing rules</b> 5	<b>Video</b> 35
<!DOCTYPE html> triggers standards mode Yes ✓	video element Yes ✓

# salonhub

salonhub winsum

agenda kassa recepten klanten team voorraad rapportage

dinsdag 9 augustus

	hanneke	chantal	john	notitie
15				
20				
25				
30				
35				
40				
45				
50				
55				
13				
5	13:00 Indraaien: Permanent & Knippen & harsevoort	13:00 Knippen-handdrogen: Knippen Dar joke van dijk	12:20 Knippen: Basis Kleuren & Knippen fam poot	
10				
15				
20				
25				
30				
35		13:30 Inzetten: Creatief Kleuren zonder k G Kauw		
40				
45	13:45 Spoelen: Permanent & Knippen & harsevoort			
50				
55				
14				
5	14:05 Knippen: Permanent & Knippen & harsevoort			
10				
15				
20				
25	14:25 Watergolf indraaien: Permanent & harsevoort			
30				
35				

Carrier 6:56 PM

kapper



**Salonlab Zuidlaren**  
De Millystraat 7, 9471 AG Zuidlaren  
Tel. 050 850 3251

+ Maak een afspraak

Salon Kaart Afspraken Over

# THE PROGRESSION OF WEB APPS

# THE PROGRESSION OF WEB APPS



**PROGRESSIVE WEB APPS**



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**PROGRESSIVE**

**RESPONSIVE**

**CONNECTIVITY INDEPENDENT**

**APP-LIKE**

**FRESH**

**SAFE**

**DISCOVERABLE**



**RE-ENGAGEABLE**

**INSTALLABLE**

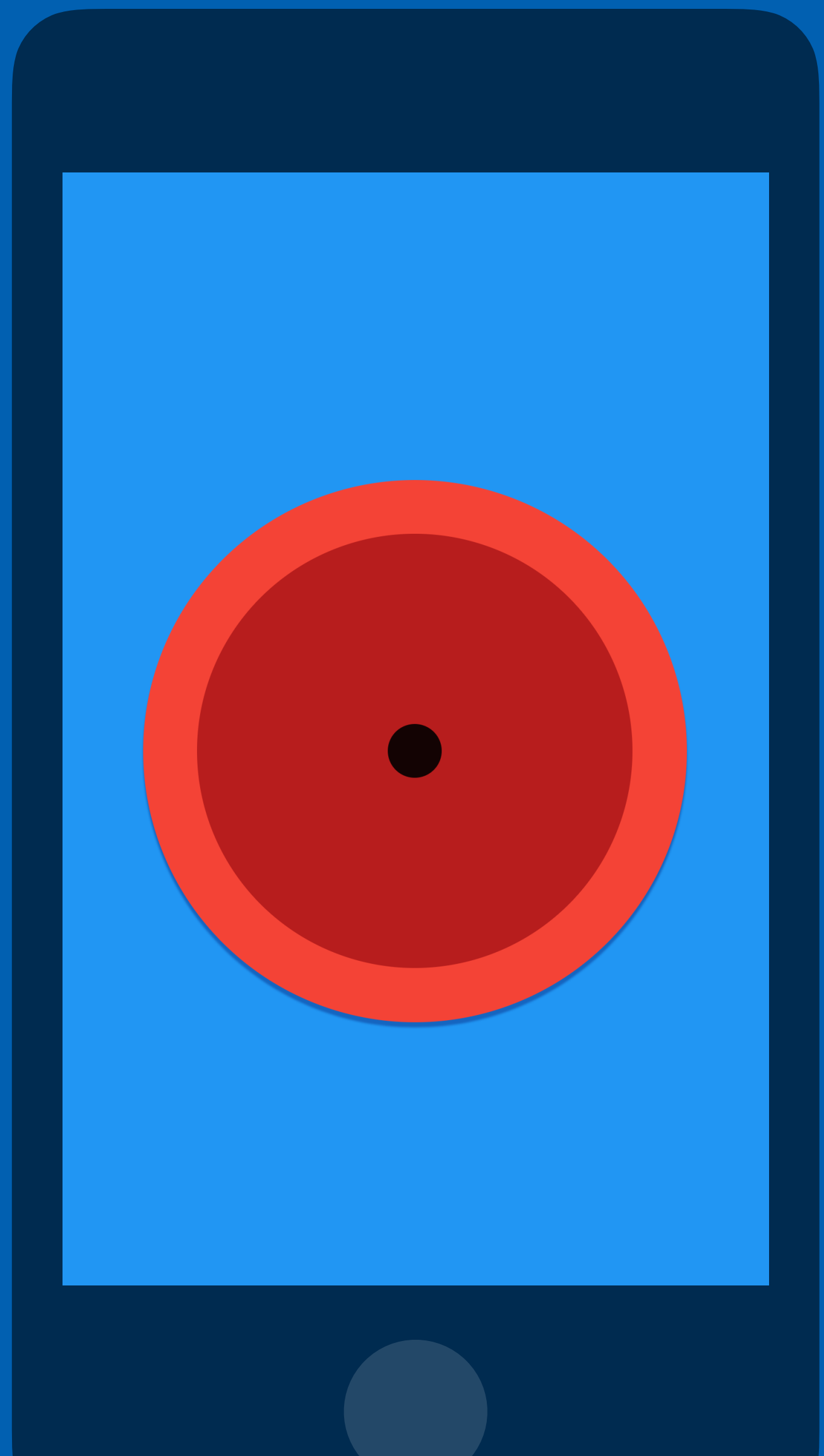
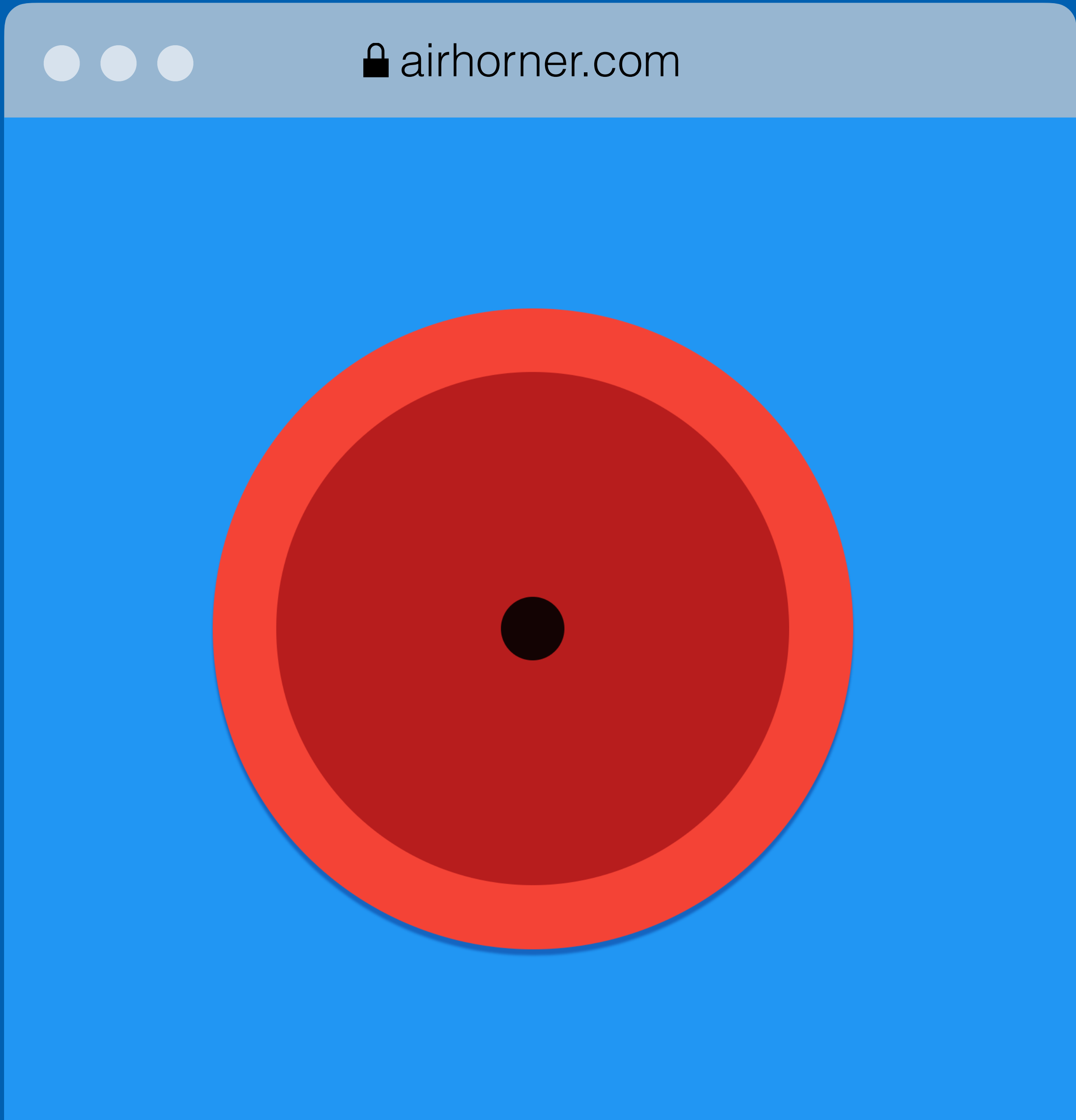
**LINKABLE**



**PROGRESSIVE**

**WEB APP**

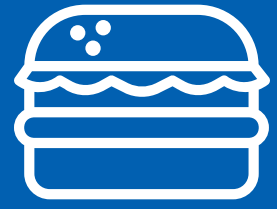
**RESPONSIVE**





**CONNECTIVITY INDEPENDENT**





**MENU**

**Where is my navigation?**

Click on the hamburger menu to get access to all of the navigation options.

**APP-LIKE**

**APP-LIKE**

**FRESH**



**FRESH**



**SAFE**



**DISCOVERABLE**



*Hi there! I'm a Web App!*

# RE-ENGAGE



This is a test pushmessage on acceptance.



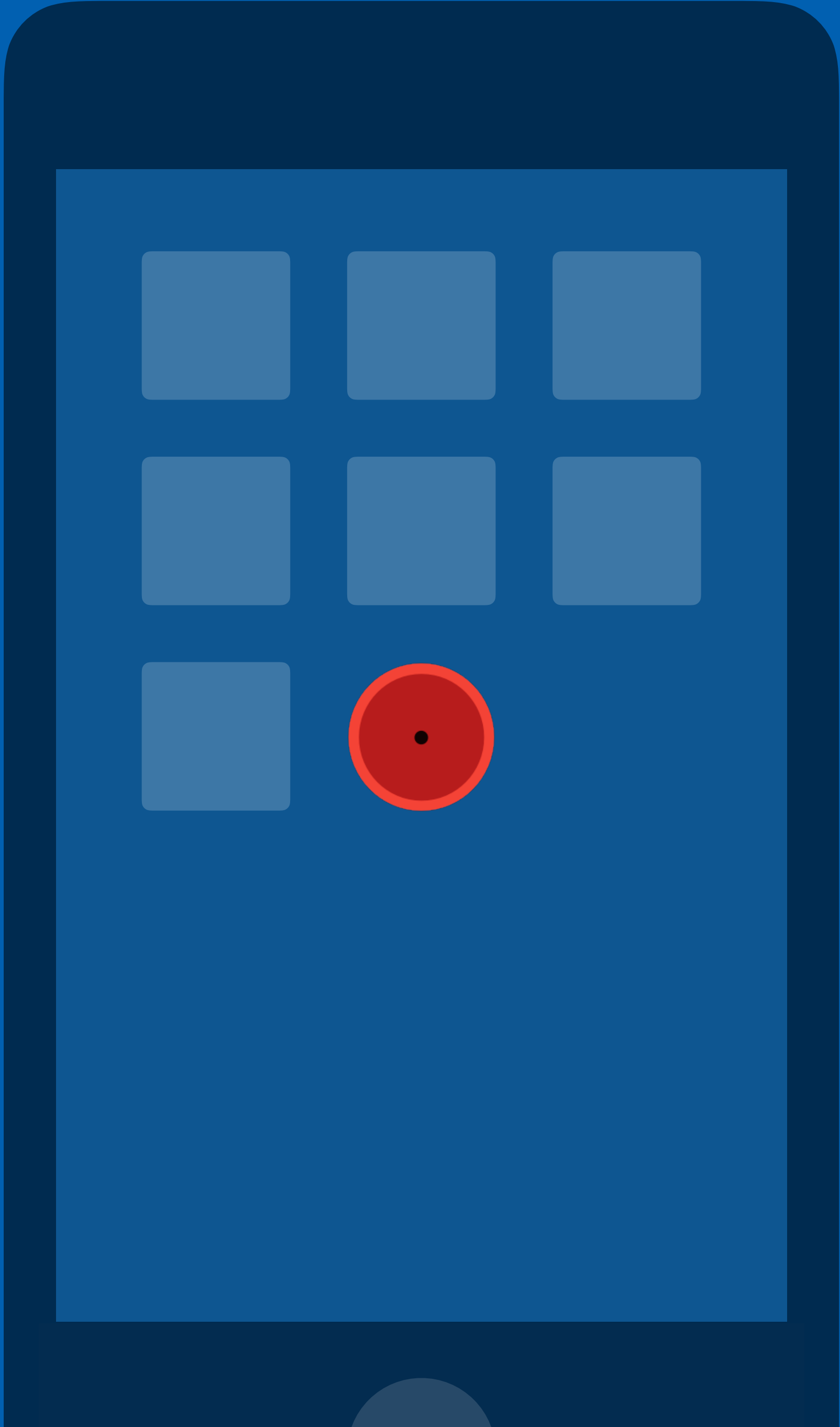
You have 4 app updates available



Someone you hardly know posted what he just ate



**INSTALLABLE**



**LINKABLE**

🔍 Airhorner



🔍 Airhorner

no results found

<https://airhorner.com>





**THIS IS NOT A NEW IDEA**



“

The full Safari engine is inside of iPhone.  
And so, you can write amazing Web 2.0 and  
Ajax apps that look exactly and behave exactly  
like apps on the iPhone. And these apps can  
integrate perfectly with iPhone services.

— Steve Jobs, 2007











“ The fundamental problem on the iPhone is not Apple’s App Store approval policies, but the iPhone developers’ arrogant disdain for Web technologies.

I reviewed the apps I have on my iPhone, and most can be released as a Web app *right now*.

— Peter Paul Koch, 2009

“

The fundamental problem on the iPhone is not Apple's App Store approval policies, but the iPhone developers' arrogant disdain for Web technologies.

I reviewed the apps I have on my iPhone, and most can be released as a Web app *right now*.

— Peter Paul Koch, 2009





✓ **PROGRESSIVE**

✓ **RESPONSIVE**

✓ **CONNECTIVITY INDEPENDENT**

✓ **APP-LIKE**

✓ **SAFE**

✓ **DISCOVERABLE**

✓ **INSTALLABLE**

✓ **LINKABLE**

**LOTS OF UGLY HACKS**



**LOTS OF BROWSER QUIRKS**

# **NON-STANDARD API'S**

**NO DEVICE API'S**



# **BUILDING NATIVE APPS USING WEB TECHNOLOGY**

**WHY?**

**WE KNOW HTML,  
CSS AND JAVASCRIPT**

# **CROSS PLATFORM DEVELOPMENT**



**GET ACCESS TO NATIVE API'S**

**THE APP STORE**

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TweetDeck

**Home** @html5test

**Marco Arment** @marcoarment now  
It has taken every ounce of willpower not to buy giant electrostatic speakers for the living room while @tiffanyarment is away for a week.

W3C retweeted

**Sarven Capadisi** @csarven 16m  
I had to get my parent's signature to apply for my city's FreeNet. I used Lynx to access the free 'library of Babel'

**W3C** @w3c  
25y ago, the world changed - forever! How did you first come across the Web? How has the Web impacted you? Do tell! w3.org/blog/2016/08/2...

rem retweeted

**Pointless Letters** @pointlessltrs 12h  
Magnificent pic.twitter.com/lq2KXlkyKg

Evening @TPEExpressTrains - 'Guy' on the seat opposite me is wearing stockings and a dress - what is that all about ??

**TPE Customer Assist** @TPEassist  
@gaz\_cocks Probably something to do with it being the 21st century now. As long as they have a ticket, everyone is welcome on our trains \*ZS

**rem** @rem 1m  
If you want to learn more about these development tools, I'm running a workshop: 2016 #conf.org/workshops#debu

**@ Mentions**

**CSS Day Conference** @cssdayconf 9d  
Let @html5test explain you everything about <noscript> in this #cssday video: vimeo.com/176436151

Slides: speakerdeck.com/nielsleenheer/...

in reply to HTML5test

**David Storey** @dstorey 9d  
@html5test I'm guessing it is a Ford?

in reply to HTML5test

**David Storey** @dstorey 9d  
@html5test the multi-year process of approving things for airlines meant it was yeas old before anything shipped.

in reply to HTML5test

**David Storey** @dstorey 9d  
@html5test almost as old as the Opera browsers that were made for seat backs of planes.

in reply to HTML5test

**Steve Brandt** @steve\_brandt 10d  
@html5test that's a volvo, right.

in reply to HTML5test

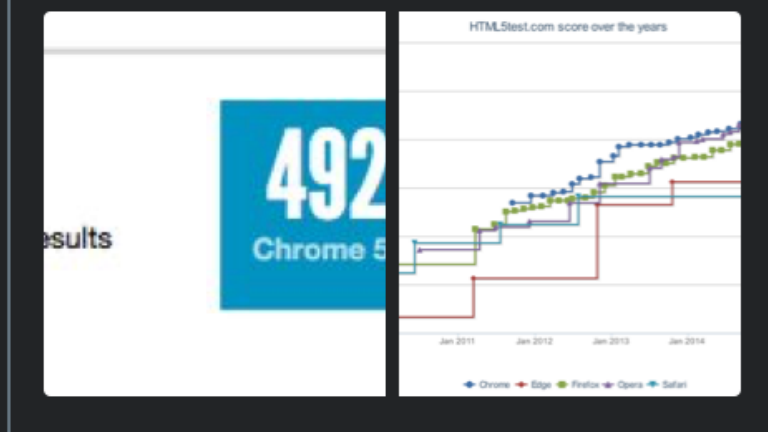
**Jeroen Heijmans** @jeroenheijmans 10d  
@html5test @codepo8 96%, wow! ;-)

**Notifications** @html5test

**bee8bit** liked your Retweet

**Nolan Lawson** @nolanlawson 2d  
For the first time ever, a Microsoft browser has surpassed Firefox on HTML5Test. It's a good time to be a web dev!

**David Storey** @dstorey  
Edge14 (released tomorrow) is now right up there with Firefox on @html5test. 460 points. (473 with flags) pic.twitter.com/XLTCOTFqC1



**Sidekick Digital** followed you

**Sidekick Digital** @sidekickdigi  
We're a creative digital agency who makes digital, more human. We're based in the heart of Norfolk, with offices in King's Lynn and Norwich.

in reply to Ryan Buckwalter

**David Storey** @dstorey 2d  
@BucksterMcgee @nolanlawson @html5test standing up a new browser with so many new sub systems is difficult, but making huge progress

**html5test**

**OpenS**  
Wonde  
suppo  
followi

**SDK.c**  
html5te  
线工具  
HTML  
行测试  
工具。

**Marin**  
For the  
by Mic  
@html5  
pic.twi

current  
Score  
492  
492  
460  
450


in reply

**andre**  
@stsha  
Great t  
HTML5  
though

in reply




Slack

**Fronteers**   
● nielsleenheer







CHANNELS (13)

- # activiteitencmissie
- # conference
- # evenementen
- # fronteers
- # watercooler


DIRECT MESSAGES (340) 


- ♥ slackbot
- nielsleenheer (you)


**#activiteitencmissie**  
23 members | [Add a topic](#)


   |    


August 3rd


 **meta** 8:05 AM  
@hdv zo simpel kan het zijn he? :-)



 **hdv** 8:05 AM  
ervanuitgaande dat er 10% niet komt (is dat realistisch?) kunnen die gewoon allemaal komen 😊


 **meta** 8:06 AM  
ja, zal ik de mailing doen?  
dan vraag ik het gewoon en komen de afmeldingen vanzelf



 **hdv** 8:07 AM  
ah yea dat is goed, hoe ver tevoren doe je dat?  
een week of?

 **meta** 8:08 AM  
een paar dagen  
kan ook nu al  
want je hebt al een wachtlijst  
als je zelf mailt kunnen ze ook replyen  
@hdv doet @thomatronic de intro of heb je een voorbeeld voor sheets?

 **thomatronic** 9:03 AM  
Ik ben d'rbij voor de MC'ing!

 **hdv** 9:19 AM  
  
ah ja, maar iets langer wachten waarschijnlijk wel goed, want dan hebben mensen al meer zekerheid over hun planning

 **hdv** 5:45 PM  
thanks, meta, voor de voorbeeldtekst!

 |  





```
data.js — /Users/niels/Projects/HTML5test
HTML5test
├── dist
├── private
├── src
│   ├── assets
│   ├── backend
│   ├── css
│   ├── fonts
│   ├── images
│   └── scripts
│       ├── 5
│       ├── 6
│       ├── 7
│       └── 8
│           ├── data.js
│           ├── engine.js
│           ├── highcharts
│           ├── jquery
│           ├── base.js
│           ├── fullscreen.js
│           ├── reporting.js
│           ├── vendor
│           ├── .ignore
│           ├── access
│           ├── about.html
│           ├── composer.json
│           ├── donate.html
│           ├── index.html
│           ├── LICENSE
│           ├── qr.html
│           └── README.md
└── engine.js
    1
    2
    3 var tests = [
    4
    5     {
    6         id: 'semantics',
    7         name: 'Semantics',
    8         column: 'left',
    9         items: [
10             {
11                 id: 'parsing',
12                 name: 'Parsing rules',
13                 status: 'stable',
14                 items: [
15                     {
16                         id: 'doctype',
17                         name: '<code>&lt;!DOCTYPE html&gt;</code> triggers standards mode',
18                         urls: [
19                             [ 'w3c', 'http://www.w3.org/TR/html5/syntax.html#the-doc' ],
20                             [ 'whatwg', 'https://html.spec.whatwg.org/multipage/synt' ]
21                         ]
22                     }, {
23                         id: 'tokenizer',
24                         name: 'HTML5 tokenizer',
25                         value: 3,
26                         urls: [
27                             [ 'w3c', 'http://www.w3.org/TR/html5/syntax.html#parsing' ],
28                             [ 'whatwg', 'https://html.spec.whatwg.org/multipage/synt' ],
29                             [ 'mdn', '/Web/Guide/HTML/HTML5/HTML5_Parser' ]
30                         ]
31                     }, {
32                         id: 'tree',
33                         name: 'HTML5 tree building',
34                         value: 2,

```

Browser.php - WhichBrowser

EXPLORER    update-chrome.php    BrowserId.php    Browser.php    Application.php

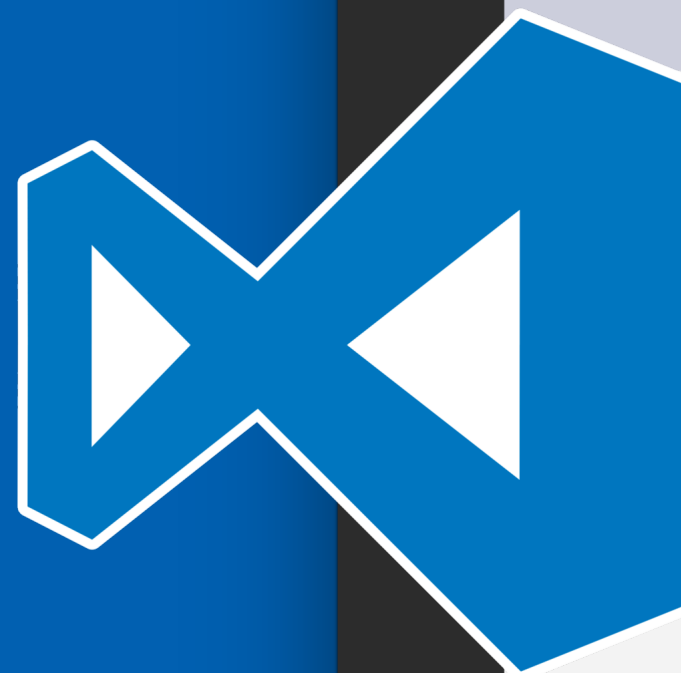
OPEN EDITORS

- update-chrome.php src/Parser/bin
- BrowserId.php src/Parser/src/Analyser/He...
- Browser.php src/Parser/src/Analyser/Head...
- Application.php src/Parser/src/Analyser/H...

WHICHBROWSER

- Gps.php
- Media.php
- Mobile.php
- Pda.php
- Phone.php
- Printer.php
- Signage.php
- Tablet.php
- Television.php
- Application.php
- Bot.php
- Browser.php
- Device.php
- Engine.php
- Os.php
- Using.php
- Baidu.php
- BrowserId.php
- OperaMini.php
- Puffin.php
- UCBrowserNew.php
- UCBrowserOld.php
- Useragent.php
- Wap.php

```
124
125 private function detectChrome($ua)
126 {
127     if (preg_match('/:Chrome|CrMo|CriOS|\\[0-9]/u', $ua) || preg_match('/Browser\\Chrome[0-9]/u', $ua)) {
128         $this->data->browser->name = 'Chrome';
129         $this->data->browser->type = Constants\\BrowserType::BROWSER;
130         $this->data->browser->stock = false;
131
132         $version = '';
133         if (preg_match('/:Chrome|CrMo|CriOS|\\([0-9.]*/u', $ua, $match)) {
134             $version = $match[1];
135         }
136         if (preg_match('/Browser\\Chrome([0-9.]*/u', $ua, $match)) {
137             $version = $match[1];
138         }
139         $this->data->browser->version = new Version(['value' => $version]);
140
141         if (isset($this->data->os->name) && $this->data->os->name == 'Android') {
142             $channel = Data\\Chrome::getChannel('mobile', $this->data->browser->version->value);
143
144             if ($channel == 'stable') {
145                 $this->data->browser->version->details = 1;
146             } elseif ($channel == 'beta') {
147                 $this->data->browser->channel = 'Beta';
148             } else {
149                 $this->data->browser->channel = 'Dev';
150             }
151
152             /* Webview for Android 4.4 and higher */
153             if (implode('.', array_slice(explode('.', $version), 1, 2)) == '0.0' && (preg_match('/:Chrome|CrMo|CriOS|\\([0-9.]*/u', $ua, $match))) {
154                 $this->data->browser->using = new Using(['name' => 'Chromium WebView', 'version' => $version]);
155                 $this->data->browser->type = Constants\\BrowserType::UNKNOWN;
156                 $this->data->browser->stock = true;
157                 $this->data->browser->name = null;
158                 $this->data->browser->version = null;
159                 $this->data->browser->channel = null;
160             }
161         }
162     }
163 }
```



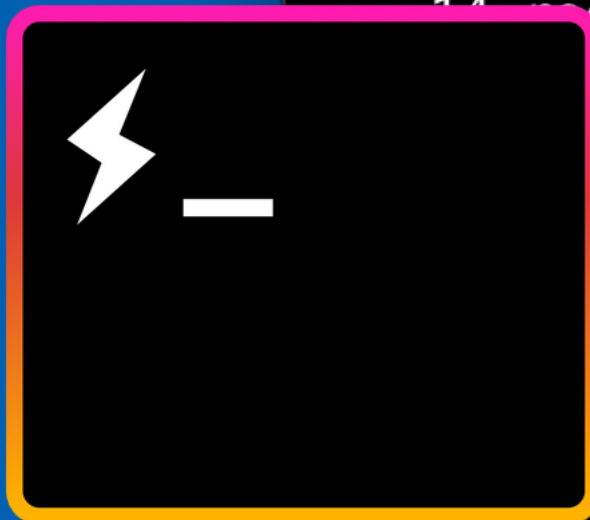




ssh

```
top - 14:44:11 up 173 days, 5:05, 1 user, load average: 0.06, 0.06, 0.07
Tasks: 124 total, 1 running, 123 sleeping, 0 stopped, 0 zombie
%Cpu(s): 0.8 us, 1.0 sy, 0.0 ni, 98.2 id, 0.0 wa, 0.0 hi, 0.0 si, 0.0 st
KiB Mem : 1838088 total, 36564 free, 532032 used, 1269492 buff/cache
KiB Swap: 4194300 total, 3854192 free, 340108 used. 1137556 avail Mem
```

PID	USER	PR	NI	VIRT	RES	SHR	S	%CPU	%MEM	TIME+	COMMAND
19963	apache	20	0	572224	13568	3648	S	0.3	0.7	0:00.06	httpd
20066	apache	20	0	572040	13132	3312	S	0.3	0.7	0:00.02	httpd
20103	apache	20	0	571644	12644	3188	S	0.3	0.7	0:00.01	httpd
20107	apache	20	0	571616	12744	3232	S	0.3	0.7	0:00.02	httpd
20242	web10	20	0	378492	17752	10376	S	0.3	1.0	0:00.08	php-cgi
1	root	20	0	348800	162516	1456	S	0.0	8.8	68:56.97	systemd
2	root	20	0	0	0	0	S	0.0	0.0	0:02.92	kthreadd
3	root	20	0	0	0	0	S	0.0	0.0	1:51.92	ksoftirqd/0
5	root	0	-20	0	0	0	S	0.0	0.0	0:00.00	kworker/0:0H
7	root	rt	0	0	0	0	S	0.0	0.0	1:07.89	migration/0
8	root	20	0	0	0	0	S	0.0	0.0	0:00.00	rcu_bh
9	root	20	0	0	0	0	S	0.0	0.0	0:00.00	rcuob/0
10	root	20	0	0	0	0	S	0.0	0.0	0:00.00	rcuob/1
11	root	20	0	0	0	0	S	0.0	0.0	262:06.19	rcu_sched
12	root	20	0	0	0	0	S	0.0	0.0	84:59.97	rcuos/0
13	root	20	0	0	0	0	S	0.0	0.0	128:42.33	rcuos/1
14	root	rt	0	0	0	0	S	0.0	0.0	1:32.50	watchdog/0
15	root	rt	0	0	0	0	S	0.0	0.0	1:27.98	watchdog/1
16	root	rt	0	0	0	0	S	0.0	0.0	1:07.58	migration/1
17	root	20	0	0	0	0	S	0.0	0.0	3:51.78	ksoftirqd/1
18	root	0	-20	0	0	0	S	0.0	0.0	0:00.00	kworker/1:0H
19	root	0	-20	0	0	0	S	0.0	0.0	0:00.00	khelper
20	root	20	0	0	0	0	S	0.0	0.0	0:00.00	kdevtmpfs
21	root	0	-20	0	0	0	S	0.0	0.0	0:00.00	netns
22	root	20	0	0	0	0	S	0.0	0.0	0:00.00	xenwatch
23	root	20	0	0	0	0	S	0.0	0.0	0:00.00	xenbus
24	root	0	-20	0	0	0	S	0.0	0.0	0:00.00	writeback
25	root	0	-20	0	0	0	S	0.0	0.0	0:00.00	kintegrityd
26	root	0	-20	0	0	0	S	0.0	0.0	0:00.00	bioaset
27	root	0	-20	0	0	0	S	0.0	0.0	0:00.00	kblockd
28	root	0	-20	0	0	0	S	0.0	0.0	0:00.00	khubd
30	root	20	0	0	0	0	S	0.0	0.0	0:00.00	khubd



- Search or start new chat
- Famwhap** 13:45  
Ina: Ff door dan is het goed...
  - Ina Leenheer** 12:15  
Ok
  - Butterfly** Yesterday  
Johannes: 🤔👍
  - Oma en Oma** Yesterday  
Ina: Appen wel ff zodra we heen ga...
  - Wilma Leenheer-Tilman** Yesterday  
Bij de lift 😊
  - Stefan Buringa** Friday  
Mazzelkont
  - Frieda van der Veen** Wednesday  
Heel graag gedaan! Ik wens jullie v...
  - Anneke Tilman Swieringa** Wednesday



**Oma en Oma**  
Anneke, Ina, Wilma, You

17:33 ✓✓

Hoog en droog 17:33 ✓✓

**Anneke Tilman-Swieringa**  
Hellup! 17:34

(Filmpje gezien 😄) 17:35

**Ina Leenheer**  
Ik ook, bar.... 18:38

YESTERDAY

Zijn weer thuis! 21:32 ✓✓

**Ina Leenheer**  
Mooi. Gaan morgenochtend naar de kinderboerderij. Zullen we elkaar daar ontmoeten?? 21:34

Dat is prima! 21:36 ✓✓

1 UNREAD MESSAGE

**Ina Leenheer**  
Appen wel ff zodra we heen gaan... 21:37

Search

Movies

Popular

Action

Adventure

Animation

Biography

Comedy

Crime

Documentary

Drama

Family

Fantasy

Film-Noir

History

Horror

Music

Musical

Mystery

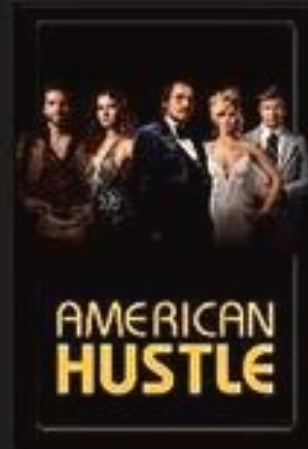
Romance



Delivery Man  
2013



12 Years a Slave  
2013



American Hustle  
2013



Gravity  
2013



Frozen  
2013



Thor The Dark W...  
2013



Reasonable Doubt  
2014



Captain Phillips  
2013



The Hunger Ga...  
2013



Dallas Buyers Club  
2013



The Book Thief  
2013



Saving Mr. Banks  
2013



Escape Plan  
2013



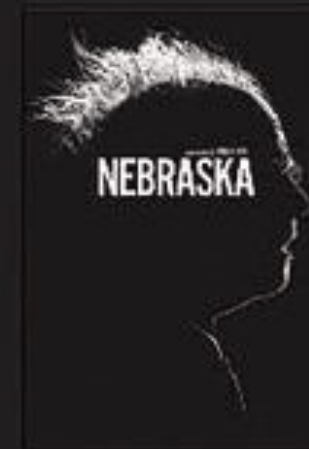
Ender's Game  
2013



Jackass Prese...  
2013



Last Vegas  
2013



Nebraska  
2013



The Wolverine  
2013



Homefront  
2013



Rush  
2013



August Osage C...  
2013



About Time  
2013



Cloudy with a...  
2013



Prisoners  
2013



Despicable Me 2  
2013



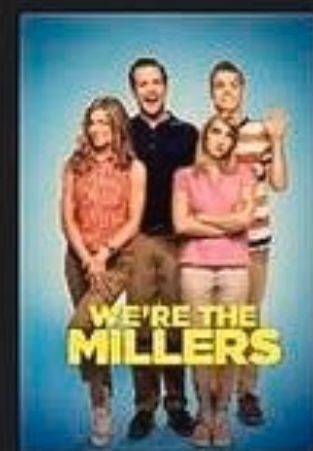
The Best Offer  
2013



World War Z  
2013



Man of Steel  
2013



We're the Mil...  
2013



The Counselor  
2013



This Is the End  
2013



Elysium  
2013



Now You See M...  
2013



Pacific Rim  
2013



The Lone Ranger  
2013



Kill Your Darlings  
2013

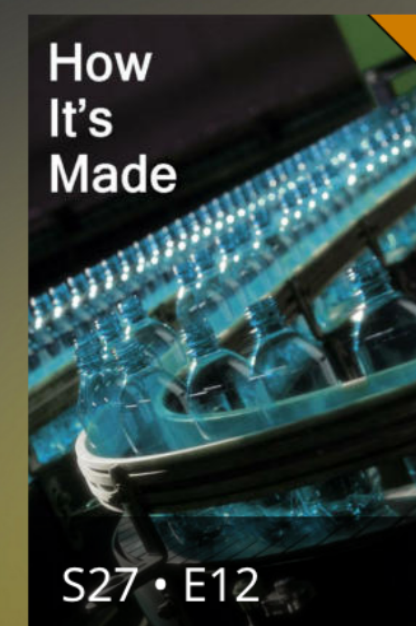
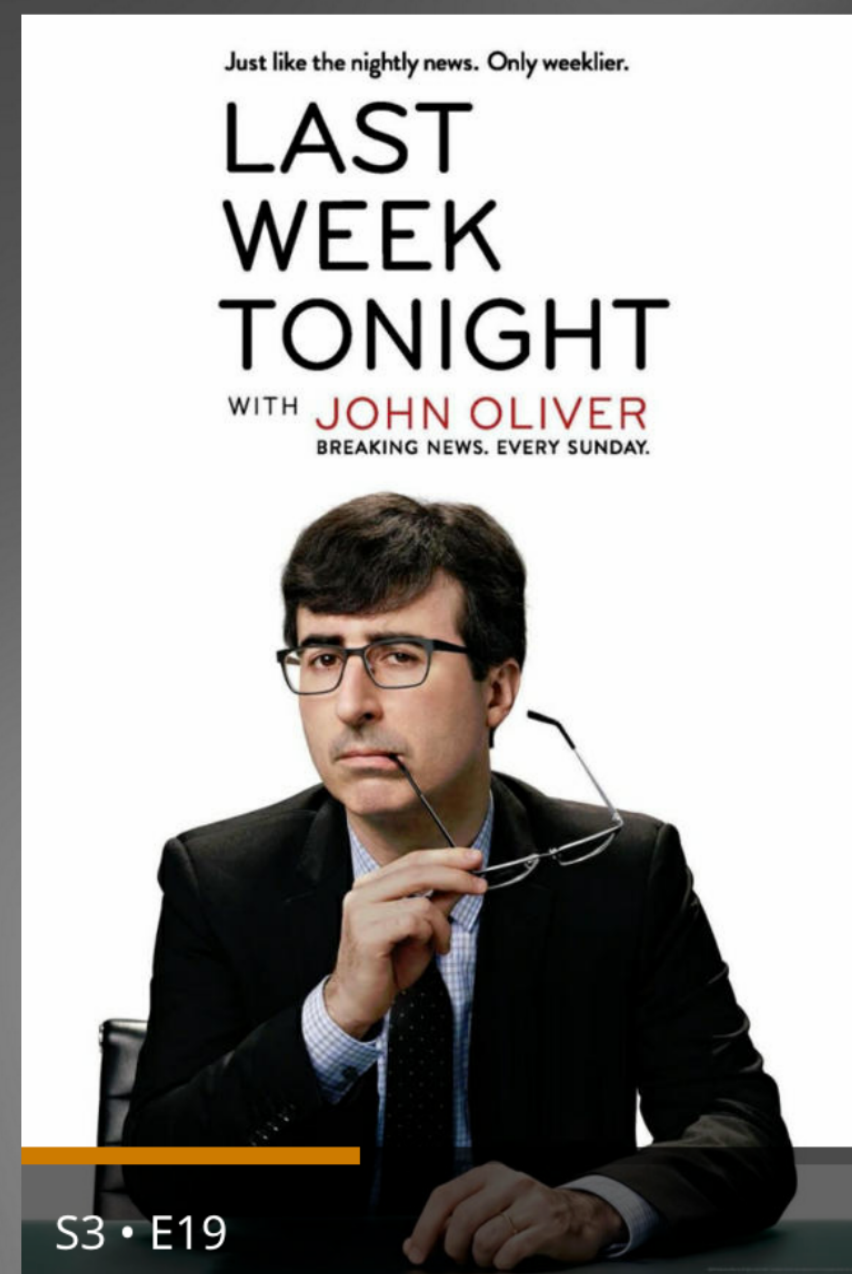


TV SHOWS

ON DECK

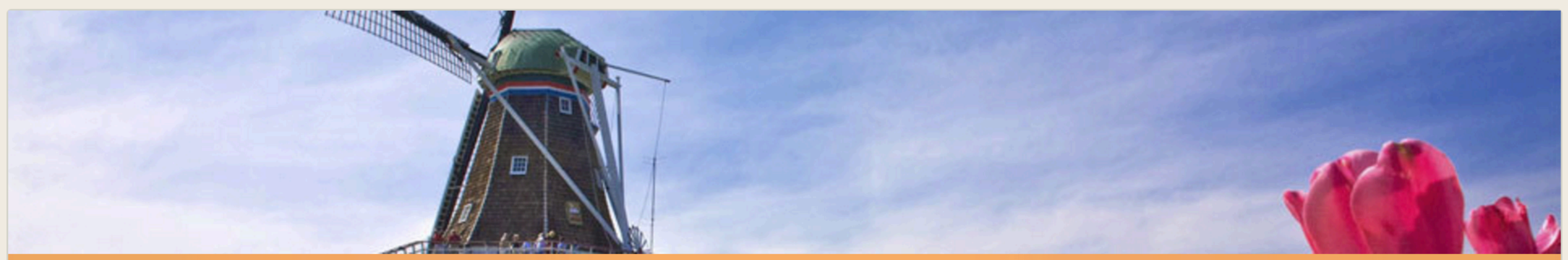
RECENTLY AIRED TV

 Browse All



More





Amsterdam, Netherlands  
Founded Nov 20, 2014

[About us...](#)

## Pragmatism and Progression @ De Voorhoede

[Tell a friend](#) [Share](#)

**Thursday, October 20, 2016**  
6:00 PM

**De Voorhoede**  
Rijnsburgstraat 9, 1059 AT, Amsterdam ([map](#))

On October 20th, we will be hosting our eighth meetup of 2016 at **De Voorhoede** in Amsterdam! Talks will be about being pragmatic in your job and developing for the NES

69 going

11 spots available

- Lara A.**  
Assistant Organizer, Event Host
- Paul V.**  
Organizer, Event Host
- Nadjib A.**
- Victor L +1**



YOUR BROWSER SCORES **485** OUT OF 555 POINTS



using Edge 14 on Windows 10 Correct? ✓ ✕

View results Compare to... Share Donate

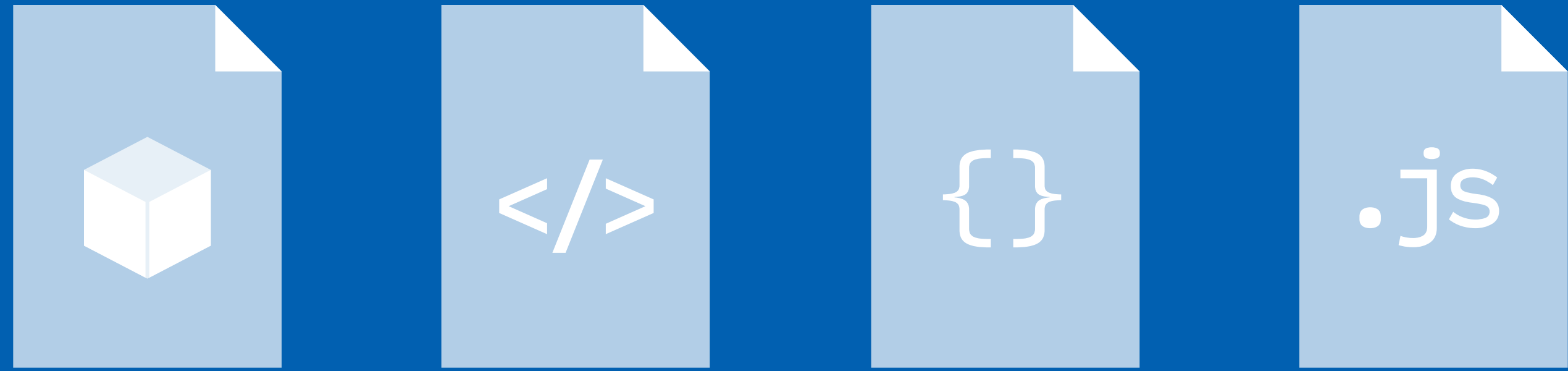
Category	Score
Parsing rules	5
Video	33

<!DOCTYPE html> triggers standards mode Yes ✓ video element Yes ✓



# PACKAGED WEB APPS

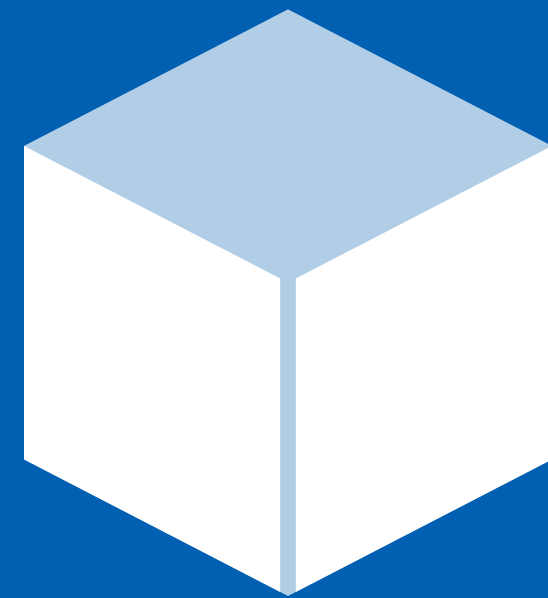




# HOSTED WEB APPS



+ URL of the hosted web app





2007



**ADOBE AIR**

application.xml

```
<application
  xmlns="http://ns.adobe.com/air/application/2.5">

  <id>nl.salonhub.Salonhub</id>
  <filename>Salonhub</filename>
  <name>Salonhub</name>
  <versionNumber>6.0.356</versionNumber>
  <description>De flexibele en complete oplossing voor uw kapsalon</description>

  <initialWindow>
    <content>platform/air/app/index.html</content>

    <width>1024</width>
    <height>768</height>
```

adt

-package

-storetype pkcs12 -keystore cert.p12 -storepass \*\*\*\*\*

dist/air/Salohub-6.0.365.air

build/air/application.xml

-C build/air assets external lib platform settings.js



Salonhub.air





## Application Install



### Salonhub

#### Description

Salonhub - De flexibele en complete oplossing voor uw kapsalon

#### Installation Preferences

Start application after installation

#### Installation Location:

/Applications



Cancel

Continue

2007



**ADOBE AIR**

2007



**ADOBE AIR**

2009



APACHE  
**CORDOVA**™

Vibration

Dialogs

Camera

Network Information

Battery Status

Device Motion

Splashscreen

# DEVICE API'S

Files

Statusbar

Device Orientation

Media Capture

Geolocation

Media

File Transfers

**PLUGINS**

“

PhoneGap is a polyfill, and the ultimate purpose of PhoneGap is to cease to exist

— Brian LeRoux

2009



APACHE  
**CORDOVA**™



2012



chrome app



chromebook





chrome web store

2012



chrome app

2013



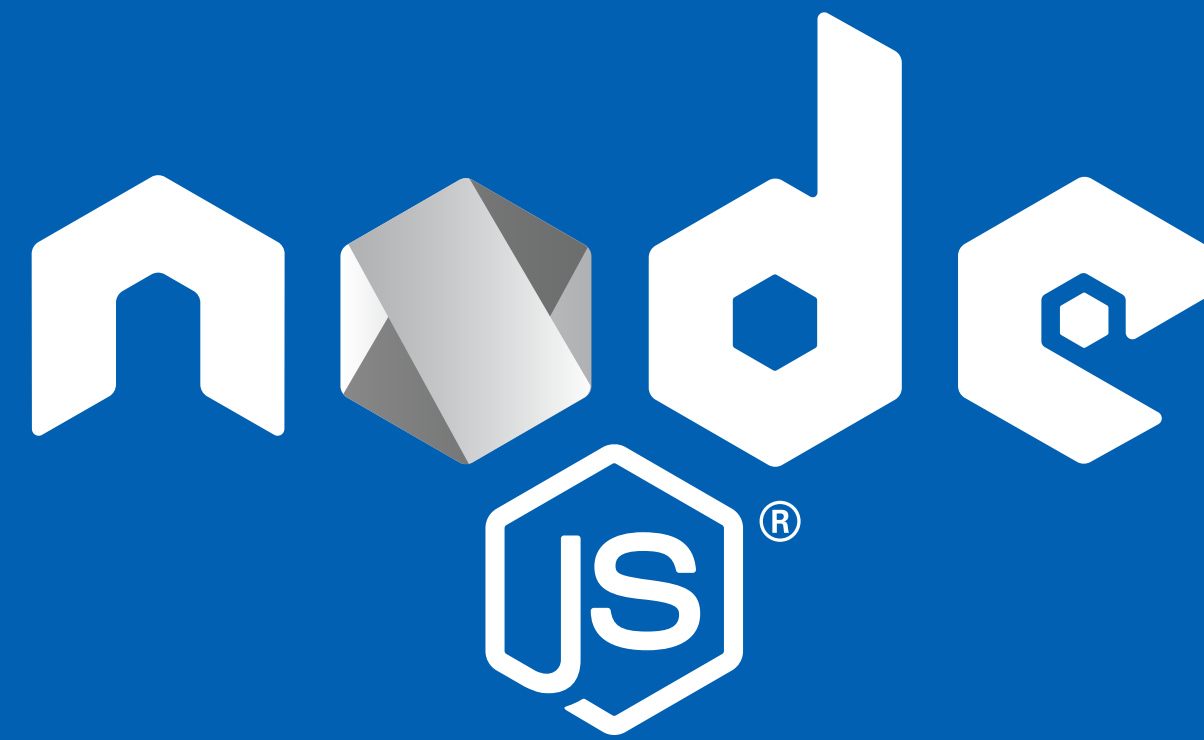
ELECTRON



```
data.js — /Users/niels/Projects/HTML5test
HTML5test
├── dist
├── private
├── src
│   ├── assets
│   ├── backend
│   ├── css
│   ├── fonts
│   ├── images
│   └── scripts
│       ├── 5
│       ├── 6
│       ├── 7
│       └── 8
│           ├── data.js
│           ├── engine.js
│           ├── highcharts
│           ├── jquery
│           ├── base.js
│           ├── fullscreen.js
│           ├── reporting.js
│           ├── vendor
│           ├── .ignore
│           ├── .access
│           ├── .about.html
│           ├── .composer.json
│           ├── .donate.html
│           ├── .index.html
│           ├── .LICENSE
│           ├── .qr.html
│           └── .README.md
└── engine.js
    1
    2
    3 var tests = [
    4
    5     {
    6         id: 'semantics',
    7         name: 'Semantics',
    8         column: 'left',
    9         items: [
   10             {
   11                 id: 'parsing',
   12                 name: 'Parsing rules',
   13                 status: 'stable',
   14                 items: [
   15                     {
   16                         id: 'doctype',
   17                         name: '<code>&lt;!DOCTYPE html&gt;</code> triggers standards mode',
   18                         urls: [
   19                             [ 'w3c', 'http://www.w3.org/TR/html5/syntax.html#the-doc' ],
   20                             [ 'whatwg', 'https://html.spec.whatwg.org/multipage/synt' ]
   21                         ]
   22                     }, {
   23                         id: 'tokenizer',
   24                         name: 'HTML5 tokenizer',
   25                         value: 3,
   26                         urls: [
   27                             [ 'w3c', 'http://www.w3.org/TR/html5/syntax.html#parsing' ],
   28                             [ 'whatwg', 'https://html.spec.whatwg.org/multipage/synt' ],
   29                             [ 'mdn', '/Web/Guide/HTML/HTML5/HTML5_Parser' ] ]
   30                         ]
   31                     }, {
   32                         id: 'tree',
   33                         name: 'HTML5 tree building',
   34                         value: 2,
```



+



launch.js

```
const electron = require('electron');
const app = electron.app;

let mainWindow;

function createWindow () {
  mainWindow = new electron.BrowserWindow({ width: 800, height: 600 });

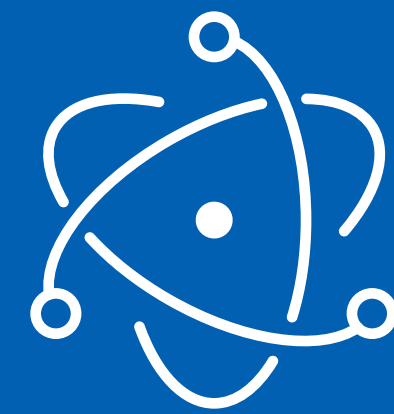
  mainWindow.loadURL('file://' + __dirname + '/app/index.html');
  mainWindow.on('closed', () => { mainWindow = null });
}

app.on('ready', () => {
  createWindow();
});

app.on('window-all-closed', () => {
  if (process.platform !== 'darwin') {
    app.quit();
  }
});
```

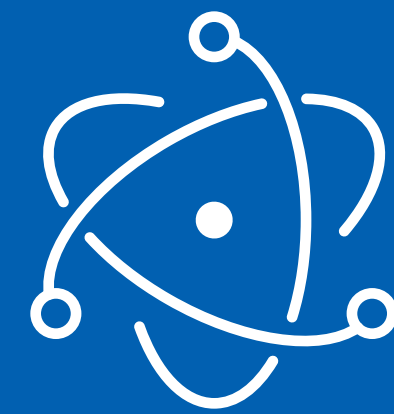


2013



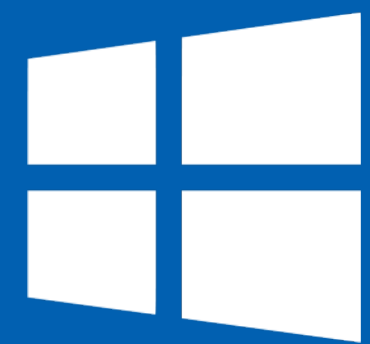
ELECTRON

2013



ELECTRON

2014



Universal Windows Platform

# Visual Studio

- Start
- [New Project...](#)
- [Open Project...](#)
- [Open from Source Control...](#)

- Recent
- App1

## Discover Visual Studio Community 2015

[New to Visual Studio? Check out coding tutorials and sample projects](#)  
[Get training on new frameworks, languages, and technologies](#)  
[Create a private code repo and backlog for your project](#)  
[See how easy it is to get started with cloud services](#)  
[Discover ways to extend and customize the IDE](#)

Ready to Cloud-power your experience?

[Connect to Azure](#) 

### News

#### [Announcing .NET Framework 4.6.2](#)

We are excited to announce the availability of the .NET Framework 4.6.2! Many of the changes are based on your feedback, including those submitted on UserVoi...

**NEW** Thursday, August 4, 2016

#### [Create high quality mobile apps with Ionic & Visual Studio](#)




Are you a web developer building mobile applications today? Are you considering joining the ranks of web developers moving beyond the mobile web to mobil...

**NEW** Thursday, August 4, 2016

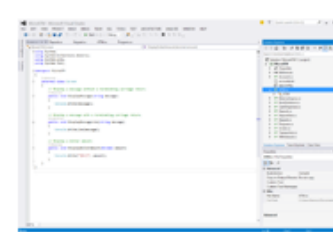
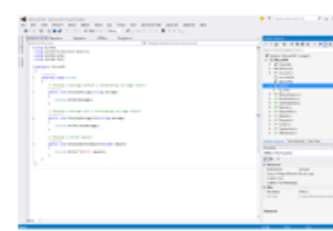
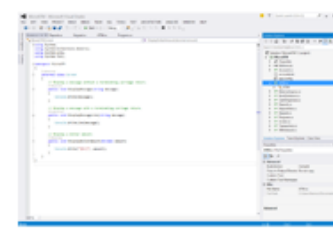
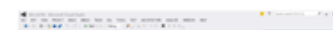
#### [Entity Framework Core 1.1 Plans](#)

Now that Entity Framework Core (EF Core) 1.0 is

## New on Microsoft Platforms

-  [Windows](#)
-  [Microsoft Azure](#)
-  [ASP.NET and Web](#)

## Featured Videos

-  **NEW** IntelliTrace Experience  
12:13
-  **NEW** Windows Presentation Foundation Application Develop...  
15:49
-  **NEW** What's New in C# 6.0  
7:49
-  **NEW** What's New for .NET 2015

### New Project

.NET Framework 4.5.2 Sort by: Default Search Installed Templates (Ctrl+E)

- Recent
- Installed
  - Blank App (Universal Windows) JavaScript
  - Blank App - Web Context (Universal Windows) JavaScript
  - Hosted Web App (Universal Windows) JavaScript**
  - WinJS App (Universal Windows) JavaScript
- Templates
  - Visual C#
  - Visual Basic
  - Visual F#
  - Visual C++
  - SQL Server
  - Python
  - JavaScript
    - Apache Cordova Apps
    - Windows
      - Universal**
  - TypeScript
  - Game
  - Build Accelerator
  - Other Project Types
- Samples
- Online

[Click here to go online and find templates.](#)

Name:

Location:

Solution name:

Create directory for solution  
 Add to Source Control

**Type:** JavaScript

A project for a Universal Windows app with a remote Start Page. To have access to all Universal Windows APIs the URL needs to be added to the Application Content URI Rules.



The properties of the deployment package for your app are contained in the app manifest file. You can use the Manifest Designer to set or modify one or more of the properties.

- Application**
- Visual Assets
- Capabilities
- Declarations
- Content URIs
- Packaging

Use this page to set the properties that identify and describe your app.





Display name:

Start page:

Default language:  [More information](#)

Description:

Supported rotations: An optional setting that indicates the app's orientation preferences.

-  Landscape
-  Portrait
-  Landscape-flipped
-  Portrait-flipped

Lock screen notifications:

Resource group:

**Tile Update:**

Updates the app tile by periodically polling a URI. The URI template can contain "{language}" and "{region}" tokens that will be replaced at runtime to generate the URI to poll.

[More information](#)

Recurrence:

URI Template:

The properties of the deployment package for your app are contained in the app manifest file. You can use the Manifest Designer to set or modify one or more of the properties.

- Application
- Visual Assets
- Capabilities
- Declarations
- Content URIs
- Packaging

Windows Store apps should support displays of different resolutions. Windows provides a simple way to do this via resource loading. This section lists all the assets which are used in the manifest.

[More information](#)

- All Image Assets
  - Tile Images and Logos
    - Square 71x71 Logo
    - Square 150x150 Logo
    - Wide 310x150 Logo
    - Square 310x310 Logo
    - Square 44x44 Logo
  - Store Logo
  - Badge Logo
  - Splash Screen

**Tile:**

Short name:

Show name:  Square 150x150 Logo  
 Wide 310x150 Logo  
 Square 310x310 Logo

Background color:

**Square 150x150 logo:**

Scaled Assets

600 x 600 px	300 x 300 px	150 x 150 px	225 x 225 px	188 x 188 px
Recommended	Recommended	Recommended		

The properties of the deployment package for your app are contained in the app manifest file. You can use the Manifest Designer to set or modify one or more of the properties.

- Application
- Visual Assets
- Capabilities
- Declarations
- Content URIs
- Packaging

Use this page to specify system features or devices that your app can use.

**Capabilities:**

- AllJoyn
- Appointments
- Background Media Playback
- Blocked Chat Messages
- Bluetooth
- Chat Message Access
- Code Generation
- Contacts
- Enterprise Authentication
- Internet (Client & Server)
- Internet (Client)
- Location
- Microphone
- Music Library
- Objects 3D
- Phone Call
- Pictures Library
- Private Networks (Client & Server)
- Proximity
- Remote System

**Description:**

Allows AllJoyn-enabled apps and devices on a network to discover and interact with each other. All apps that access APIs in the Windows.Devices.AllJoyn namespace must use this capability.

[More information](#)



Airhorner - Microsoft Visual Studio

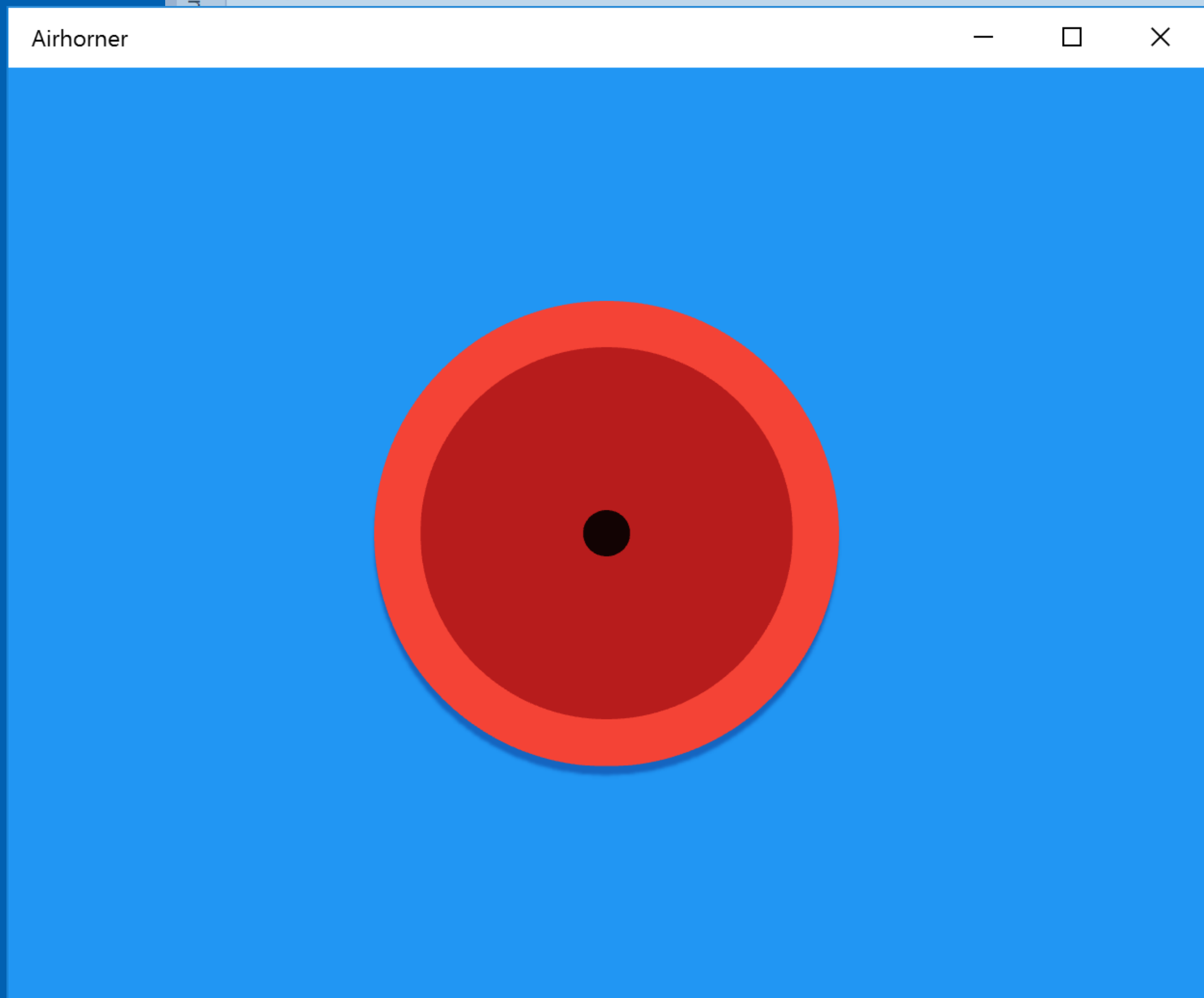
File Edit View Project Build Debug Team Tools Test Analyze Window Help

Quick Launch (Ctrl+Q)

Debug Any CPU Local Machine

package.appxmanifest

The properties of the deployment package for your app are contained in the app manifest file. You can use the Manifest Designer to set or modify one or more of the properties.



Content URIs Packaging

on a network to discover and interact with each other. All apps  
Ujoyn namespace must use this capability.

- Private Networks (Client & Server)
- Proximity
- Remote System



**manifoldjs**

```
npm install -g manifoldjs
```

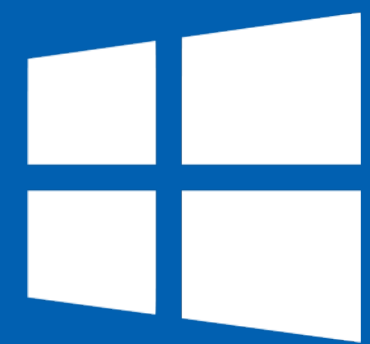
```
manifoldjs https://airhorner.com -d ~/Projects -p windows10
```

```
manifoldjs package ~/Projects/AirHorner/windows10
```

**UNIVERSAL WINDOWS APPS  
HAVE ACCESS TO THE  
UNIVERSAL WINDOWS API**

**DEPLOY ON  
DESKTOP, MOBILE  
AND XBOX ONE**

2014



Universal Windows Platform

**AND MANY MORE...**

**BUT...**



**DEPENDANT ON THIRD PARTIES**

**NOT PART OF THE WEB**





**PROGRESSIVE WEB APPS**

# WEB MANIFEST



index.html

```
<!doctype>  
<html>  
  <head>  
    <title>HTML5test - How well does your browser support HTML5?</title>
```

index.html

```
<!doctype>
<html>
  <head>
    <title>HTML5test - How well does your browser support HTML5?</title>

    <meta name="apple-mobile-web-app-capable" content="yes">
    <meta name="apple-mobile-web-app-status-bar-style" content="black">
```

```
<!doctype>
<html>
  <head>
    <title>HTML5test - How well does your browser support HTML5?</title>

    <meta name="apple-mobile-web-app-capable" content="yes">
    <meta name="apple-mobile-web-app-status-bar-style" content="black">

    <link rel="apple-touch-icon" sizes="57x57" href="/apple-icon-57x57.png">
    <link rel="apple-touch-icon" sizes="114x114" href="/apple-icon-114x114.png">
    <link rel="apple-touch-icon" sizes="72x72" href="/apple-icon-72x72.png">
    <link rel="apple-touch-icon" sizes="144x144" href="/apple-icon-144x144.png">
    <link rel="apple-touch-icon" sizes="60x60" href="/apple-icon-60x60.png">
    <link rel="apple-touch-icon" sizes="120x120" href="/apple-icon-120x120.png">
    <link rel="apple-touch-icon" sizes="76x76" href="/apple-icon-76x76.png">
    <link rel="apple-touch-icon" sizes="152x152" href="/apple-icon-152x152.png">
```



index.html

```
<link rel="apple-touch-icon" sizes="57x57" href="/apple-icon-57x57.png">  
<link rel="apple-touch-icon" sizes="114x114" href="/apple-icon-114x114.png">  
<link rel="apple-touch-icon" sizes="72x72" href="/apple-icon-72x72.png">  
<link rel="apple-touch-icon" sizes="144x144" href="/apple-icon-144x144.png">  
<link rel="apple-touch-icon" sizes="60x60" href="/apple-icon-60x60.png">  
<link rel="apple-touch-icon" sizes="120x120" href="/apple-icon-120x120.png">  
<link rel="apple-touch-icon" sizes="76x76" href="/apple-icon-76x76.png">  
<link rel="apple-touch-icon" sizes="152x152" href="/apple-icon-152x152.png">
```

index.html

```
<link rel="apple-touch-icon" sizes="57x57" href="/apple-icon-57x57.png">
<link rel="apple-touch-icon" sizes="114x114" href="/apple-icon-114x114.png">
<link rel="apple-touch-icon" sizes="72x72" href="/apple-icon-72x72.png">
<link rel="apple-touch-icon" sizes="144x144" href="/apple-icon-144x144.png">
<link rel="apple-touch-icon" sizes="60x60" href="/apple-icon-60x60.png">
<link rel="apple-touch-icon" sizes="120x120" href="/apple-icon-120x120.png">
<link rel="apple-touch-icon" sizes="76x76" href="/apple-icon-76x76.png">
<link rel="apple-touch-icon" sizes="152x152" href="/apple-icon-152x152.png">

<meta name="mobile-web-app-capable" content="yes">
<meta name="theme-color" content="#0092bf">
```

index.html

```
<link rel="apple-touch-icon" sizes="57x57" href="/apple-icon-57x57.png">
<link rel="apple-touch-icon" sizes="114x114" href="/apple-icon-114x114.png">
<link rel="apple-touch-icon" sizes="72x72" href="/apple-icon-72x72.png">
<link rel="apple-touch-icon" sizes="144x144" href="/apple-icon-144x144.png">
<link rel="apple-touch-icon" sizes="60x60" href="/apple-icon-60x60.png">
<link rel="apple-touch-icon" sizes="120x120" href="/apple-icon-120x120.png">
<link rel="apple-touch-icon" sizes="76x76" href="/apple-icon-76x76.png">
<link rel="apple-touch-icon" sizes="152x152" href="/apple-icon-152x152.png">

<meta name="mobile-web-app-capable" content="yes">
<meta name="theme-color" content="#0092bf">

<link rel="icon" type="image/png" href="/icon-16x16.png" sizes="16x16">
<link rel="icon" type="image/png" href="/icon-32x32.png" sizes="32x32">
<link rel="icon" type="image/png" href="/icon-96x96.png" sizes="96x96">
<link rel="icon" type="image/png" href="/icon-160x160.png" sizes="160x160">
<link rel="icon" type="image/png" href="/icon-196x196.png" sizes="196x196">
```

index.html

```
<meta name="mobile-web-app-capable" content="yes">
<meta name="theme-color" content="#0092bf">

<link rel="icon" type="image/png" href="/icon-16x16.png" sizes="16x16">
<link rel="icon" type="image/png" href="/icon-32x32.png" sizes="32x32">
<link rel="icon" type="image/png" href="/icon-96x96.png" sizes="96x96">
<link rel="icon" type="image/png" href="/icon-160x160.png" sizes="160x160">
<link rel="icon" type="image/png" href="/icon-196x196.png" sizes="196x196">
```

index.html

```
<meta name="mobile-web-app-capable" content="yes">
<meta name="theme-color" content="#0092bf">

<link rel="icon" type="image/png" href="/icon-16x16.png" sizes="16x16">
<link rel="icon" type="image/png" href="/icon-32x32.png" sizes="32x32">
<link rel="icon" type="image/png" href="/icon-96x96.png" sizes="96x96">
<link rel="icon" type="image/png" href="/icon-160x160.png" sizes="160x160">
<link rel="icon" type="image/png" href="/icon-196x196.png" sizes="196x196">

<meta name="application-name" content="HTML5test">
<meta name="msapplication-TileColor" content="#0092bf">
<meta name="msapplication-TileImage" content="/mstile-144x144.png">
```

**PLACE EVERYTHING  
IN A SEPARATE JSON FILE**

manifest.json

```
{
  "name": "HTML5test",
  "theme_color": "#0092bf",
  "display": "standalone",

  "icons": [
    {
      "src": "/icon-192x192.png",
      "sizes": "192x192",
      "type": "image/png"
    },
    {
      "src": "/icon-256x256.png",
      "sizes": "256x256",
      "type": "image/png"
    },
    {
      "src": "/icon-512x512.png",
      "sizes": "512x512",
      "type": "image/png"
    }
  ]
}
```

**APP NAME**

**ICONS**

**THEME COLORS**

**SETTINGS**



# LAUNCH FULL SCREEN

```
{  
  "display": "standalone"  
}
```

# LIMIT SCREEN ORIENTATION

```
{  
  "orientation": "portrait"  
}
```

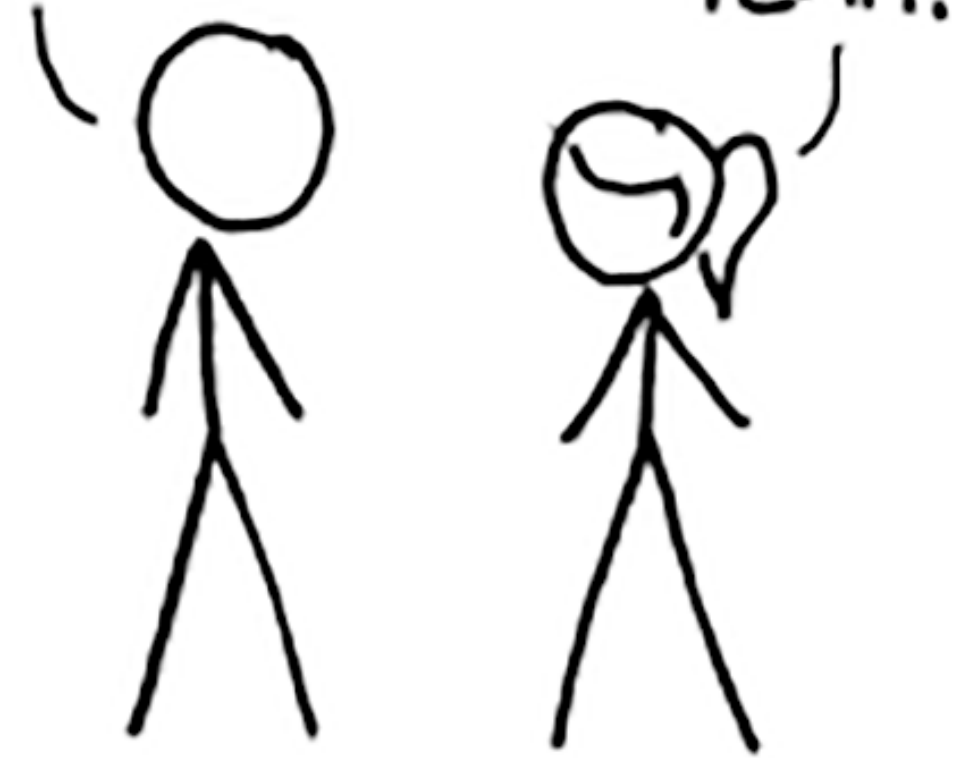
# START A DIFFERENT URL

```
{  
  "start_url": "standalone.html"  
}
```

HOW STANDARDS PROLIFERATE:  
(SEE: A/C CHARGERS, CHARACTER ENCODINGS, INSTANT MESSAGING, ETC)

SITUATION:  
THERE ARE  
14 COMPETING  
STANDARDS.

14?! RIDICULOUS!  
WE NEED TO DEVELOP  
ONE UNIVERSAL STANDARD  
THAT COVERS EVERYONE'S  
USE CASES.



SOON:

SITUATION:  
THERE ARE  
15 COMPETING  
STANDARDS.

```
<!doctype>
<html>
  <head>
    <title>HTML5test - How well does your browser support HTML5?</title>

    <meta name="apple-mobile-web-app-capable" content="yes">
    <meta name="apple-mobile-web-app-status-bar-style" content="black">

    <link rel="apple-touch-icon" sizes="57x57" href="/apple-icon-57x57.png">
    <link rel="apple-touch-icon" sizes="114x114" href="/apple-icon-114x114.png">
    <link rel="apple-touch-icon" sizes="72x72" href="/apple-icon-72x72.png">
    <link rel="apple-touch-icon" sizes="144x144" href="/apple-icon-144x144.png">
    <link rel="apple-touch-icon" sizes="60x60" href="/apple-icon-60x60.png">
    <link rel="apple-touch-icon" sizes="120x120" href="/apple-icon-120x120.png">
    <link rel="apple-touch-icon" sizes="76x76" href="/apple-icon-76x76.png">
    <link rel="apple-touch-icon" sizes="152x152" href="/apple-icon-152x152.png">

    <meta name="mobile-web-app-capable" content="yes">
    <meta name="theme-color" content="#0092bf">

    <link rel="icon" type="image/png" href="/icon-16x16.png" sizes="16x16">
```

index.html

```
<meta name="mobile-web-app-capable" content="yes">
<meta name="theme-color" content="#0092bf">

<link rel="icon" type="image/png" href="/icon-16x16.png" sizes="16x16">
<link rel="icon" type="image/png" href="/icon-32x32.png" sizes="32x32">
<link rel="icon" type="image/png" href="/icon-96x96.png" sizes="96x96">
<link rel="icon" type="image/png" href="/icon-160x160.png" sizes="160x160">
<link rel="icon" type="image/png" href="/icon-196x196.png" sizes="196x196">

<meta name="application-name" content="HTML5test">
<meta name="msapplication-TileColor" content="#0092bf">
<meta name="msapplication-TileImage" content="/mstile-144x144.png">
```

index.html

```
<meta name="mobile-web-app-capable" content="yes">
<meta name="theme-color" content="#0092bf">

<link rel="icon" type="image/png" href="/icon-16x16.png" sizes="16x16">
<link rel="icon" type="image/png" href="/icon-32x32.png" sizes="32x32">
<link rel="icon" type="image/png" href="/icon-96x96.png" sizes="96x96">
<link rel="icon" type="image/png" href="/icon-160x160.png" sizes="160x160">
<link rel="icon" type="image/png" href="/icon-196x196.png" sizes="196x196">

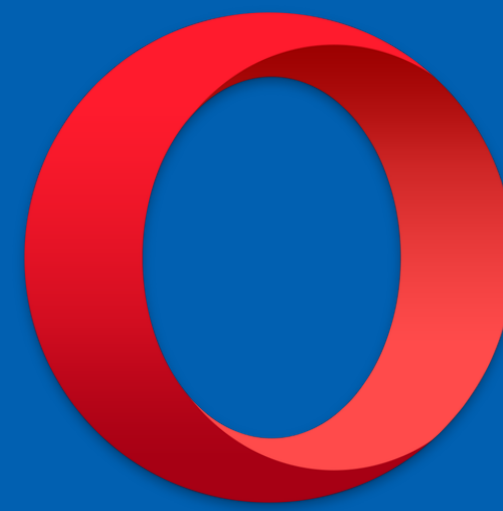
<meta name="application-name" content="HTML5test">
<meta name="msapplication-TileColor" content="#0092bf">
<meta name="msapplication-TileImage" content="/mstile-144x144.png">

<link rel="manifest" href="/manifest.json">
```

# BROWSER SUPPORT



Chrome 39



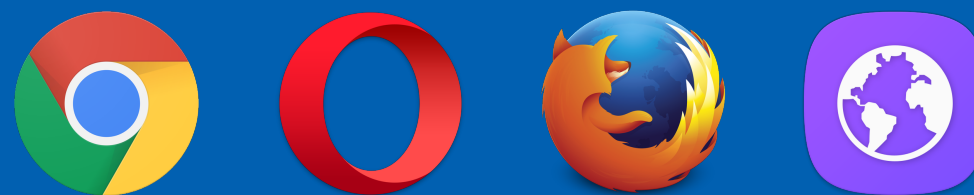
Opera 32



# DEVICE API'S



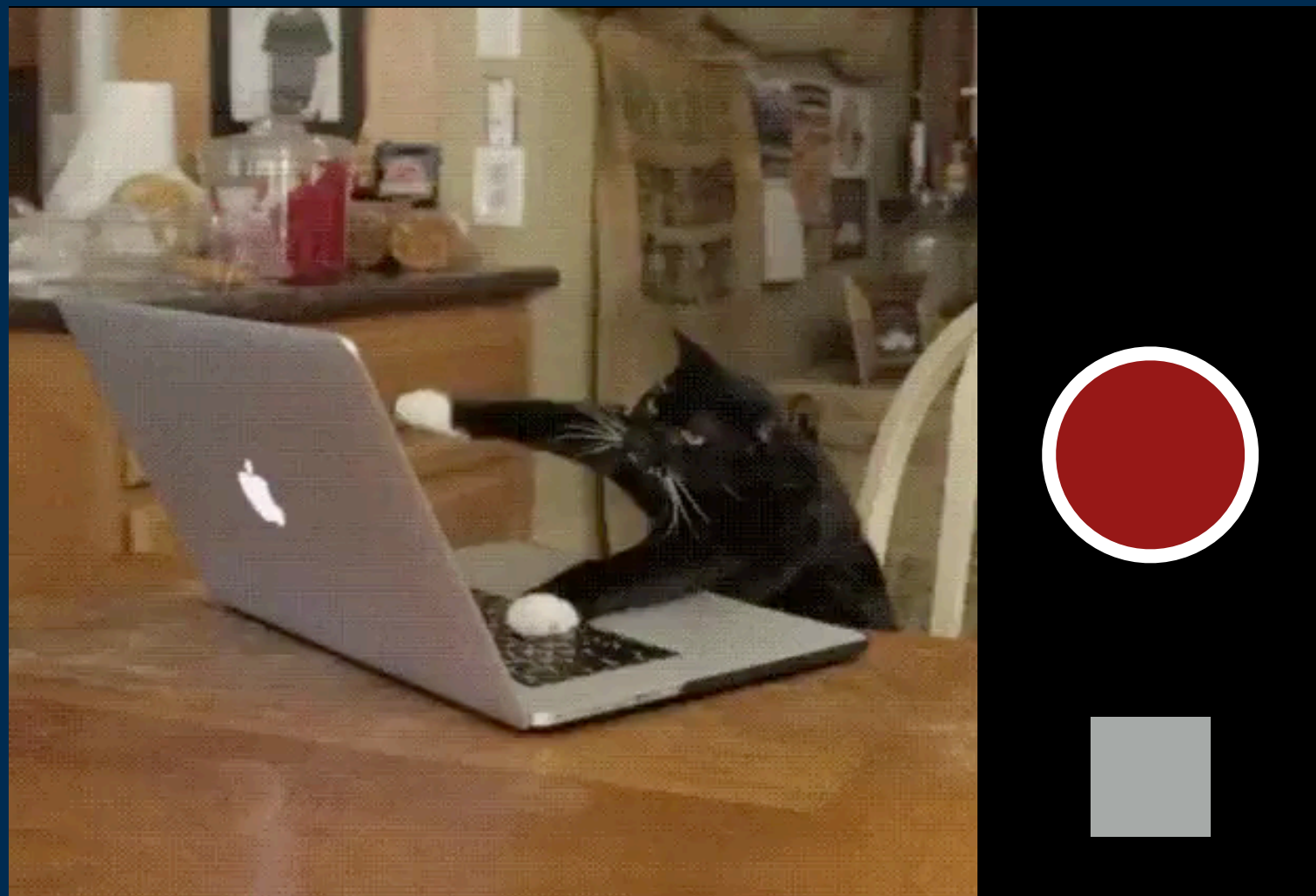
# VIBRATION



```
navigator.vibrate(200);
```

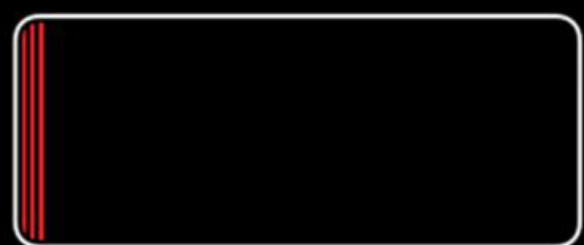
```
navigator.vibrate([100, 200, 200, 200, 500]);
```

# CAMERA & MICROPHONE



```
navigator.getUserMedia(  
  {  
    audio: true,  
    video: { width: 1280, height: 720 }  
  },  
  
  function(stream) {  
  },  
  
  function(err) {  
  }  
});
```

# BATTERY



```
navigator.getBattery().then(function(battery) {  
  
    battery.addEventListener('chargingchange', function() {  
        console.log(battery.charging);  
    });  
  
    battery.addEventListener('levelchange', function() {  
        console.log(battery.level);  
    });  
  
});
```

**GEOLOCATION**



**DEVICE MOTION**



**DEVICE ORIENTATION**



**AMBIENT LIGHT**



**BLUETOOTH**



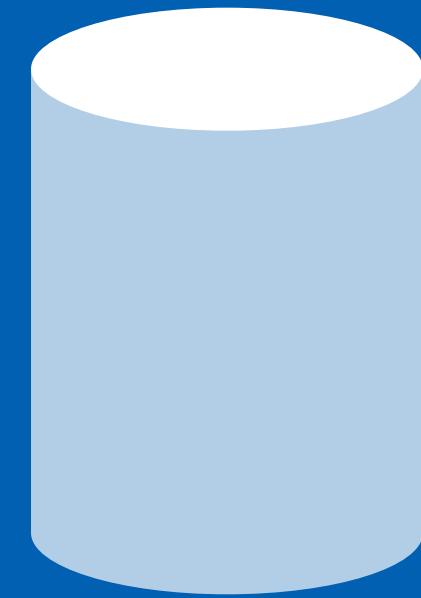
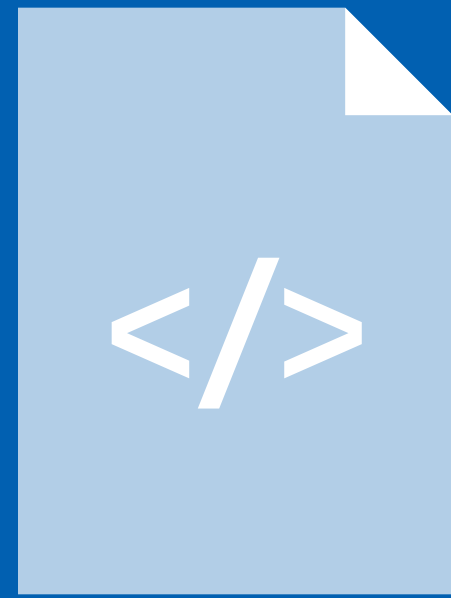
# SERVICE WORKERS



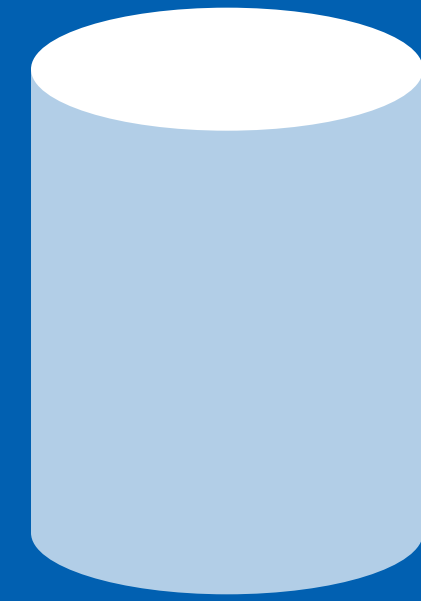
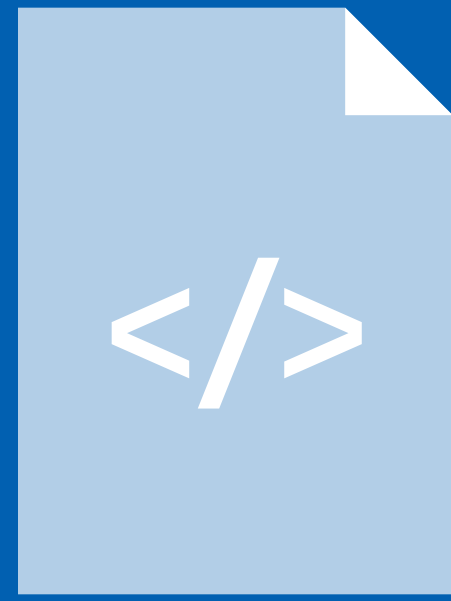
“ Application Cache is a Douchebag!

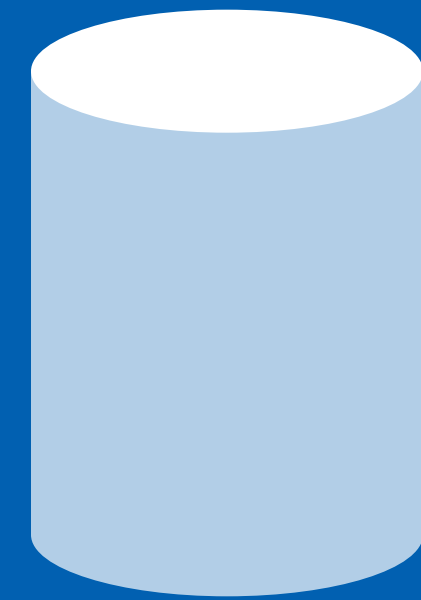
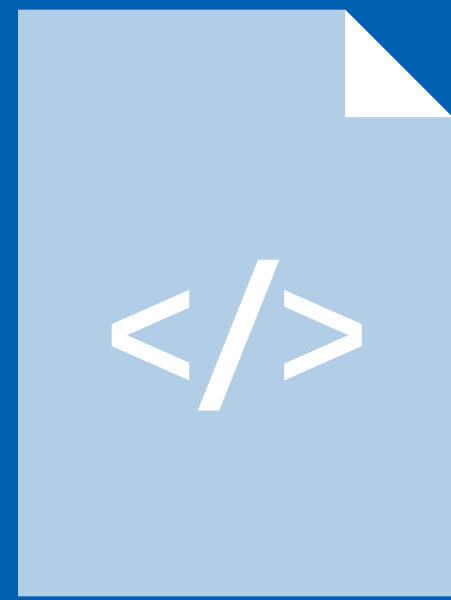


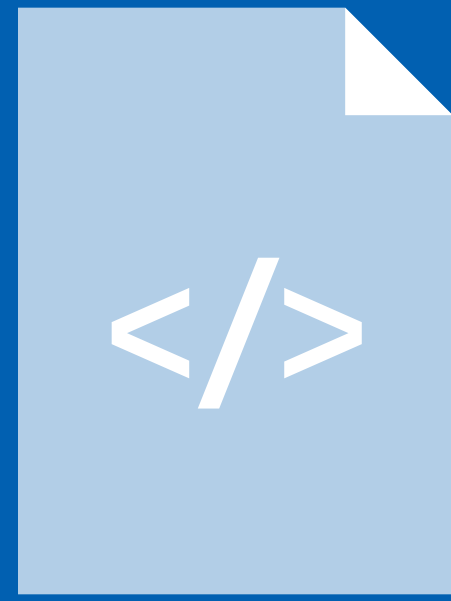
— Jake Archibald

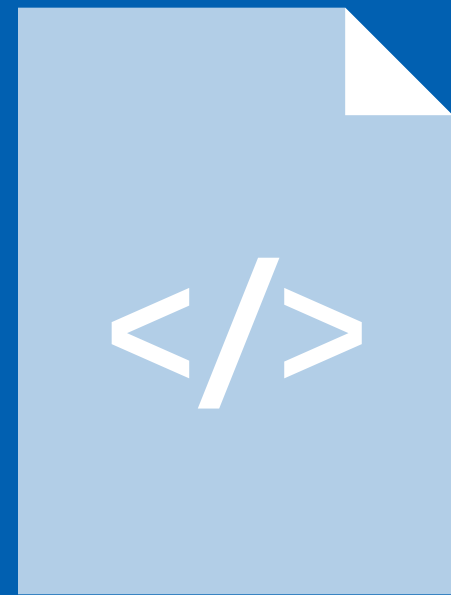




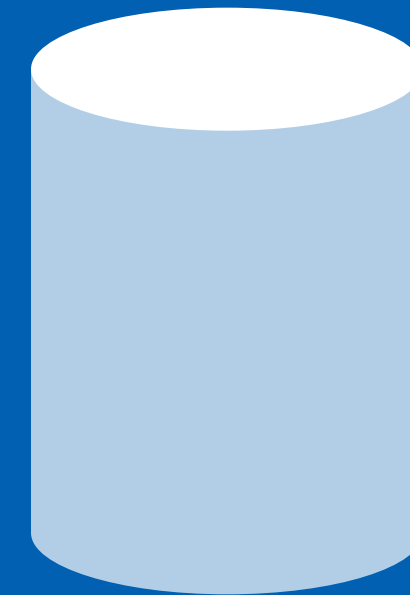


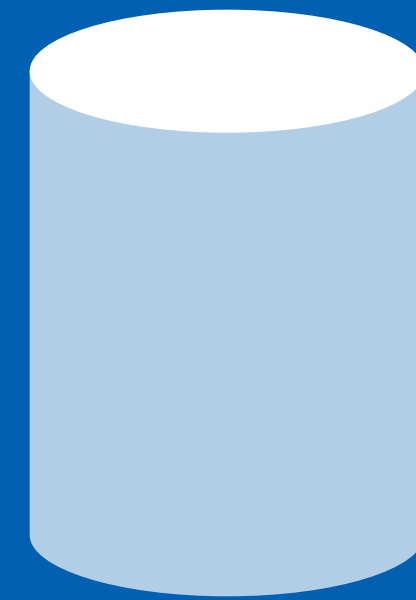
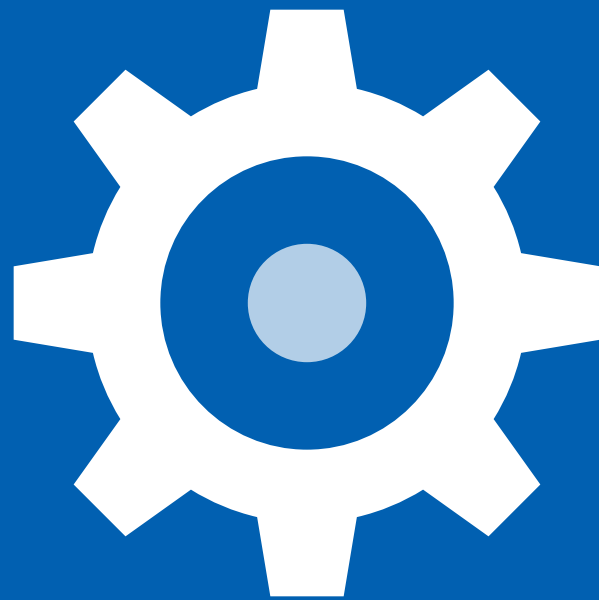
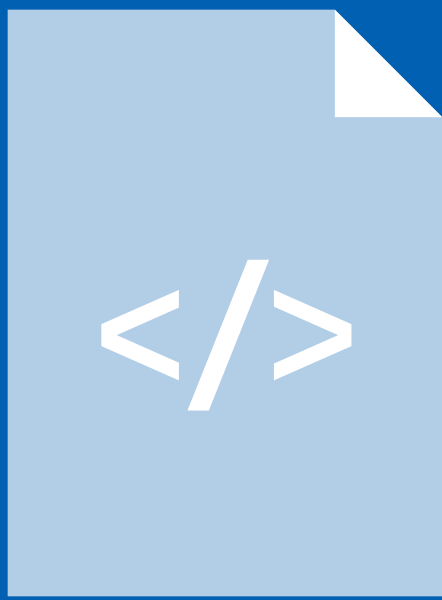


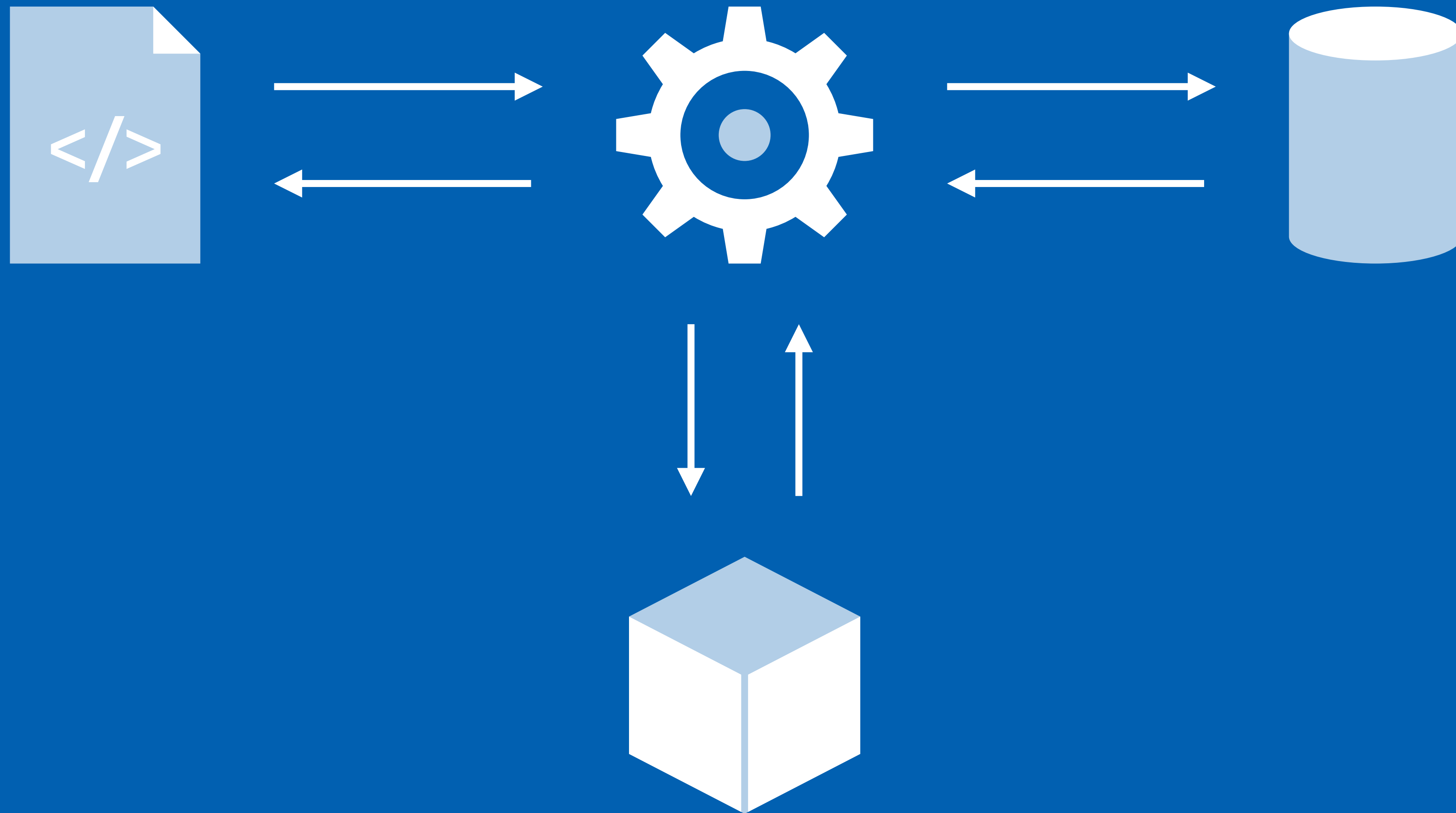


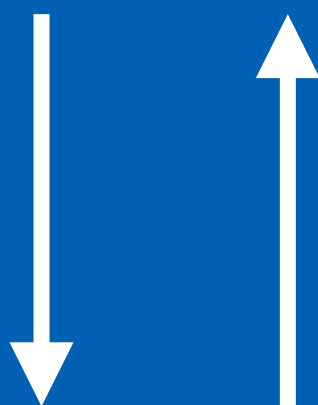
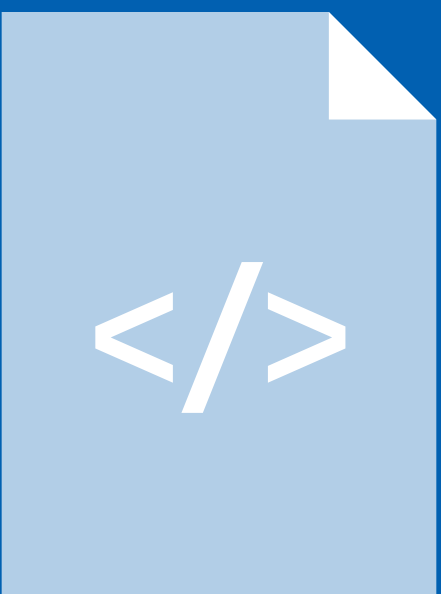


```
if ('serviceWorker' in navigator) {  
  navigator.serviceWorker.register('/sw.js');  
}
```









**THE SERVICE WORKER RUNS  
JAVASCRIPT CODE :-)**



sw.js

```
self.addEventListener('install', function(event) {  
    // Perform install steps  
});
```

sw.js

```
self.addEventListener('install', function(event) {  
  event.waitUntil(  
    caches.open('v1').then(function(cache) {  
      return cache.addAll([  
        '/index.html',  
        '/styles/main.css',  
        '/scripts/main.js'  
      ]);  
    })  
  );  
});
```



sw.js

```
});  
});
```



sw.js

```
    );  
  });  
  
  self.addEventListener('fetch', function(event) {  
    // Intercept network requests  
  });
```

sw.js

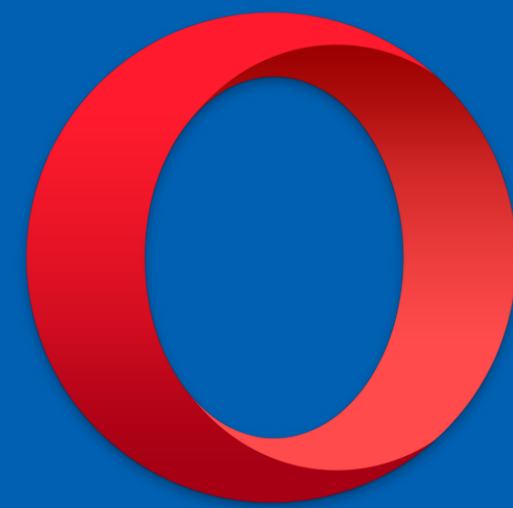
```
    );  
  });  
  
  self.addEventListener('fetch', function(event) {  
    event.respondWith(  
      caches.match(event.request)  
        .then(function(response) {  
          if (response) {  
            return response;  
          }  
  
          return fetch(event.request);  
        })  
    );  
  });  
});
```

**THE SERVICE WORKER IS  
INDEPENDENT OF YOUR WEBPAGE**

## BROWSER SUPPORT



Chrome 40



Opera 27



Firefox 44



Samsung 4



Edge  
(behind flag)

# PUSH NOTIFICATIONS



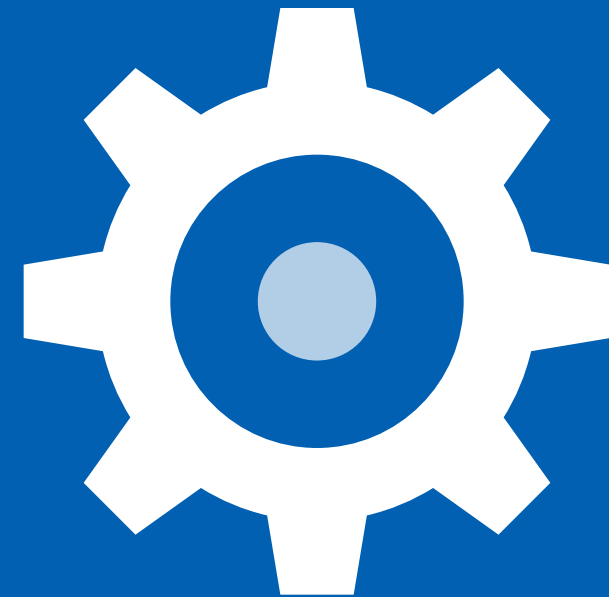
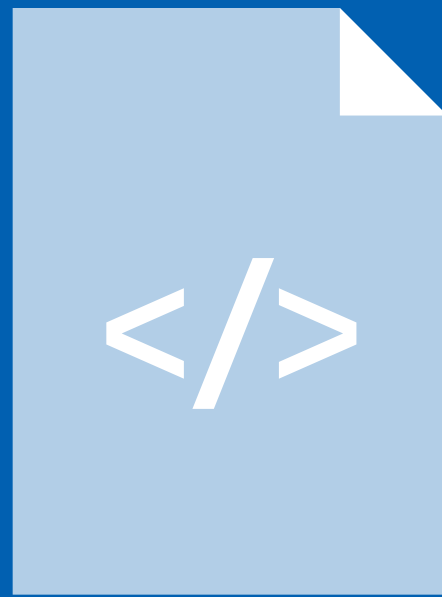


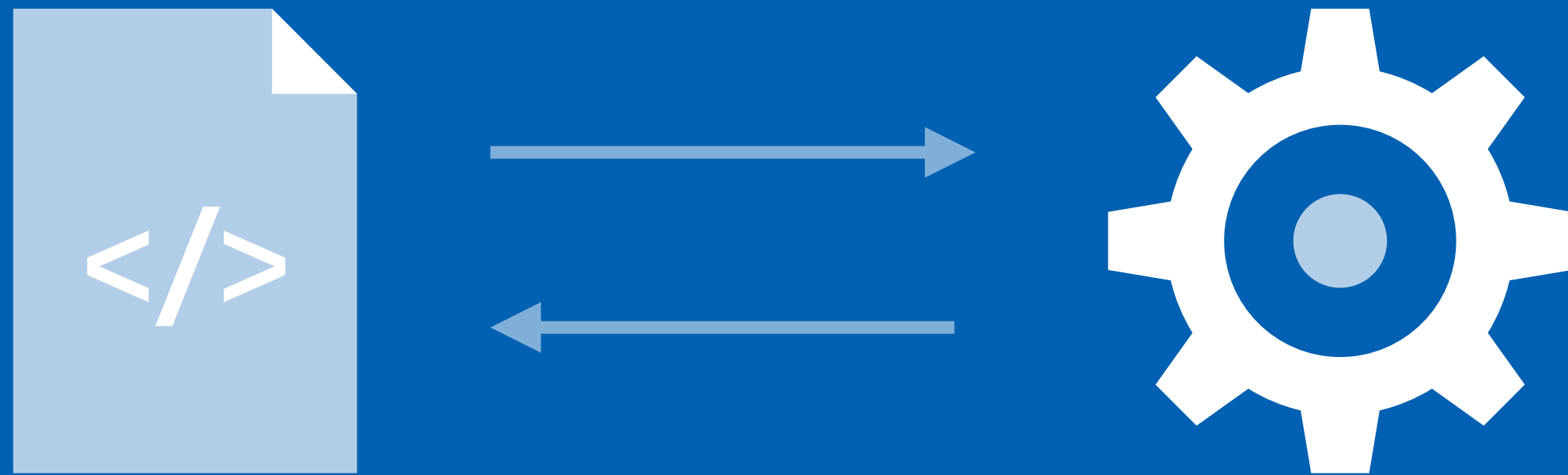
**WEB PUSH  
API**

**WEB PUSH  
PROTOCOL**

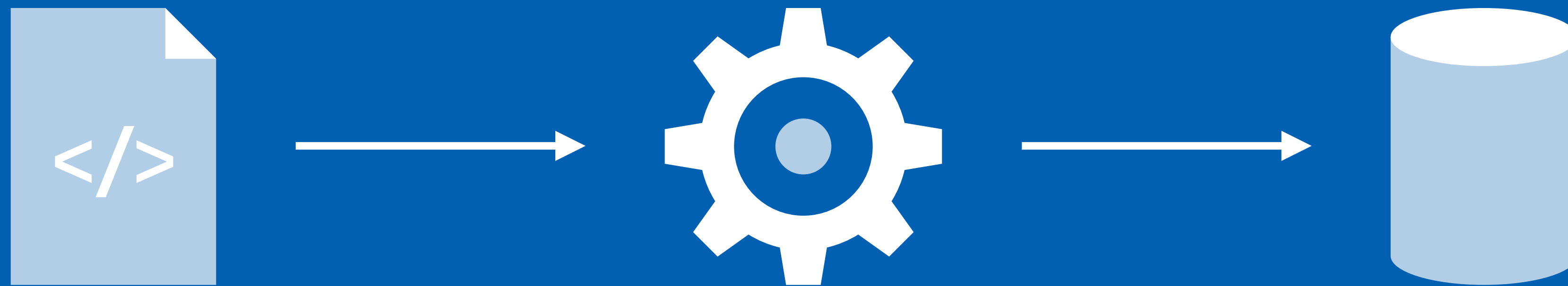
**WEB  
NOTIFICATIONS**

**SERVICE  
WORKERS**

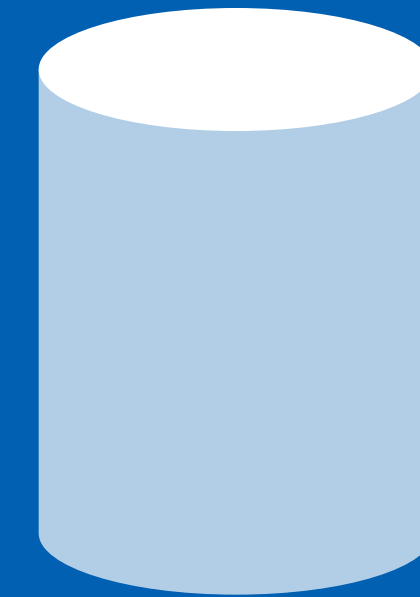




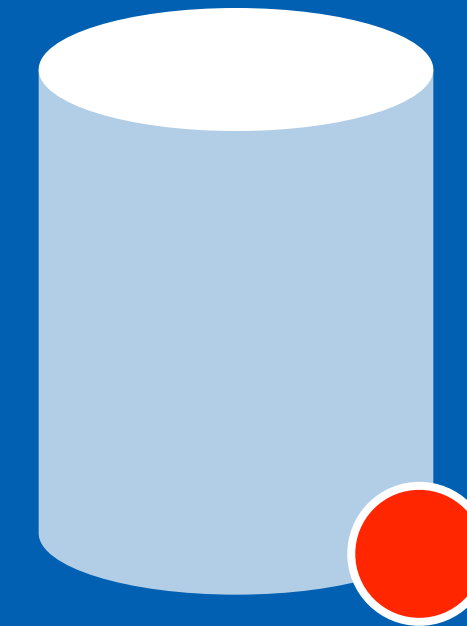
```
navigator.serviceWorker.ready.then(function(sw) {  
  sw.pushManager.subscribe().then(function(subscription) {  
    // Send subscription to server  
  })  
})
```



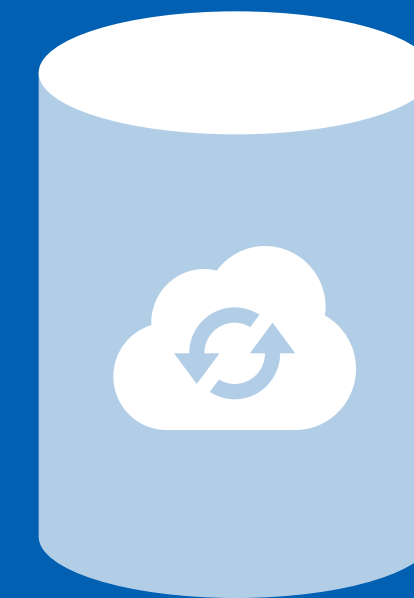
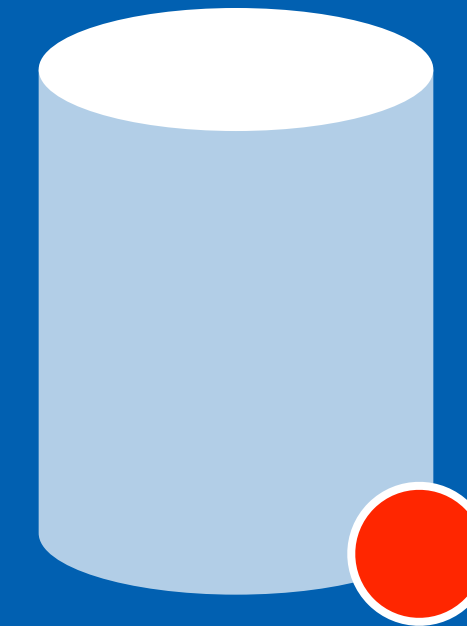
Send the subscription data to our server,  
including the URL of the push server



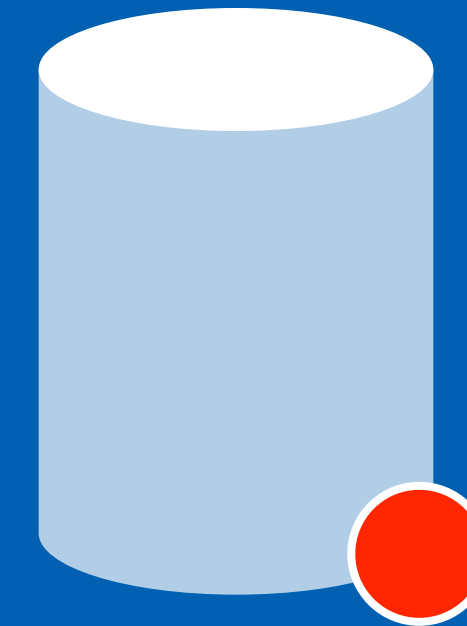
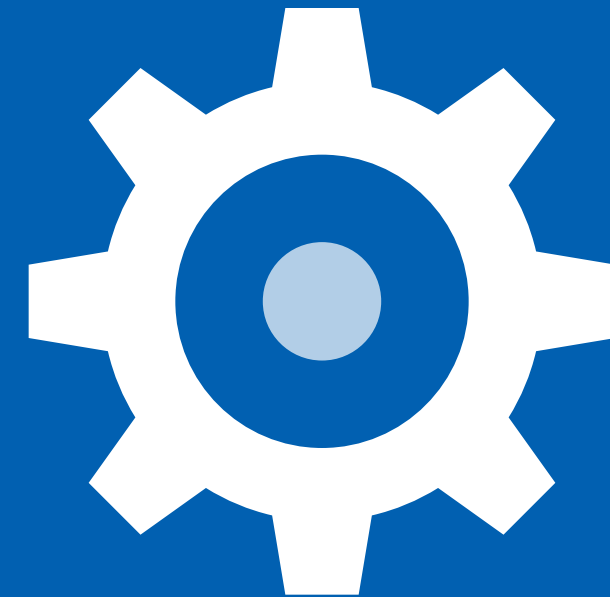
The webpage is closed and  
the service worker is sleeping



The server has new  
information for the user



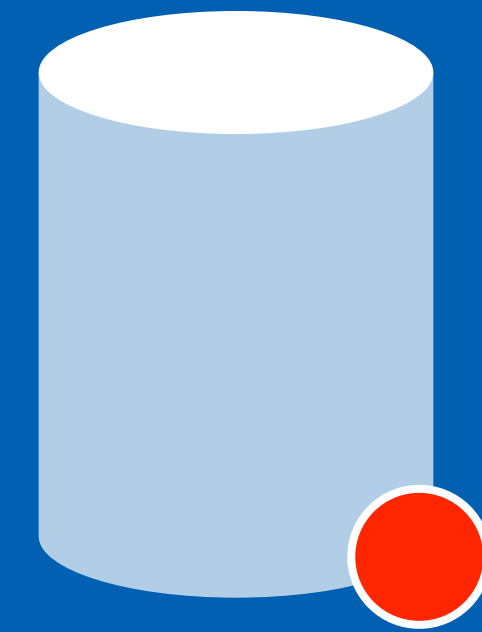
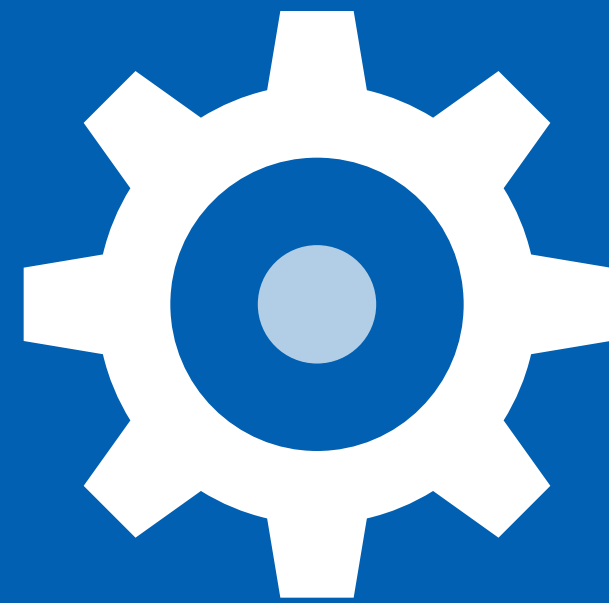
The server sends a message to the push server using the Web Push protocol



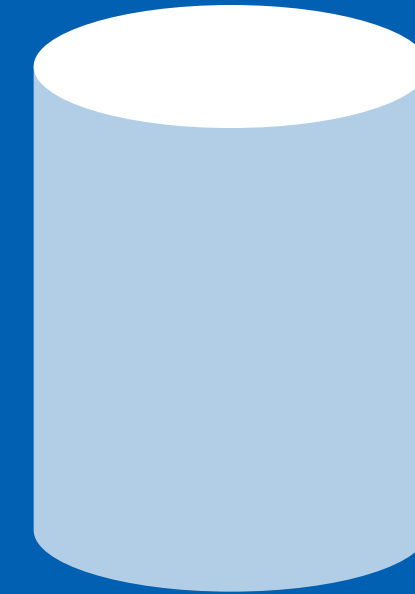
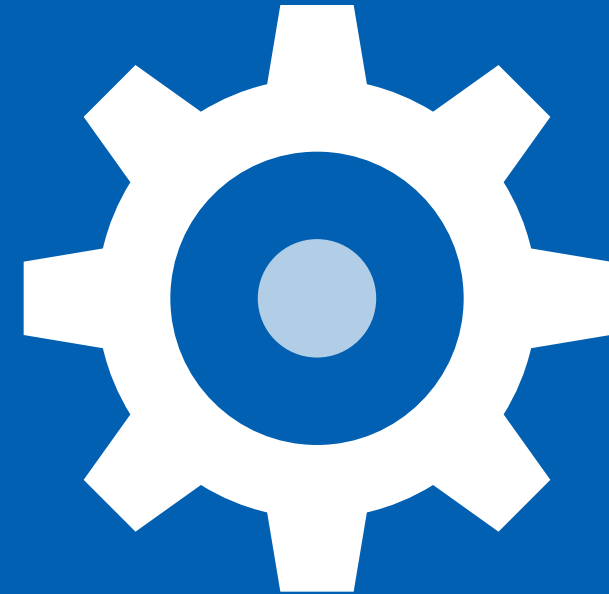
The push server wakes up  
the service worker



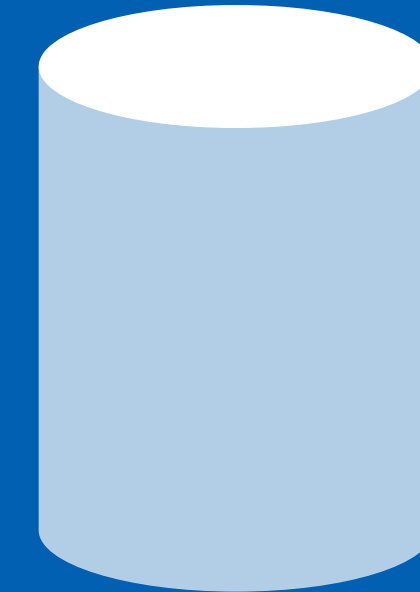
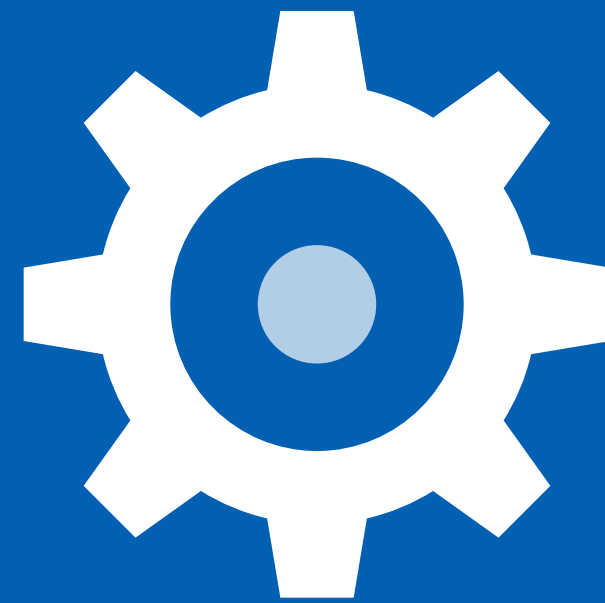




```
self.addEventListener('push', function(event) {  
    // We received a push message  
});
```

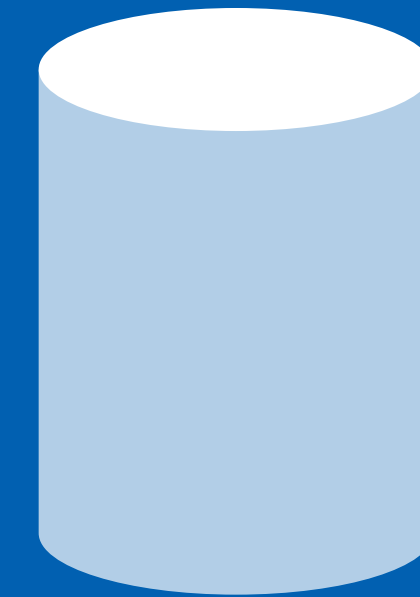


(optional)



```
self.registration.showNotification('Attention!', {  
  body: 'Push message received',  
  icon: 'icon.png'  
});
```

(optional)

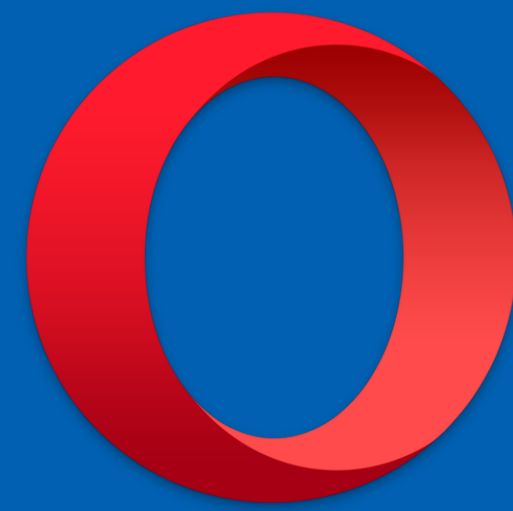


The webpage is still closed and  
the service worker is sleeping again

## BROWSER SUPPORT



Chrome 42



Opera 30



Firefox 44



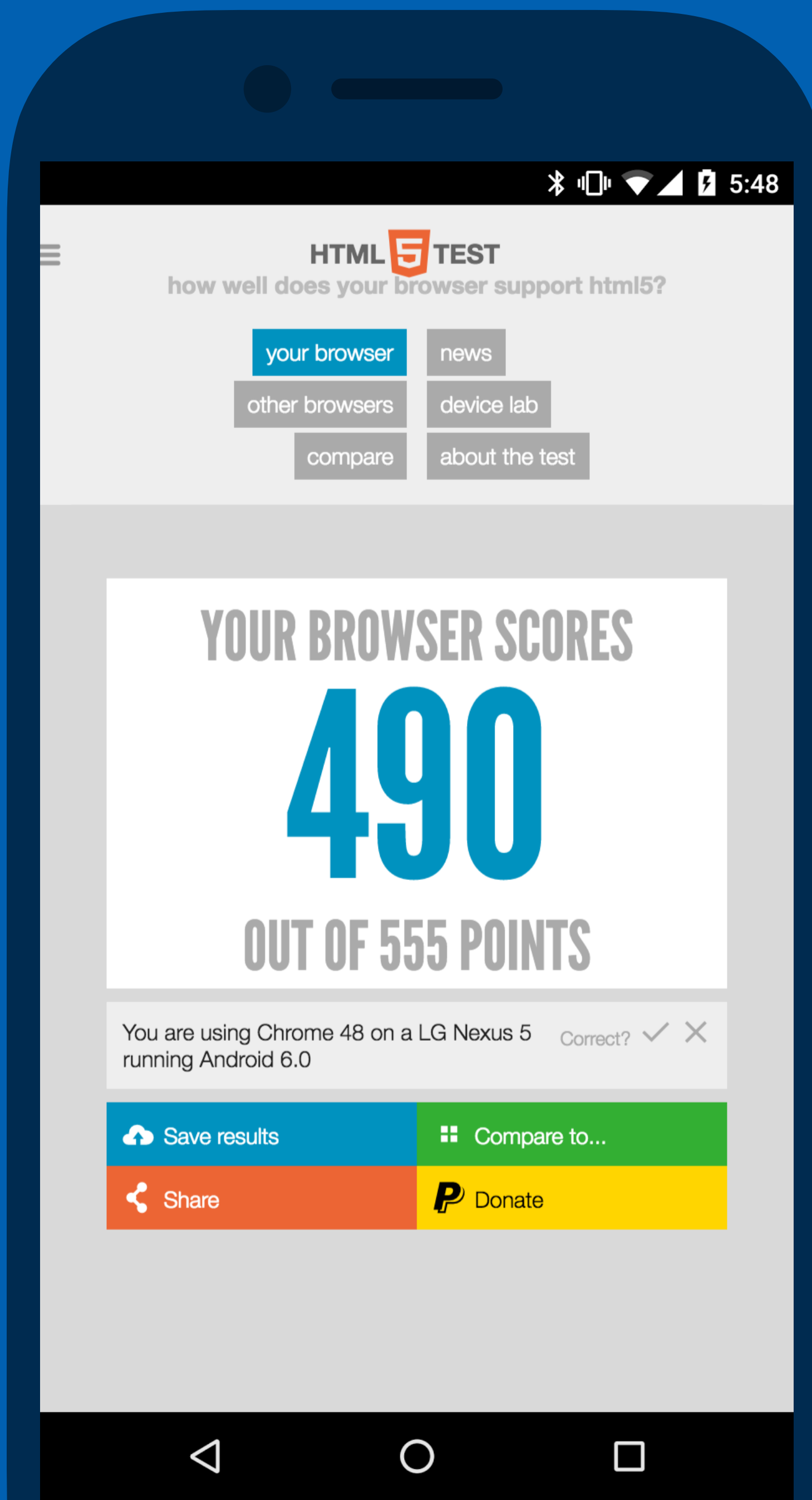
Samsung 4



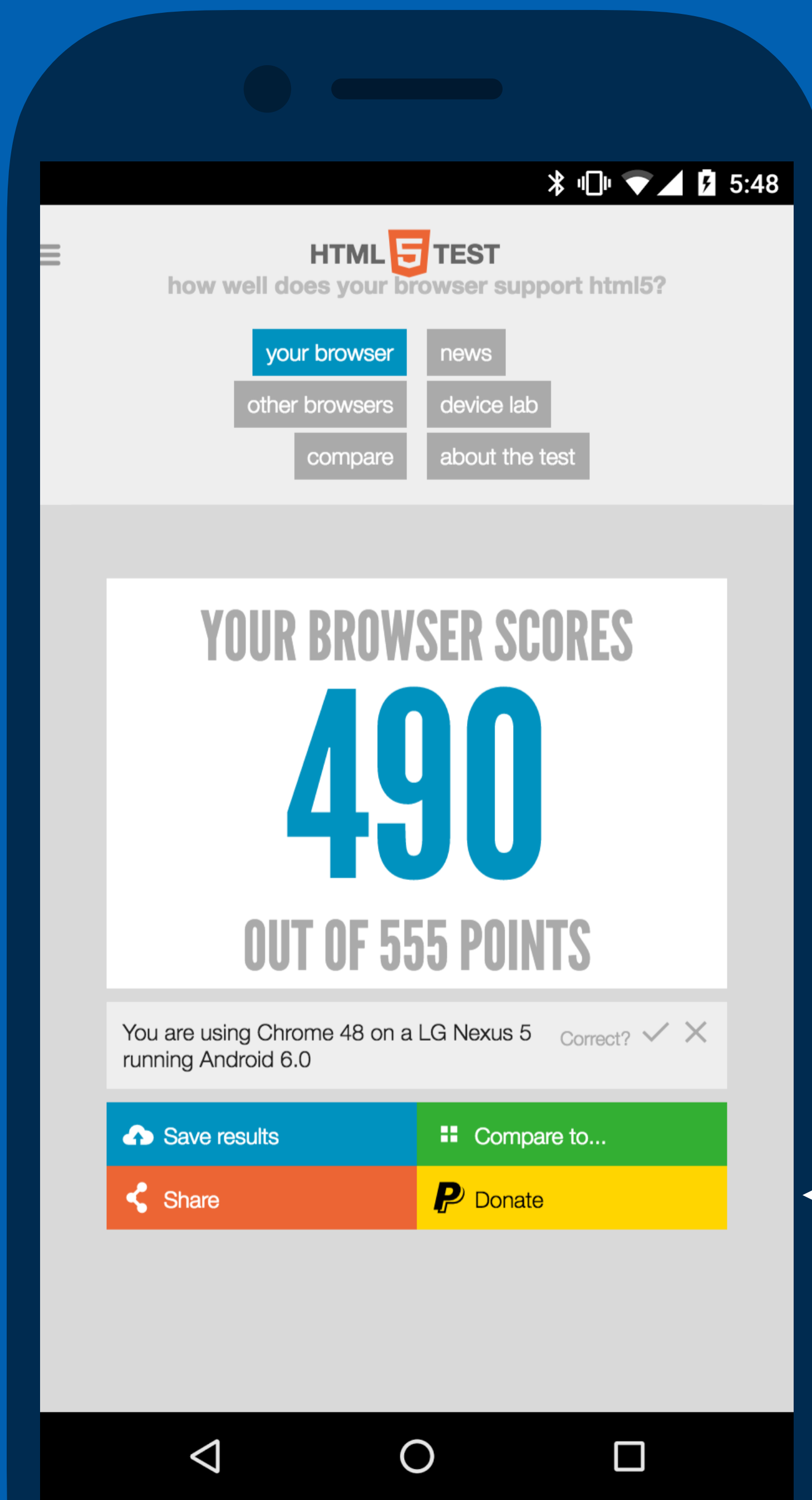
Edge  
(behind flag)

# WEB PAYMENTS



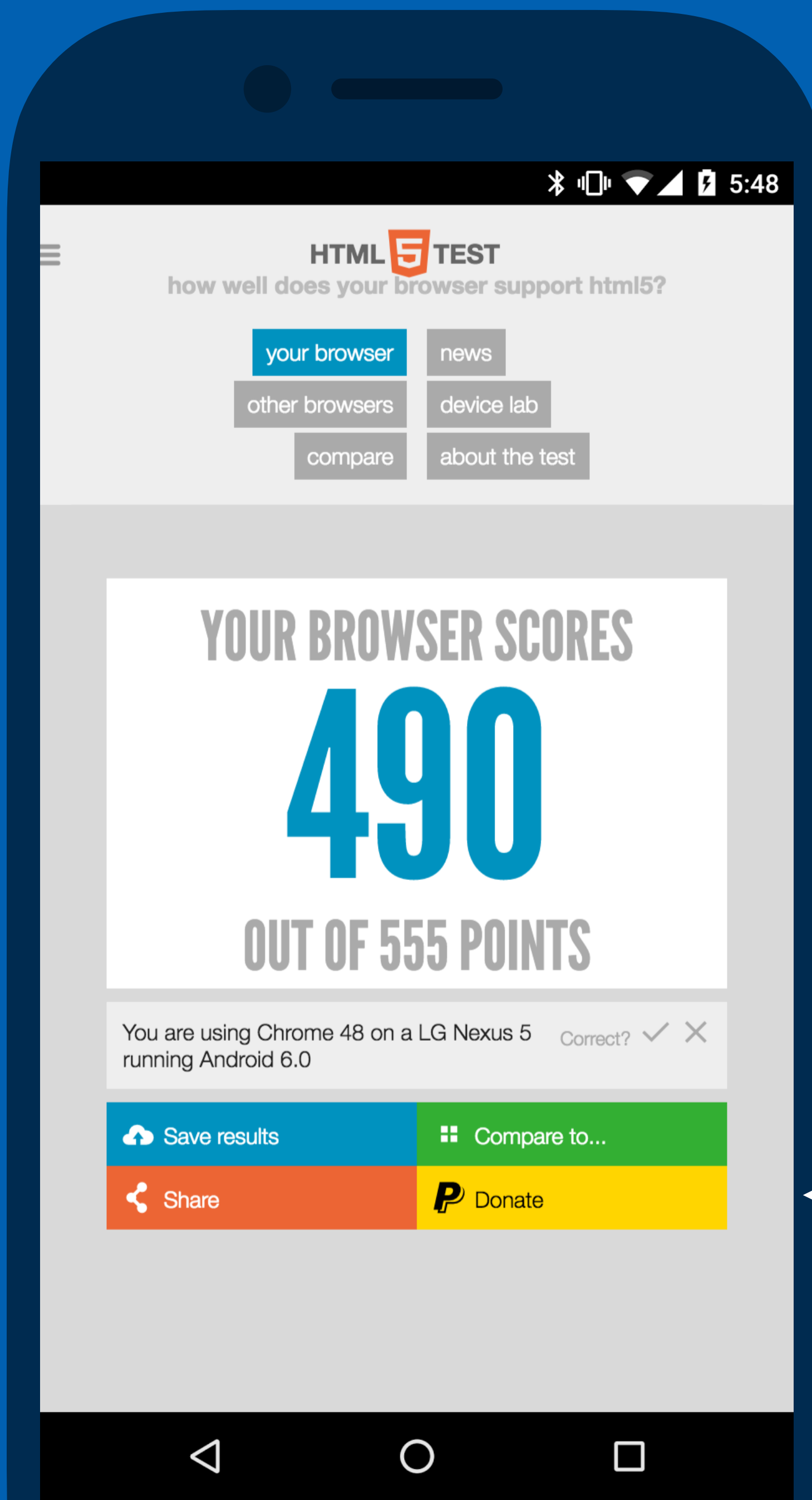


Start payment process by clicking a button in your app

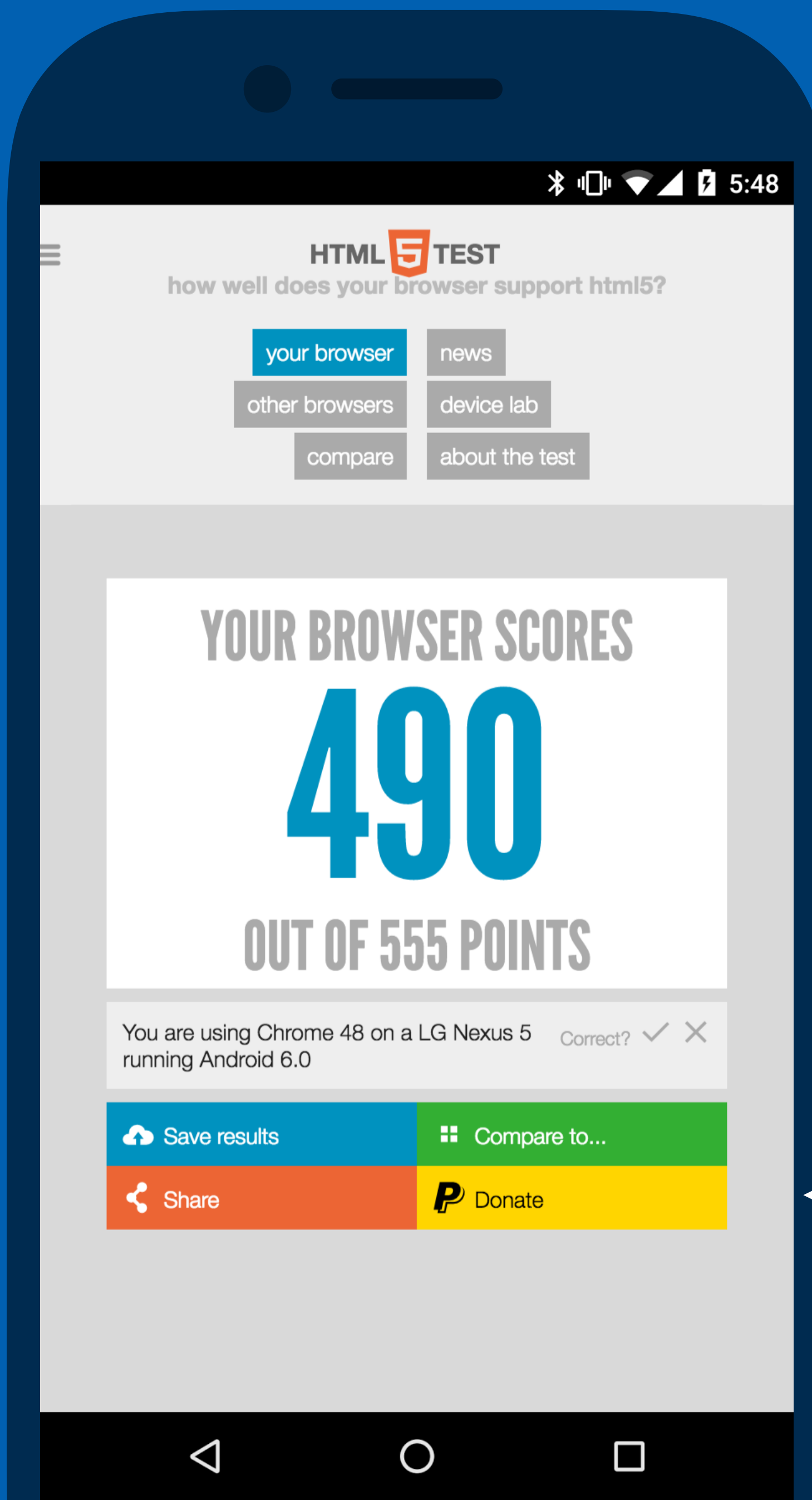


```
var methodData = [  
  {  
    supportedMethods: ["visa", "mastercard"]  
  }  
];
```

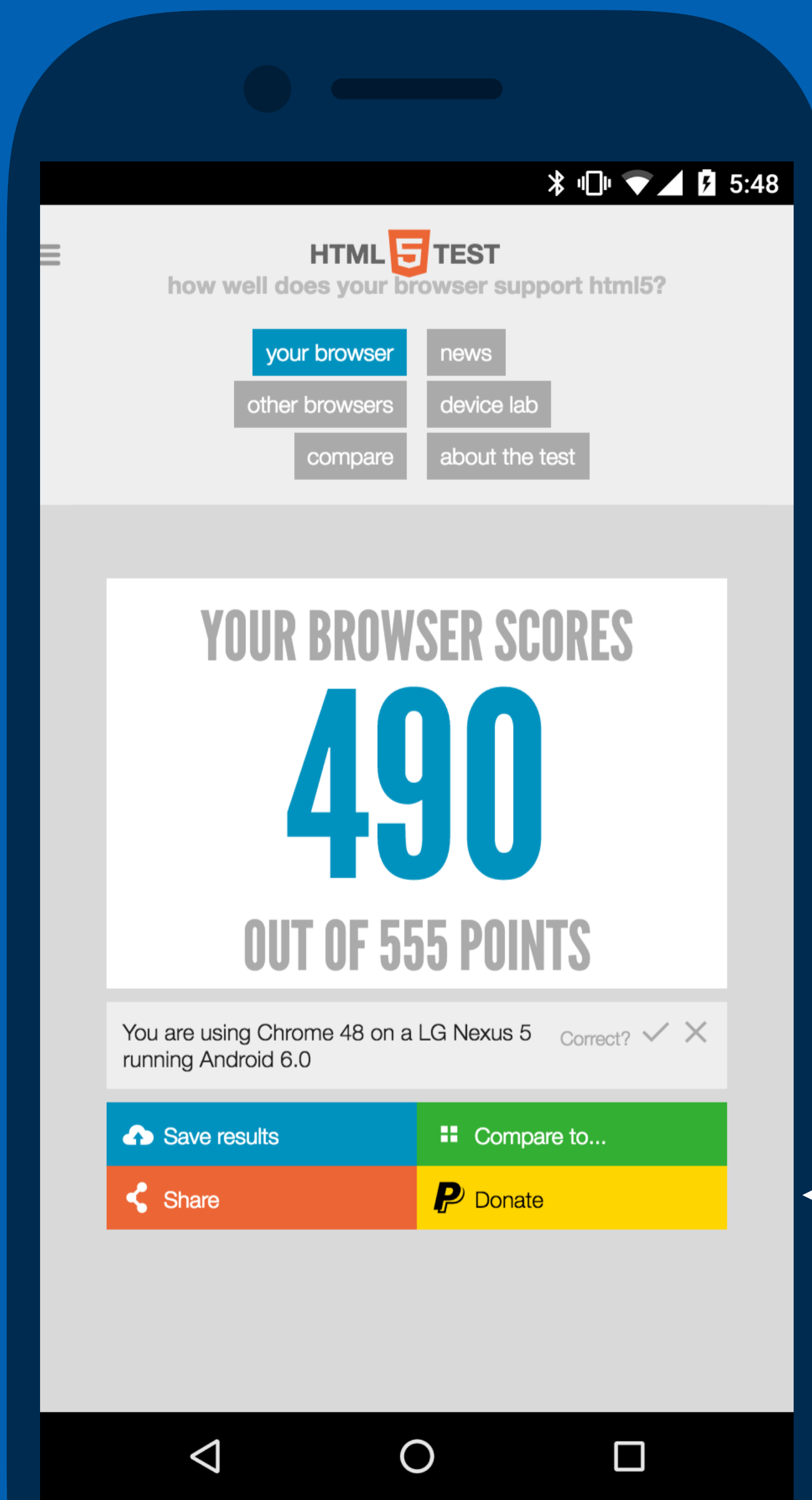




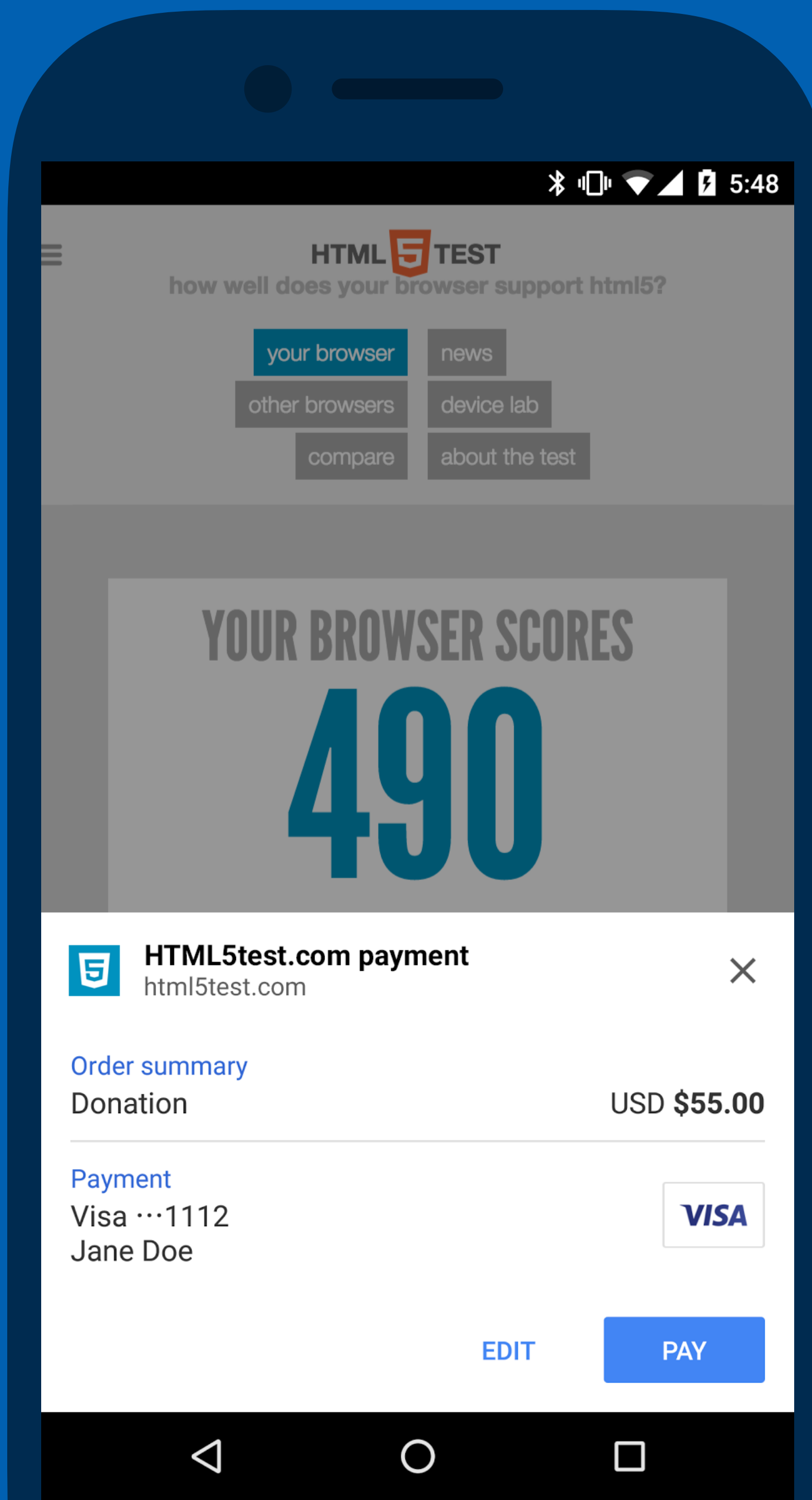
```
var details = {
  displayItems: [
    {
      label: "Donation",
      amount: { currency: "USD", value : "55.00" }
    }
  ],
  total: {
    label: "Total",
    amount: { currency: "USD", value : "55.00" }
  }
};
```



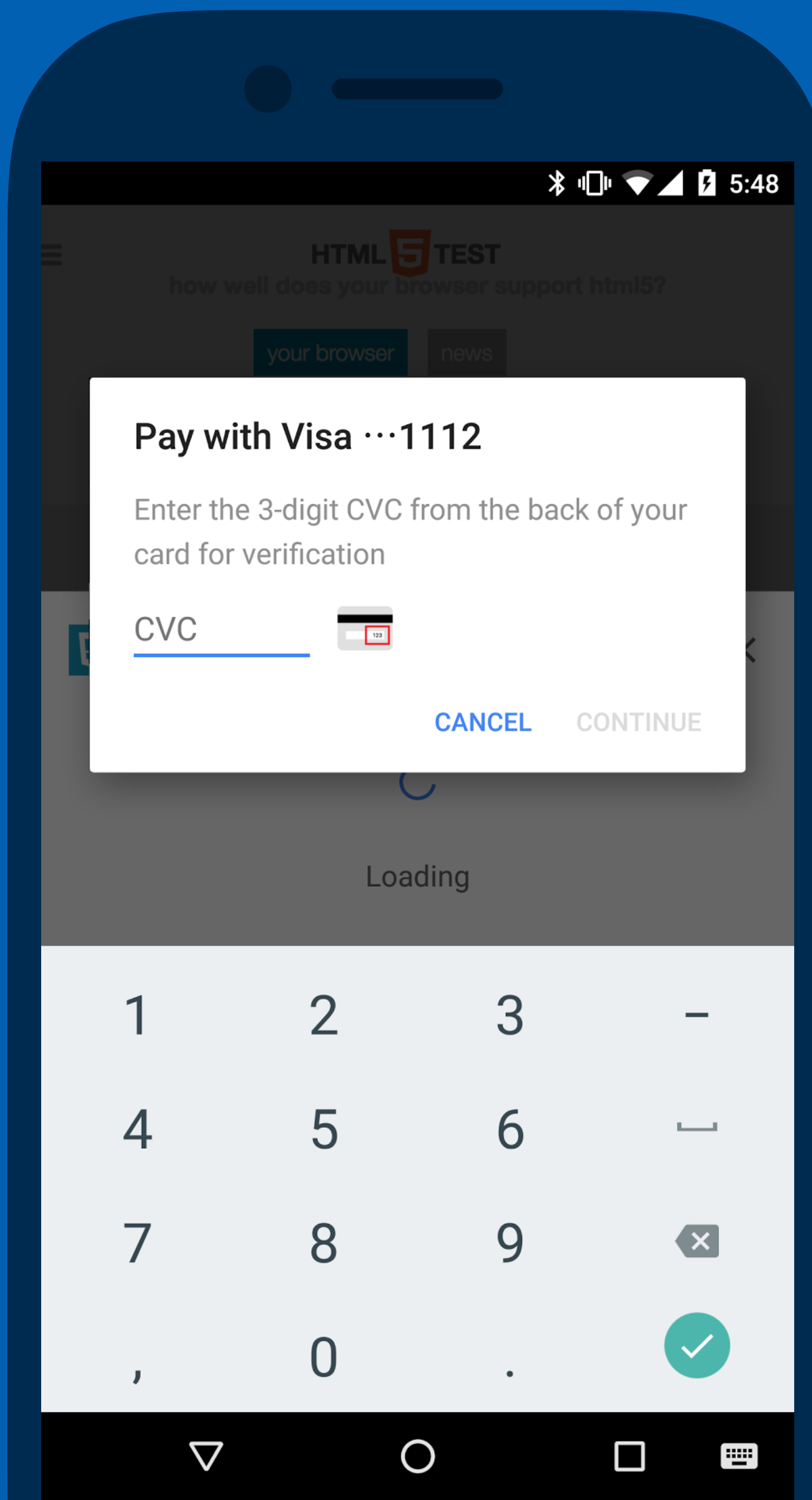
```
var request = new PaymentRequest(  
  methodData, // required payment method data  
  details     // required transaction information  
);
```



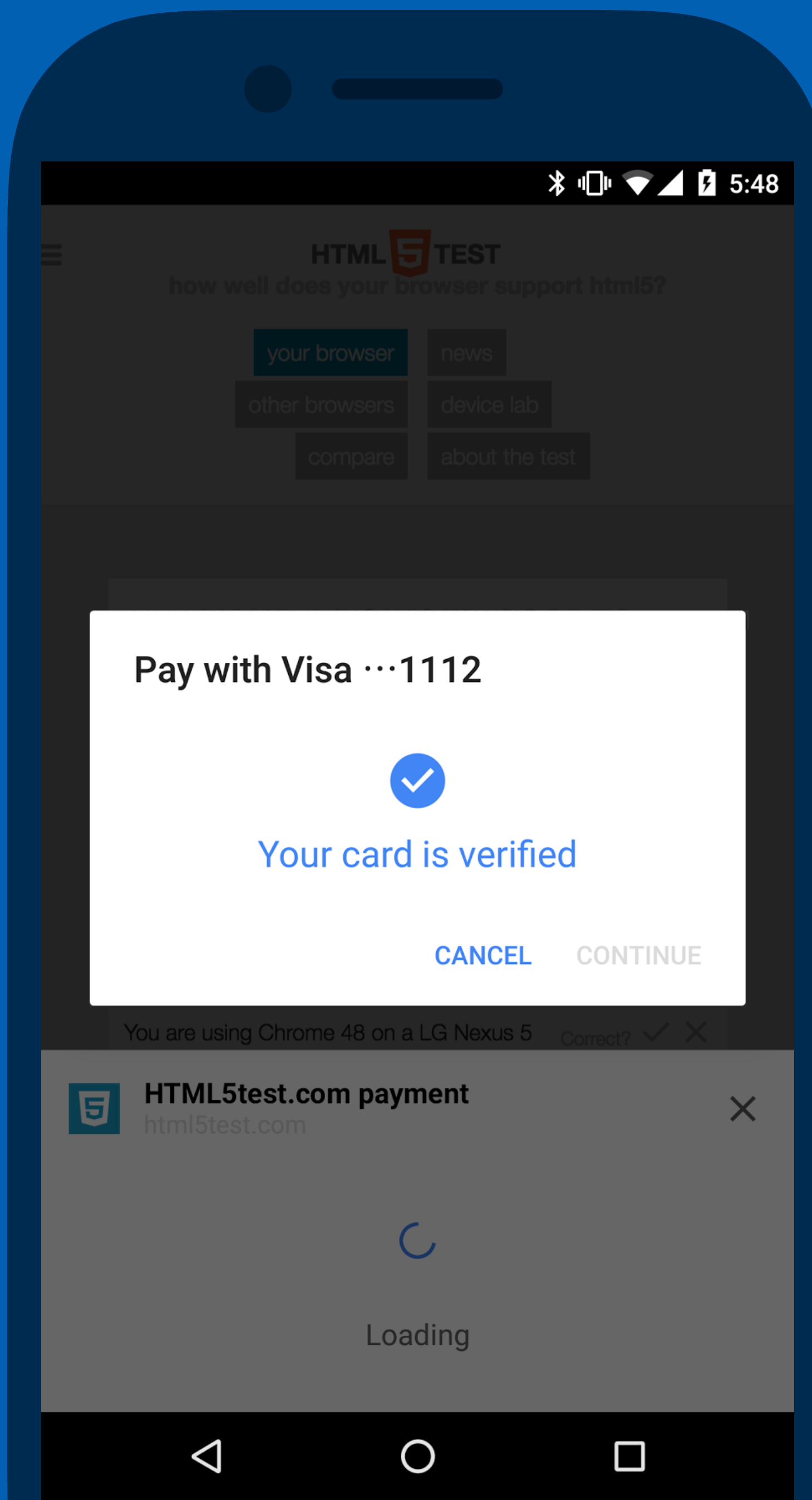
```
request.show().then(function(response) {  
    // success  
}).catch(function(err) {  
    // failed  
});
```



Select your payment method or use the default



Enter your CVC code or  
confirm with your fingerprint



Done!

## BROWSER SUPPORT



Chrome



Samsung 4  
(coming soon)



Edge  
(behind flag)



**BUT WHAT ABOUT  
THE DESKTOP?**



**BROWSER DEVELOPMENT  
IS DRIVEN BY MOBILE**

# The Washington Post

Monday, August 8, 2016

**BETA**

Welcome to the Washington Post's Progressive Web App!

Top Stories Opinion Politics World Business Tec

This app brings near-instant load times and offline reading capability to mobile browsers. Please open on a phone to check it out!

**Send link to phone**

**BUT...**



# **NATIVE PWA SUPPORT IN THE WINDOWS STORE**



# **NATIVE PWA SUPPORT IN THE WINDOWS STORE**

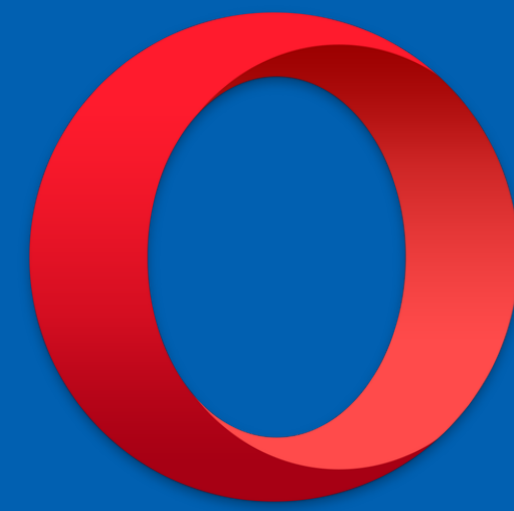




**BUT WHAT ABOUT  
APPLE?**

**THIS IS NOT A GOOGLE THING**





**BUT...**



**THE OLD HACKS STILL WORK**

**MAYBE, HOPEFULLY, POSSIBLY  
THIS WILL CHANGE IN THE FUTURE**

**OR NOT**

















MAKE WEB APPS  
GREAT AGAIN

**THANK YOU!**

**@HTML5TEST**



# HALFSTACK

JAVASCRIPT. IN A PUB. 18 NOV 2016

## 18 NOVEMBER, LONDON

Dylan Schiemann, Christian Heilmann,  
Mark Wubben, Jonathan Fielding  
and me