
PROGRESSIVE WEB APP (INTRODUCTION)

Lai Weng Han (Johnson)

<https://pwa-web.wenghan.me>

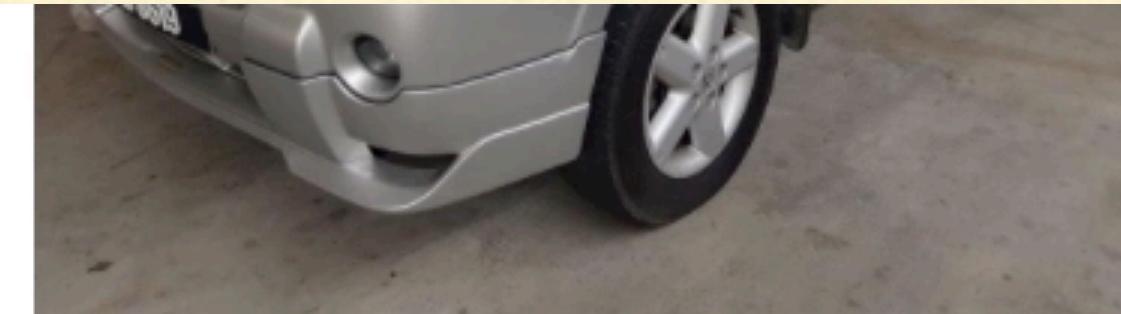




2011 Honda Civic 1.8 I-VTEC AT
#INSP00005

Current Price RM 48,000

Details



2013 Nissan X-Trail 2.5 4WD AT
#INSP00023

Current Price RM 36,000



2009 Perodua Viva 1.0 SX MT
#INSP00042

Current Price RM 8,500

Details



2014 Volkswagen Polo 1.6 Sedan AT
#INSP00011

Current Price RM 39,000

Details



2008 Perodua Myvi 1.3 EZI AT
#INSP00041

Current Price RM 15,500

Details



www.phytomark.com/dealer/bid.aspx?id=42





UTIL



<https://whatsapp.surge.sh/>

Lighthouse
Version: 2.3.0

Results for: <https://whatsapp.surge.sh/>
Sep 23, 2017, 3:31 AM UTC • [Runtime settings](#)

Category	Score
Progressive Web App	100
Performance	90
Accessibility	94
Best Practices	92

Progressive Web App
These audits validate the aspects of a Progressive Web App, as specified by the baseline [PWA Checklist](#). (100)

0 failed audits

> 11 Passed Audits

> Manual checks to verify

Performance
These encapsulate your app's performance. (90)

Metrics
These metrics encapsulate your app's performance across a number of dimensions.

Dimension	Value
314 ms	Initial render time
828 ms	First contentful paint
942 ms	Mean first render time
1.3 s	Time to interactive
1.6 s	Load time
1.9 s	First input delay
2.2 s	Large resource download
2.5 s	Resource blocking
2.8 s	Resource count
3.1 s	Resource size

https://extension://51pmidconkpinefhhmammtpppbkx0cfd709f-aaa0-42bc-a5be-e1d359aeec78/pwa/

<https://whatsapp.surge.sh>

UTIL

WhatsApp

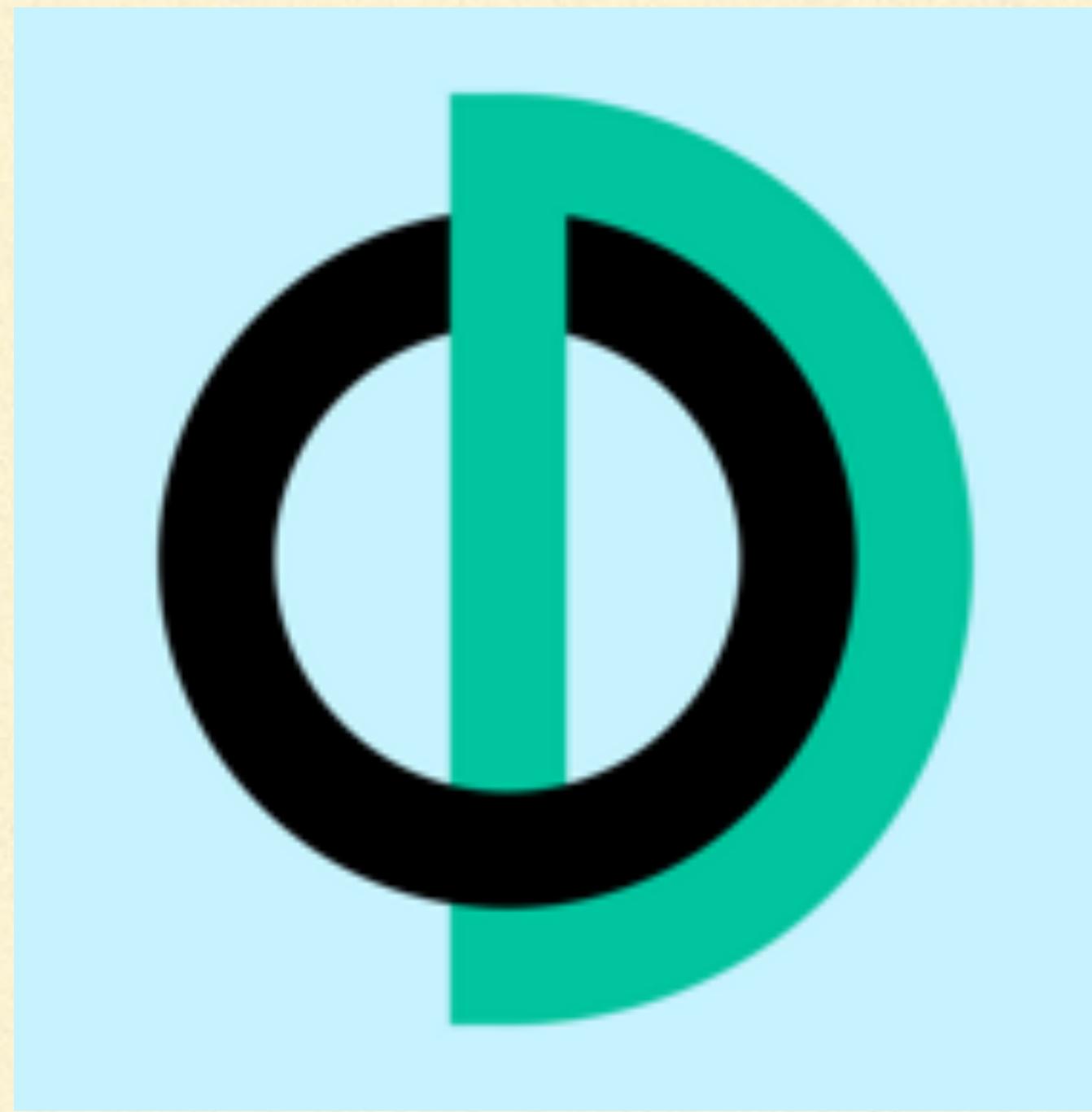
insert phone number with country code

Open Copy

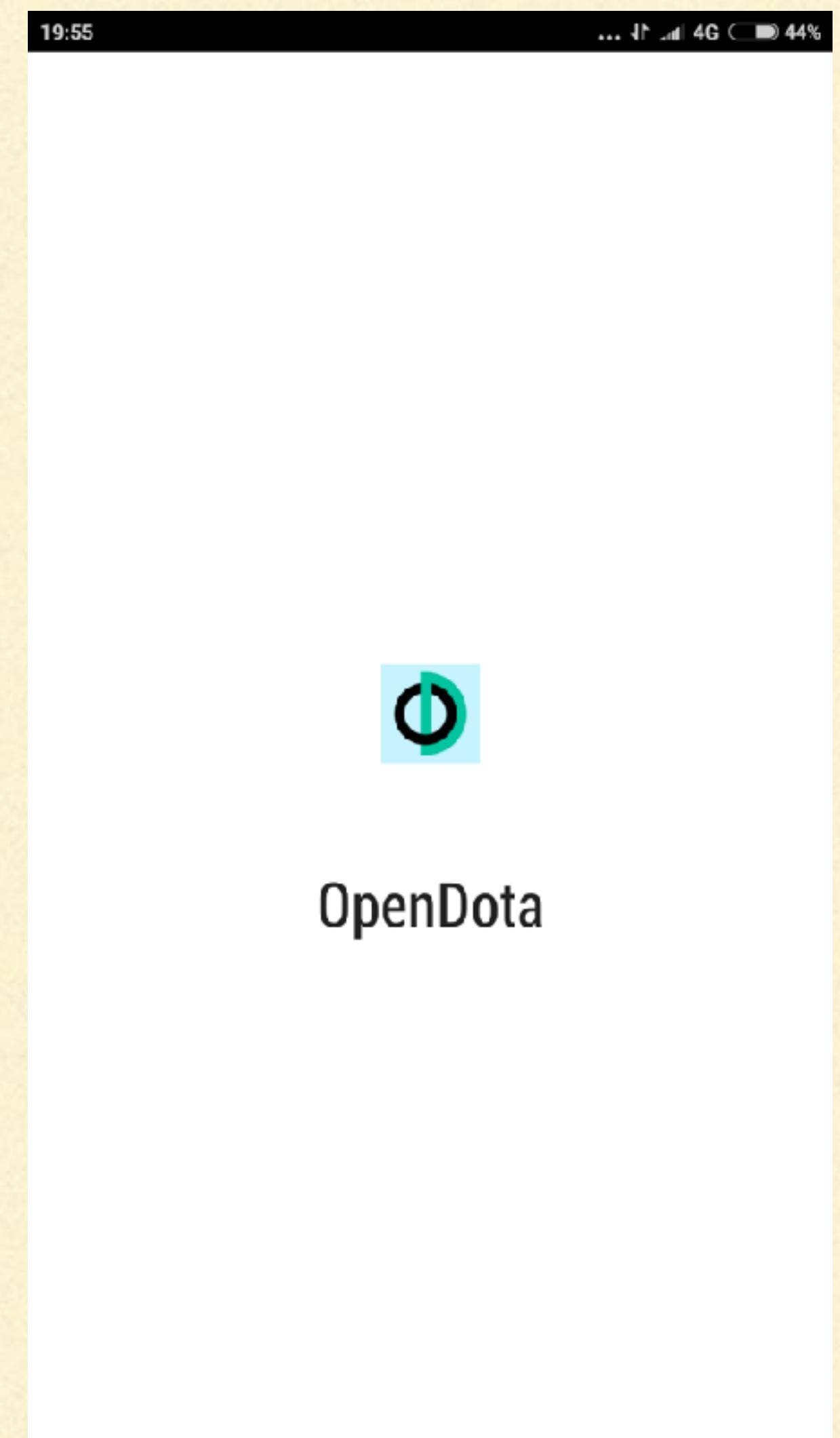
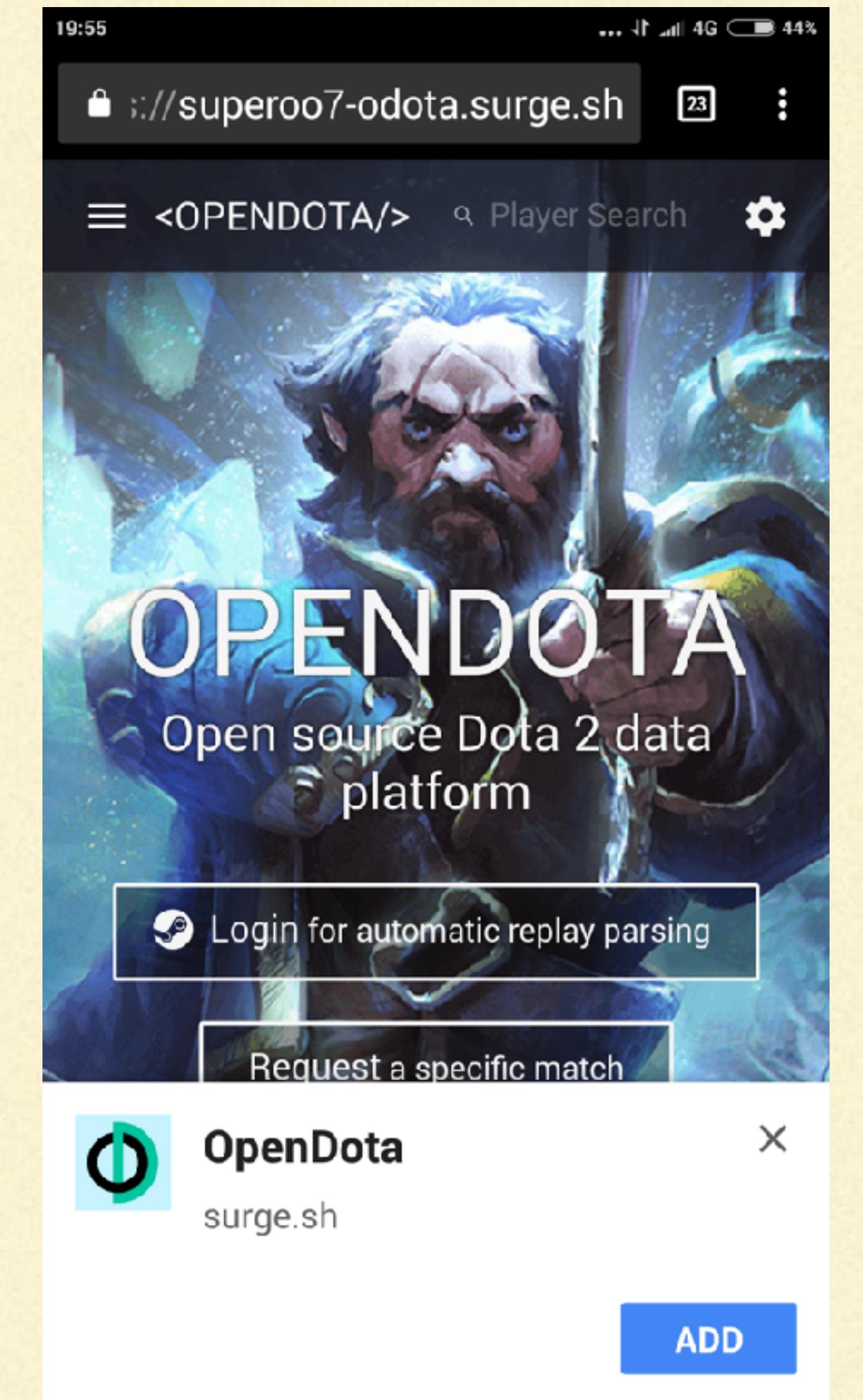
? ?

<https://pwa-web.wenghan.me>

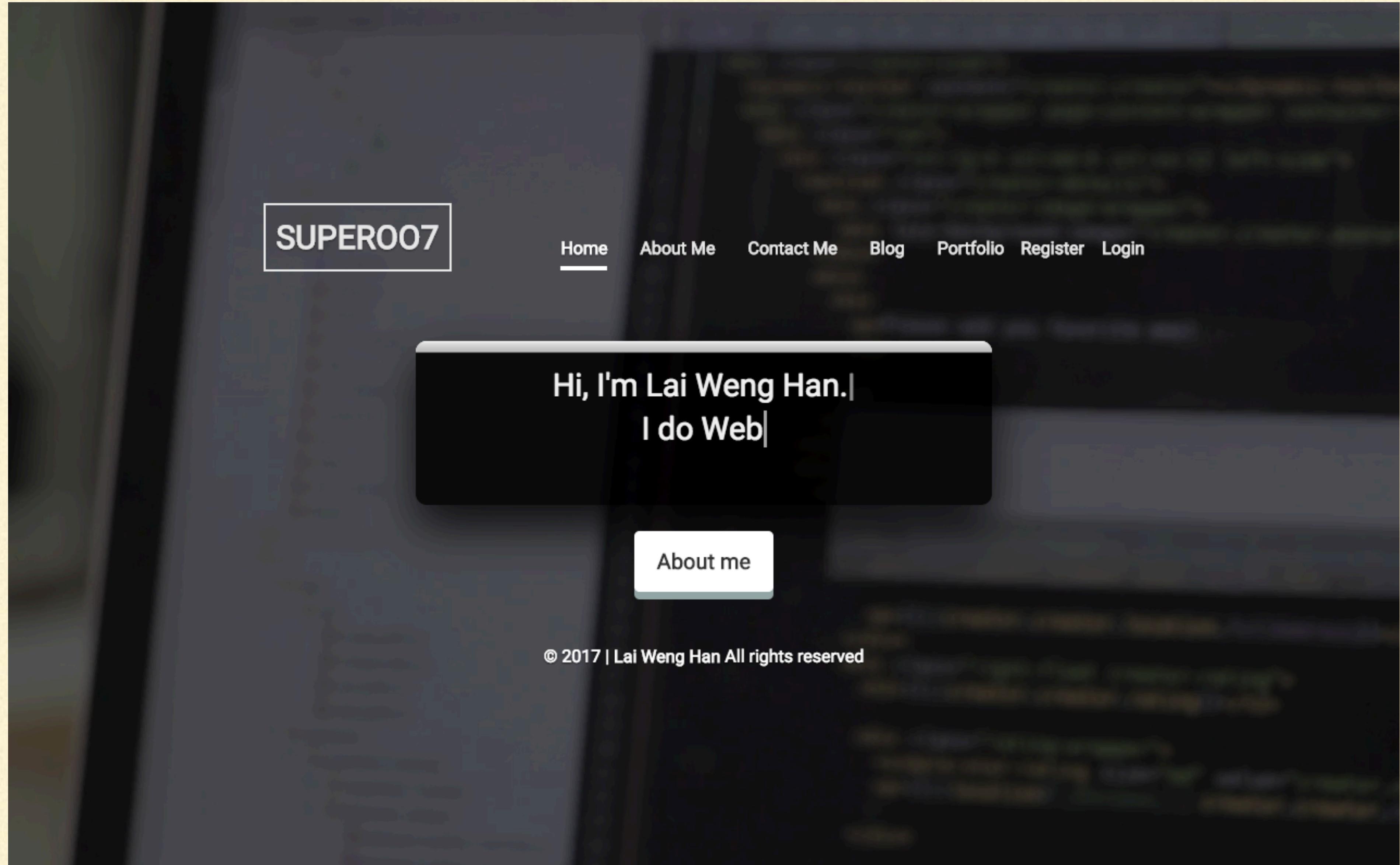
OPEN DOTA



<https://opendota.com>



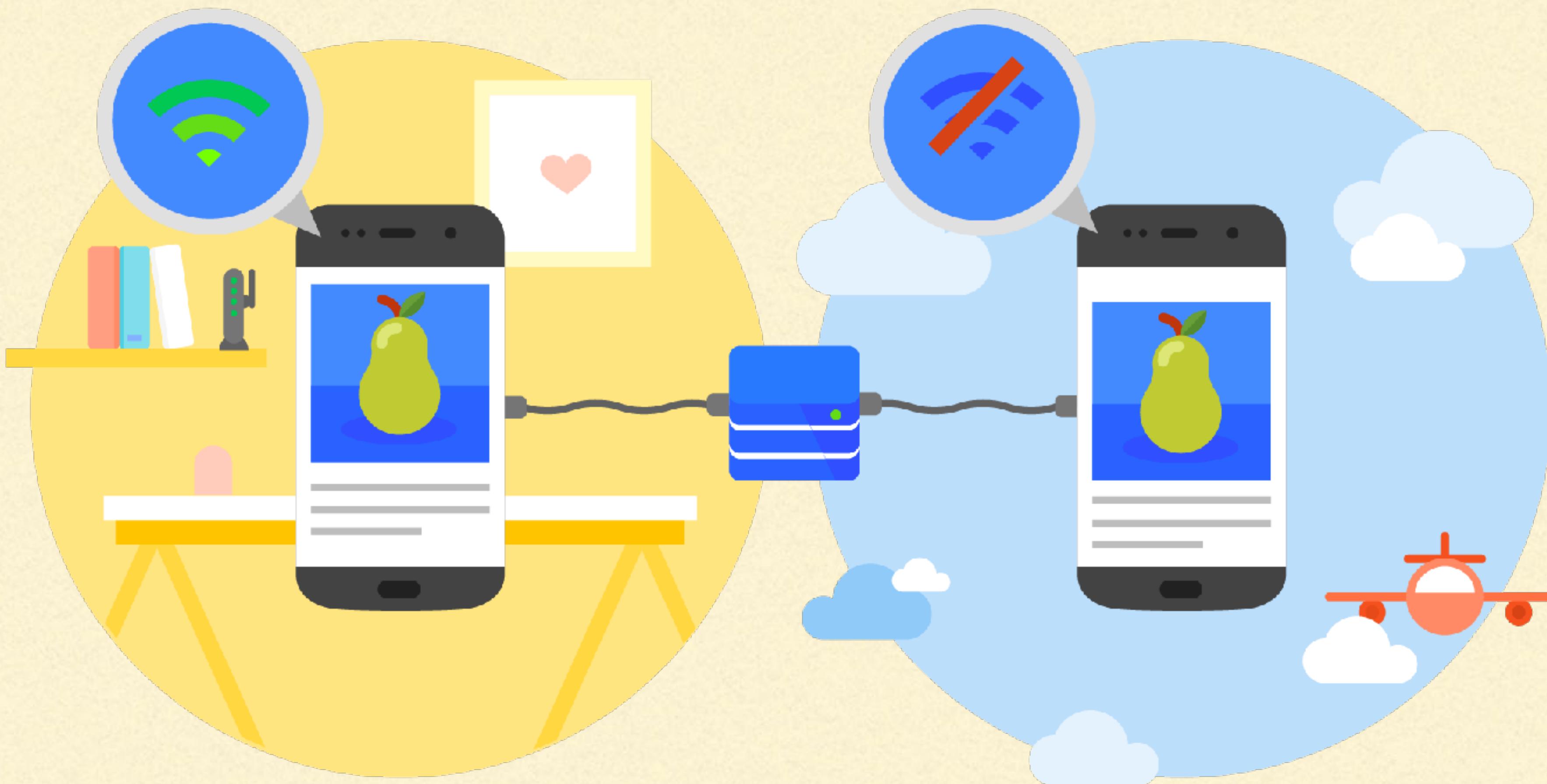
<https://pwa-web.wenghan.me>



<https://www.wenghan.me>

<https://pwa-web.wenghan.me>

WHAT IS PROGRESSIVE WEB APP?



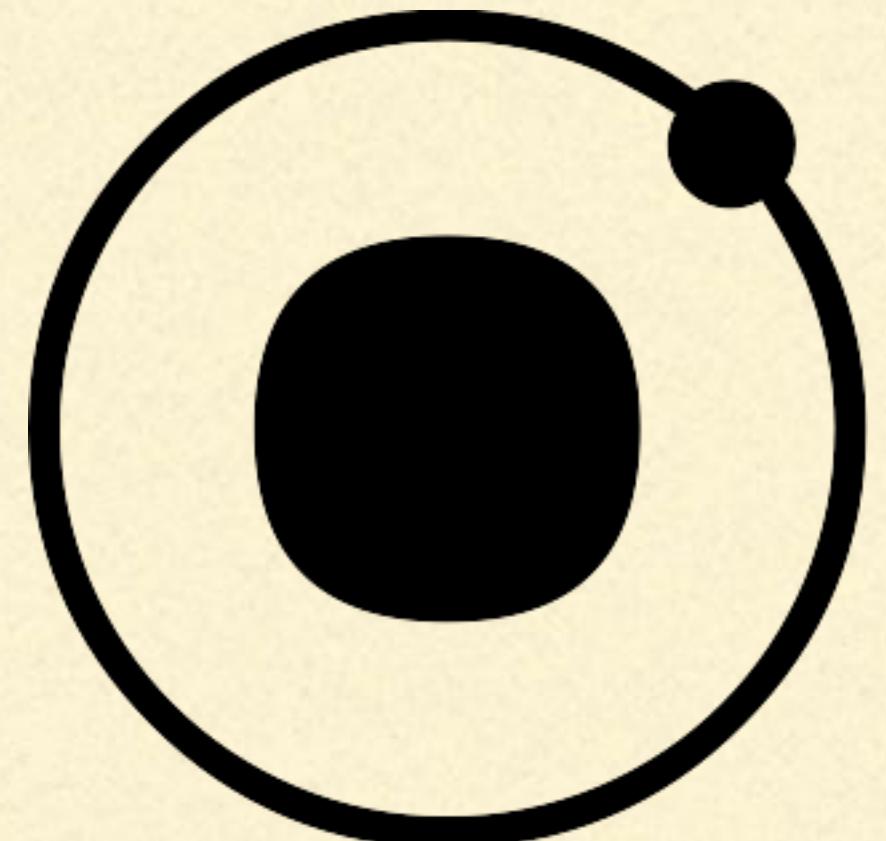
“a term used to denote web applications
that use the latest web technologies.”

–Wikipedia

W

“a web app that uses modern web
capabilities to deliver an app-like
experience to users.”

—Ionic Framework



“a couple of modern web features that you
can add to any existing web app, to further
enhance UX.”

—My Definition

PROGRESSIVE WEB APP

- **Progressive**
- **Responsive**
- **Work Offline**
- **App-Like**
- **Fresh**
- **Safe**
- **Discoverable**
- **Re-Engageable**
- **Durable**
- **Linkable**

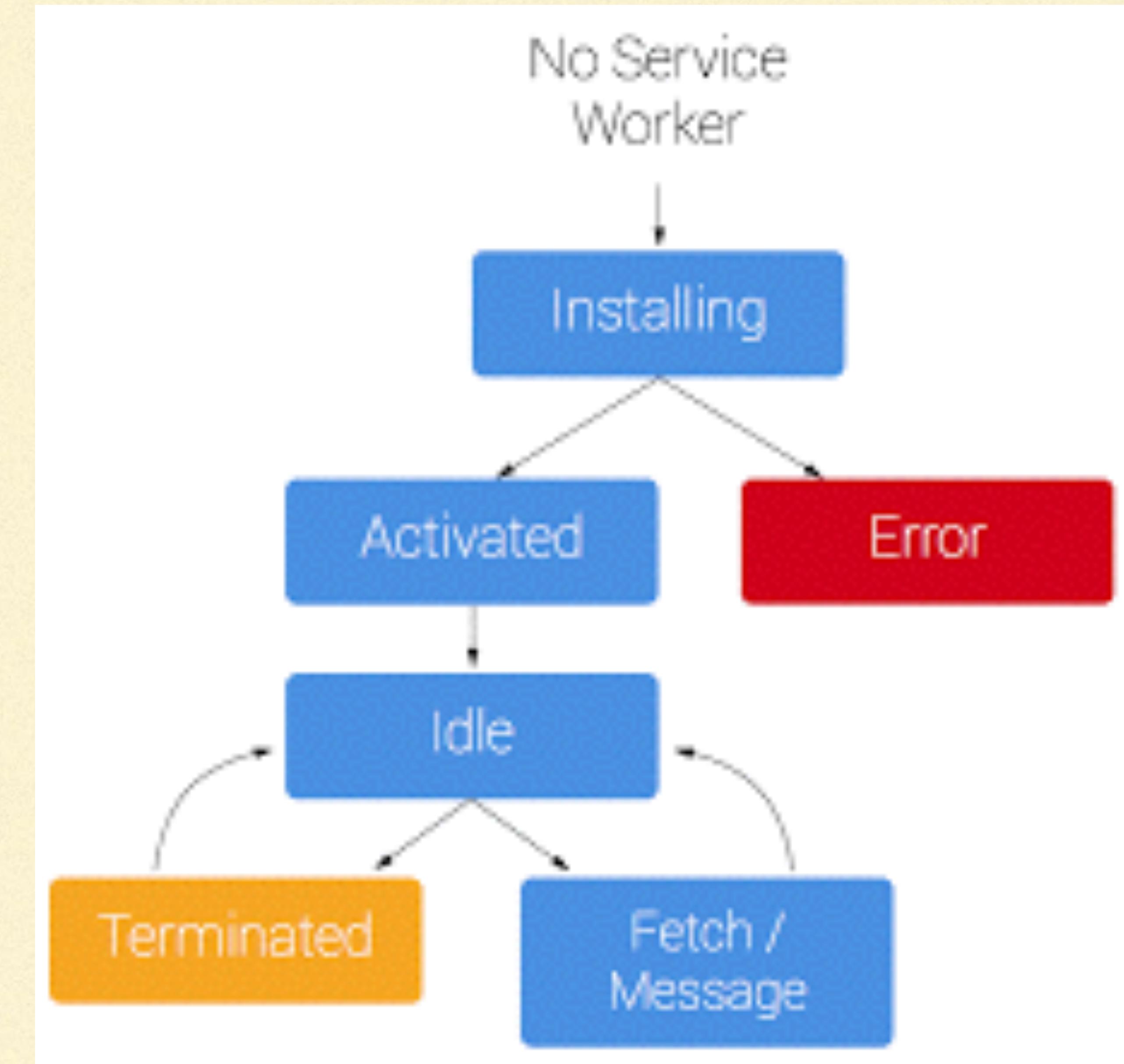
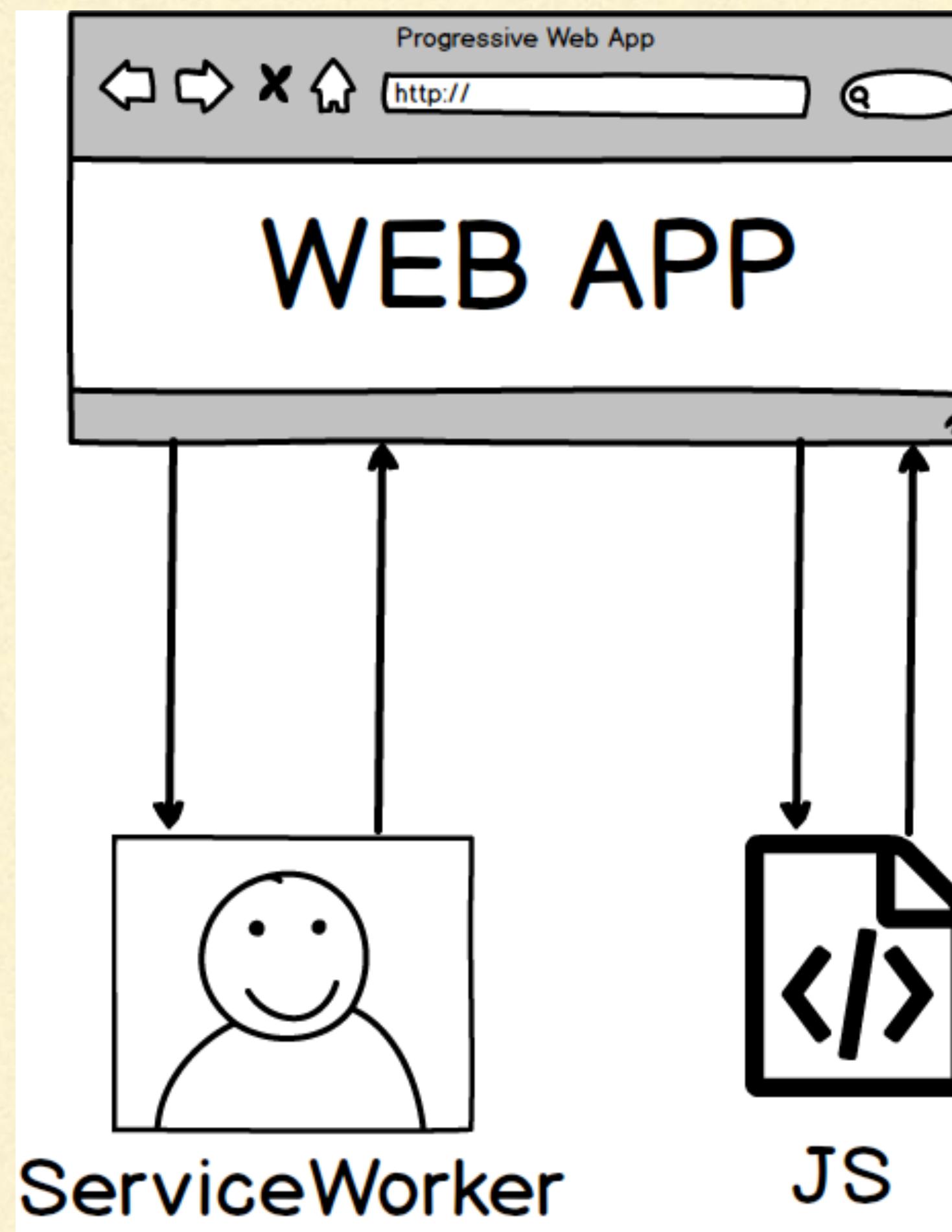


⚠ This is an **experimental technology**

Check the [Browser compatibility table](#) carefully before using this in production.

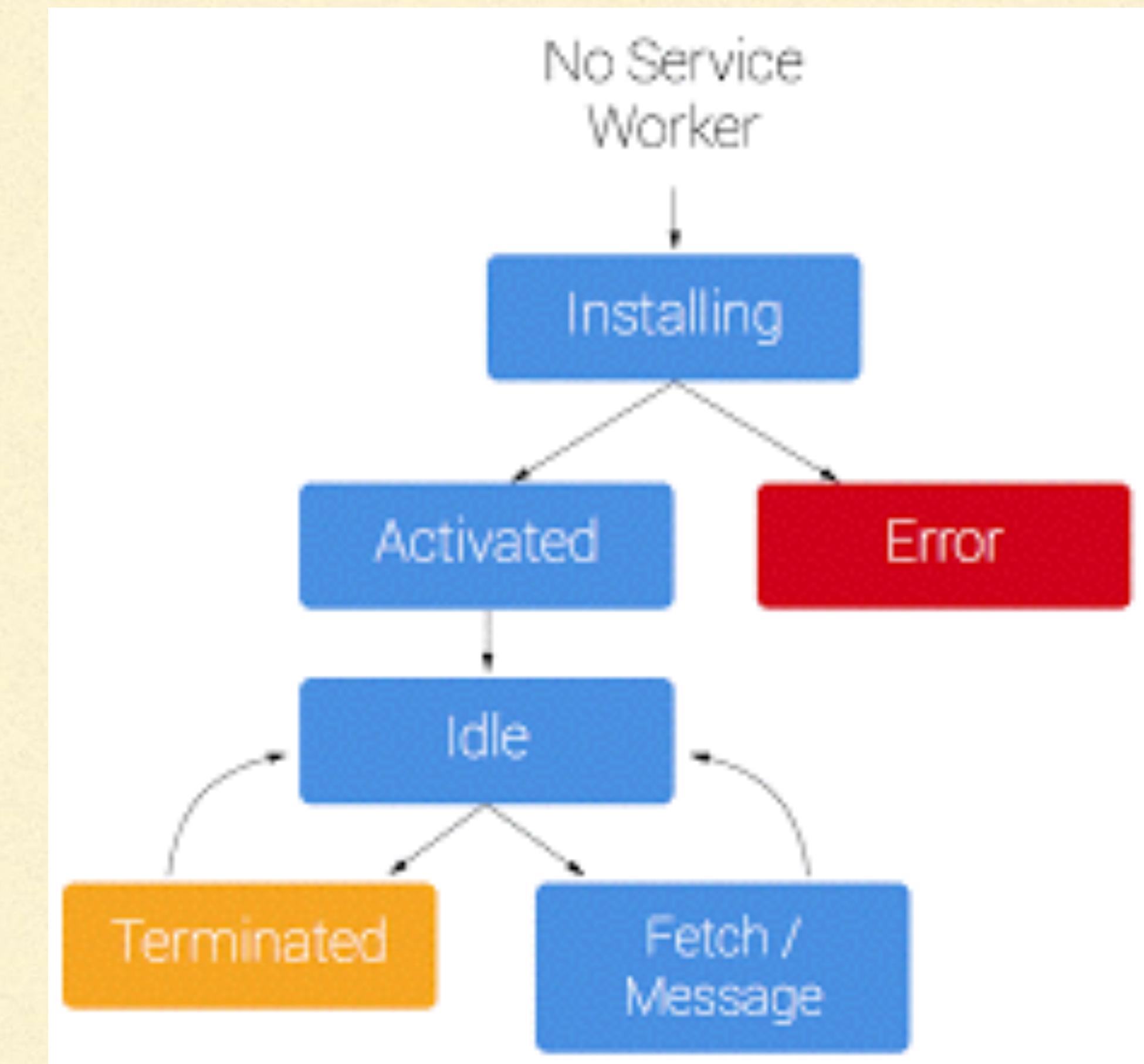
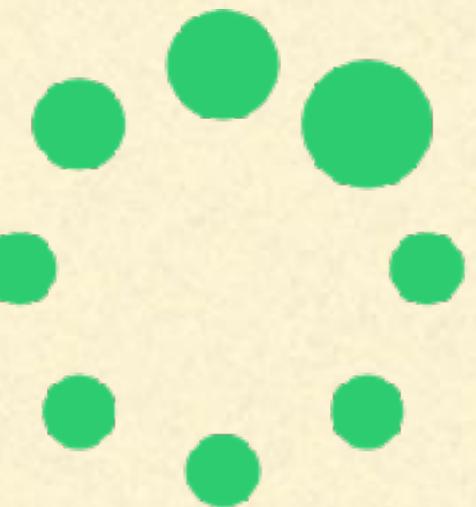
Service Worker (Caching)

SERVICE WORKER



INSTALLING

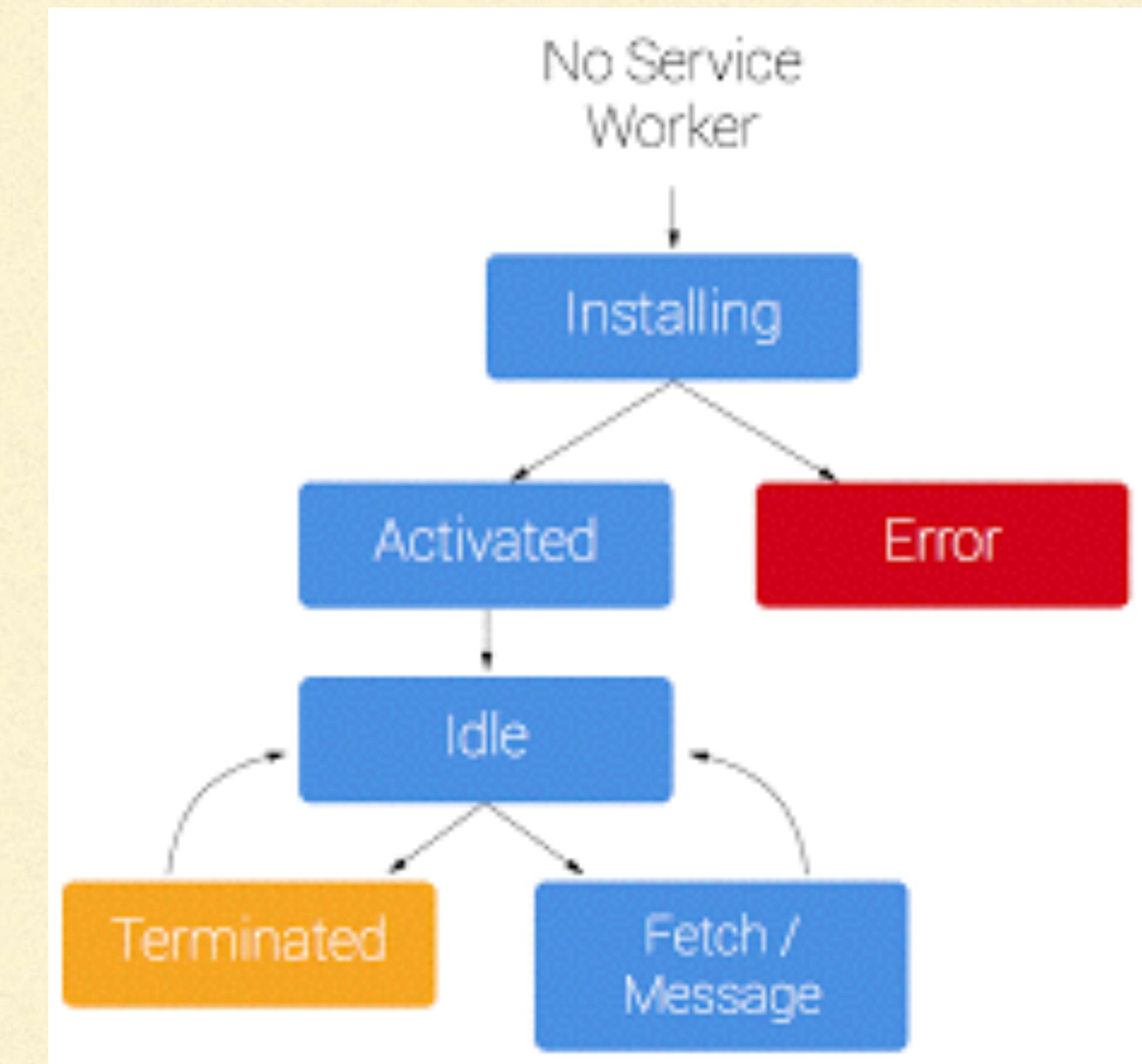
- Mainly to do Caching related
- Static Caching



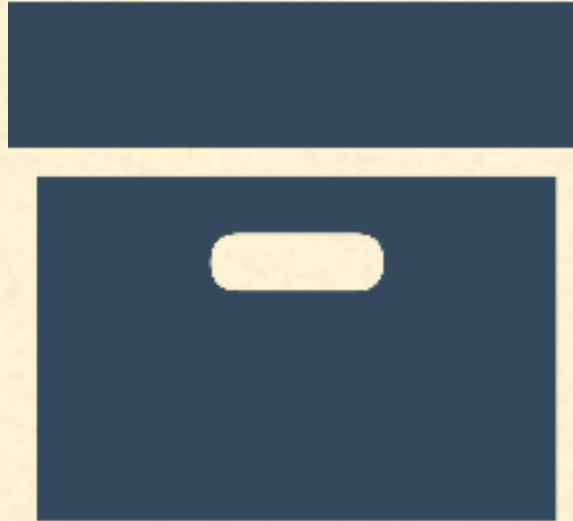
ACTIVATING



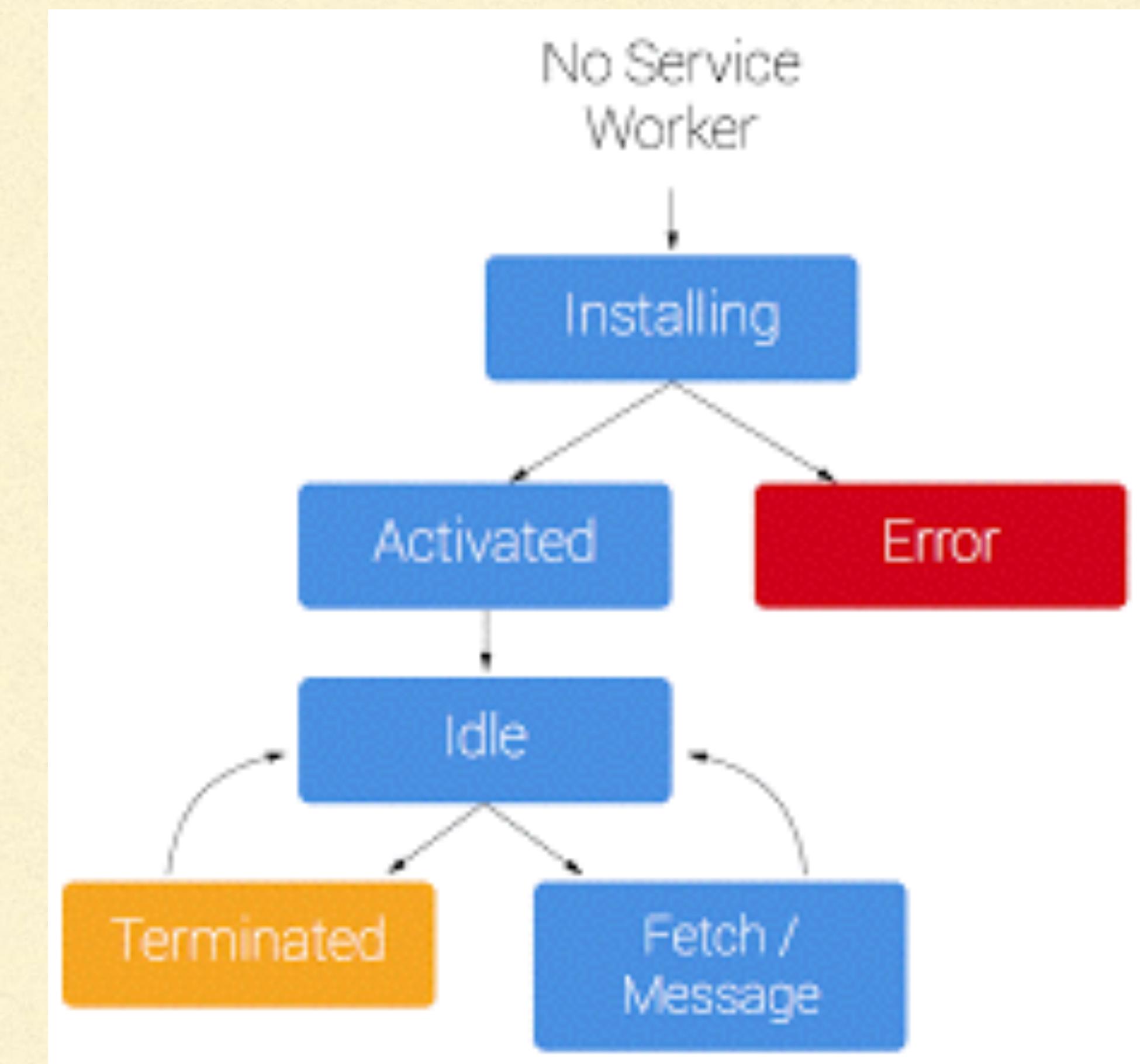
- After Installing
- Delete Old Cache



FETCH EVENT



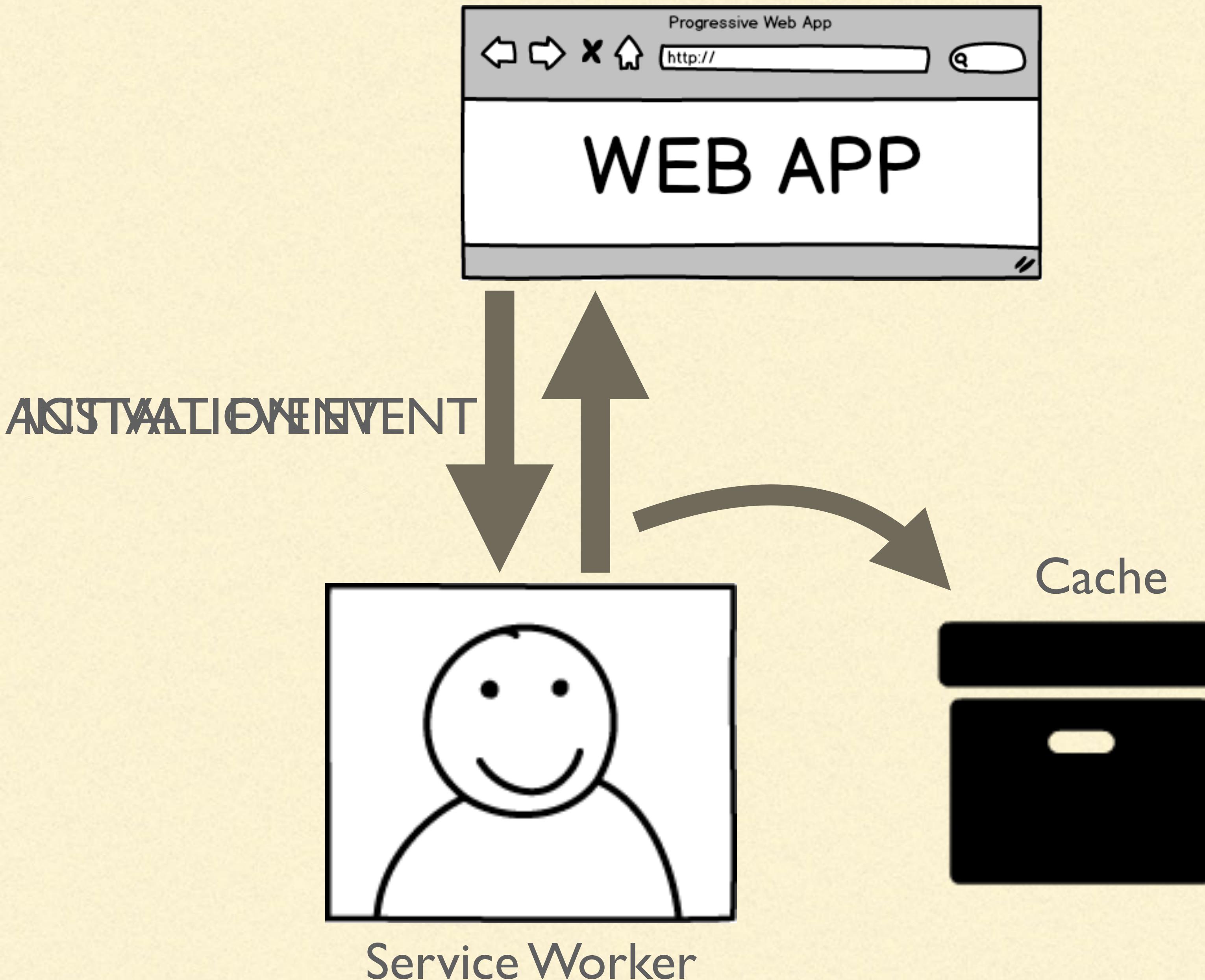
- Fetch is replacement of AJAX
- Fetching Data in JSON / Images / Fonts / CSS



Caching Strategy

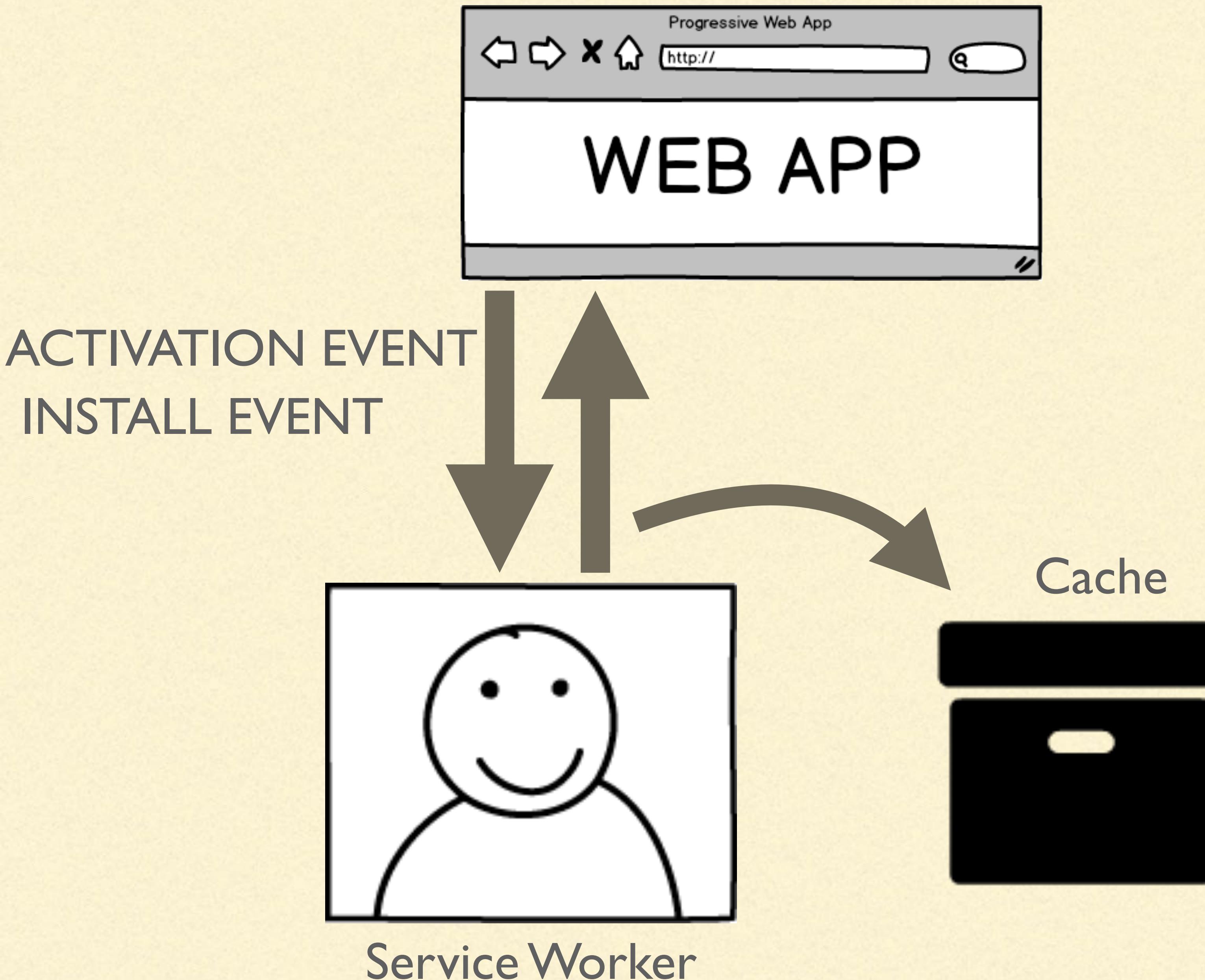
THE OFFLINE COOKBOOK

<https://developers.google.com/web/fundamentals/instant-and-offline/offline-cookbook/>



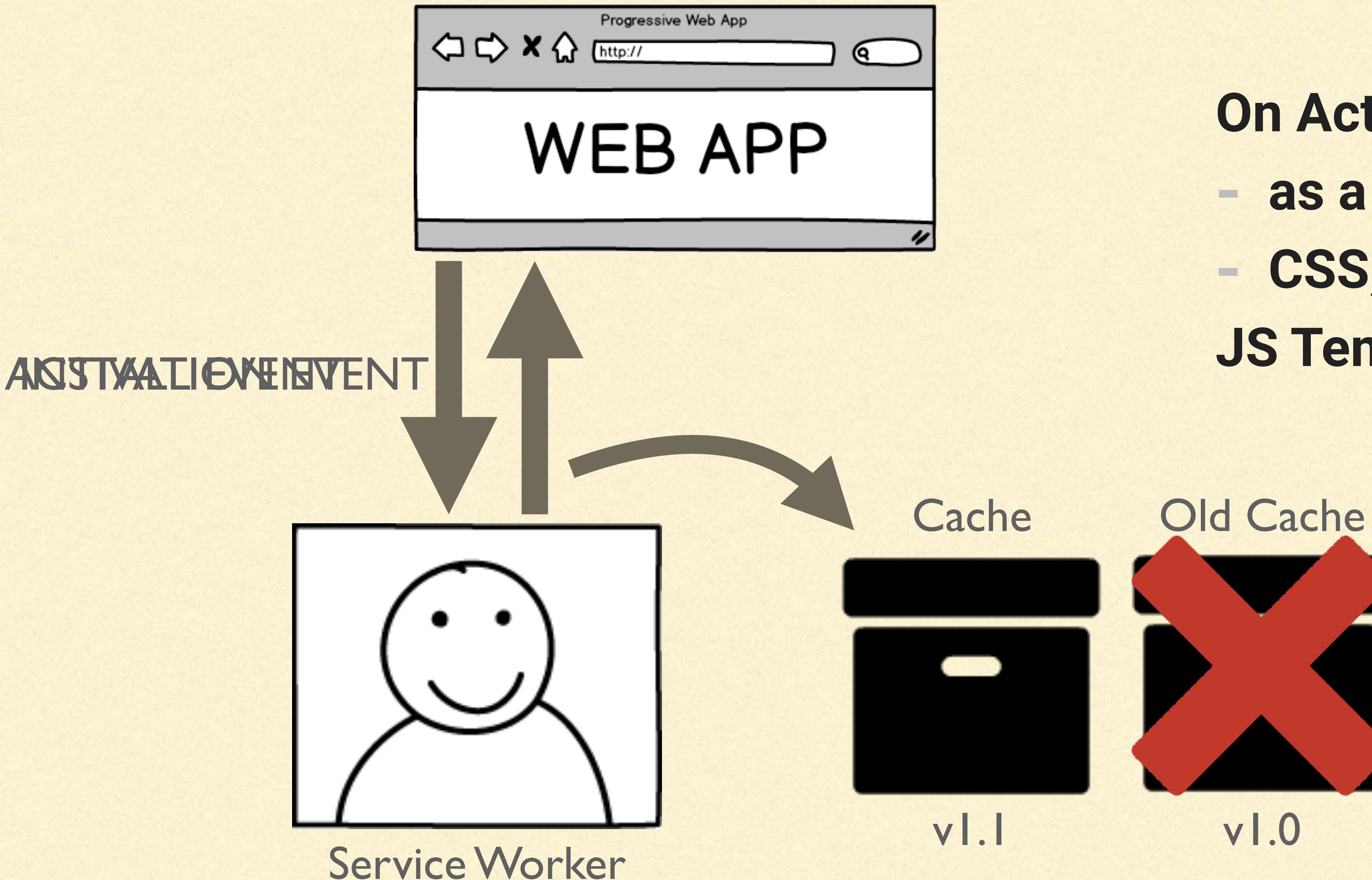
On install

- as a dependency
- CSS, Images, fonts, JS Templates



On install

- **not as a dependency**



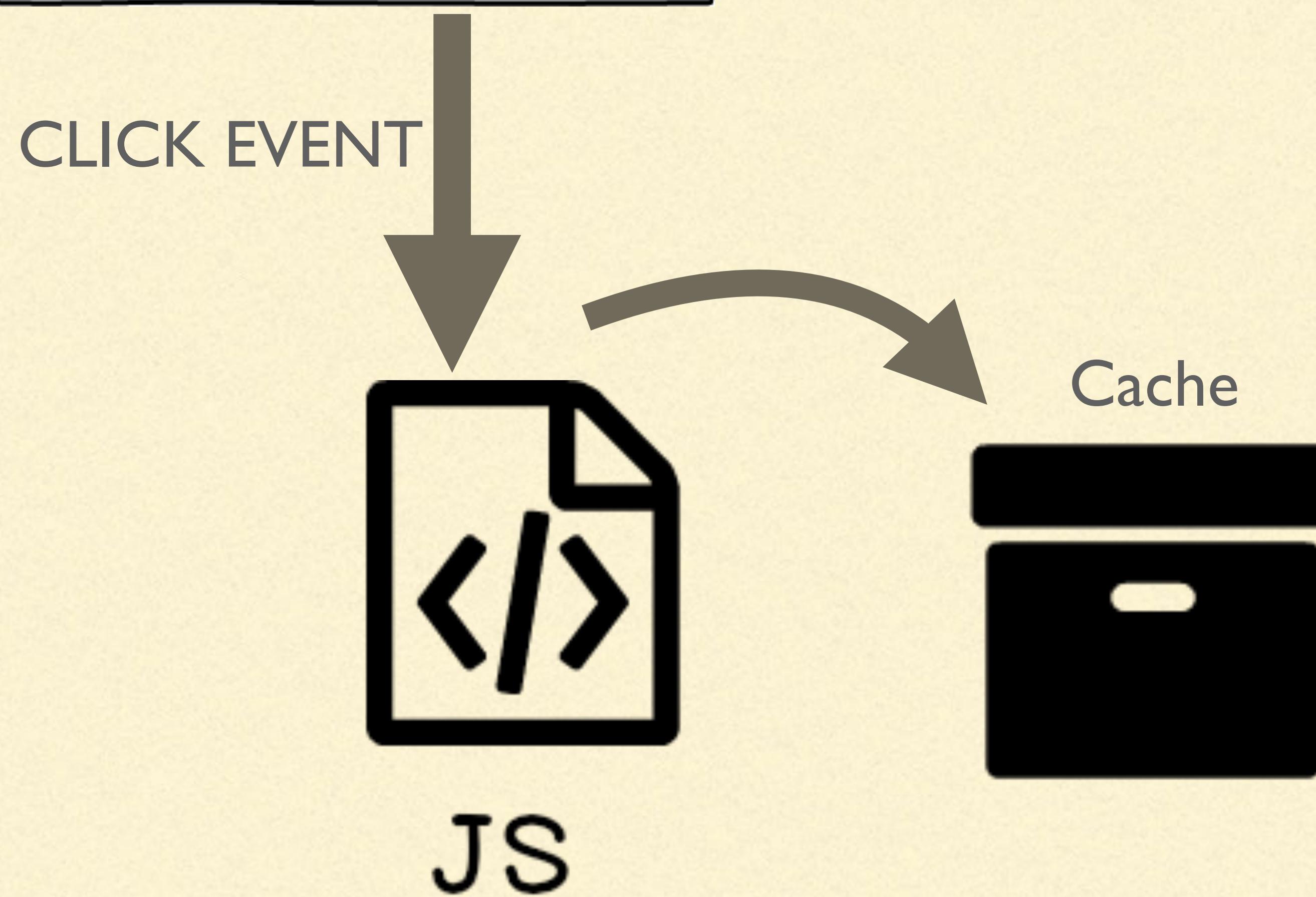
On Activate

- as a dependency
- CSS, Images, fonts,

JS Templates

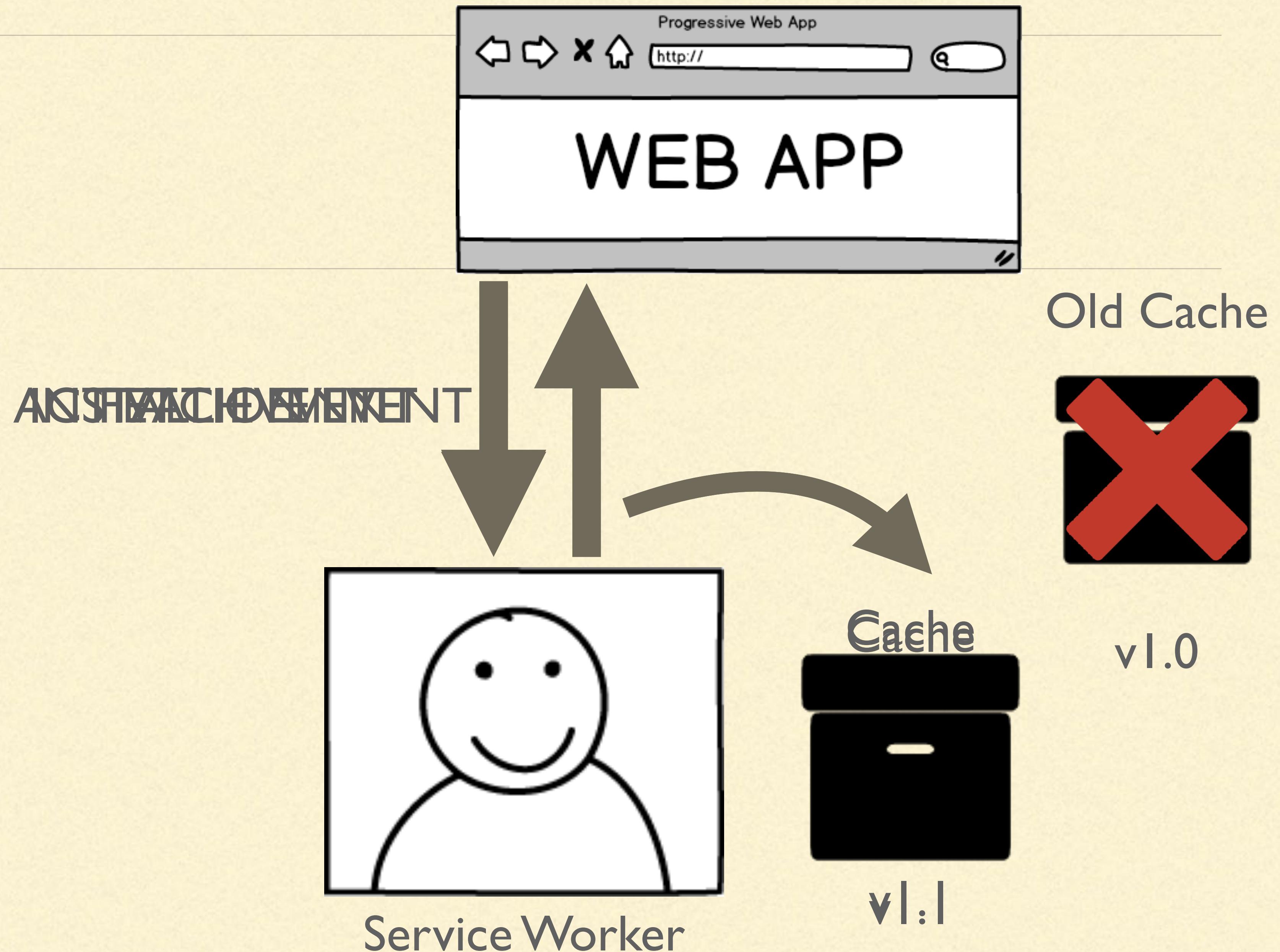


On User Interaction



MY STRATEGY

- Static Caching Image / Video
- Dynamic Caching Fonts and Framework
- Fetch for Dynamic Data (JSON)



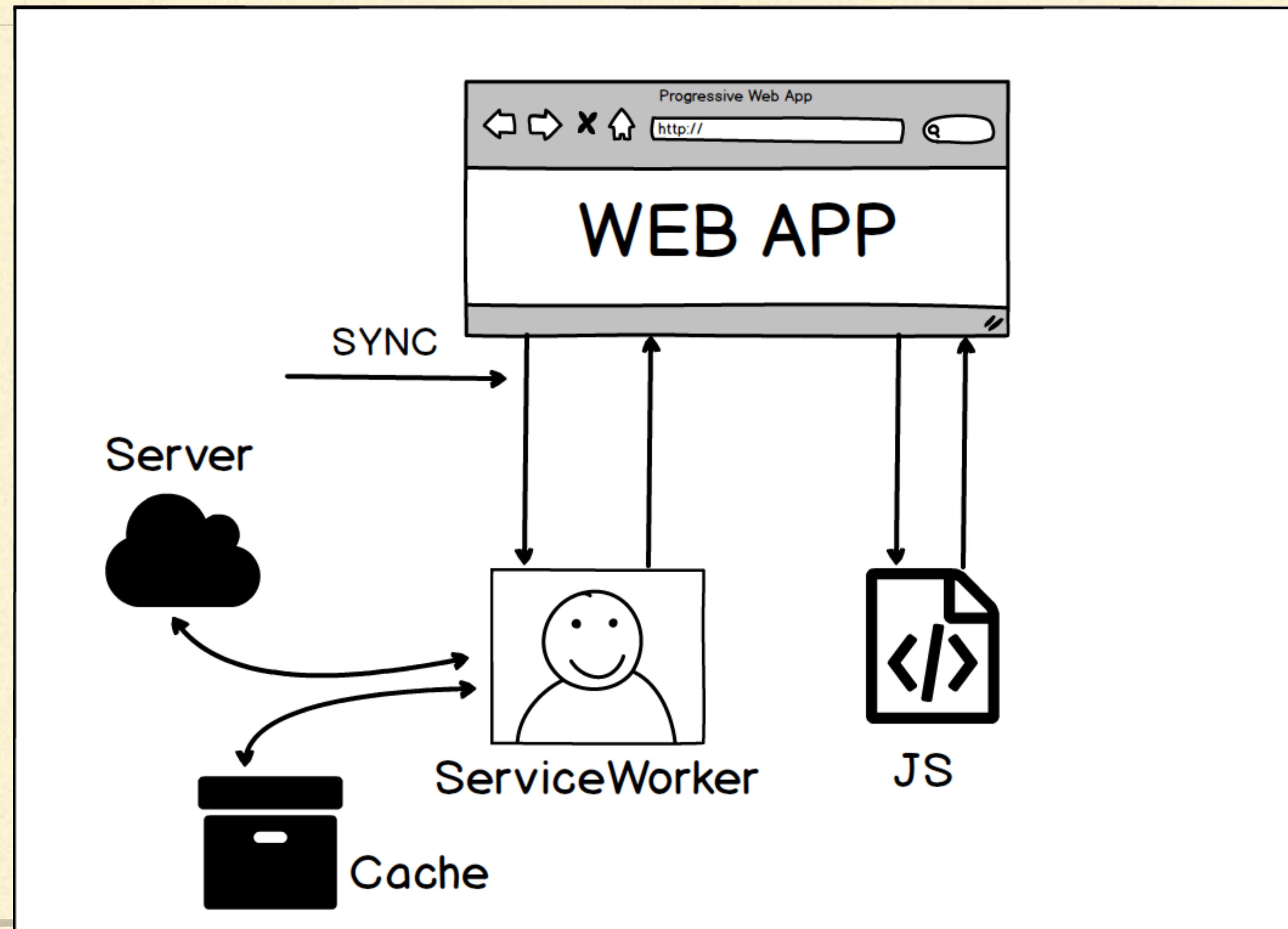
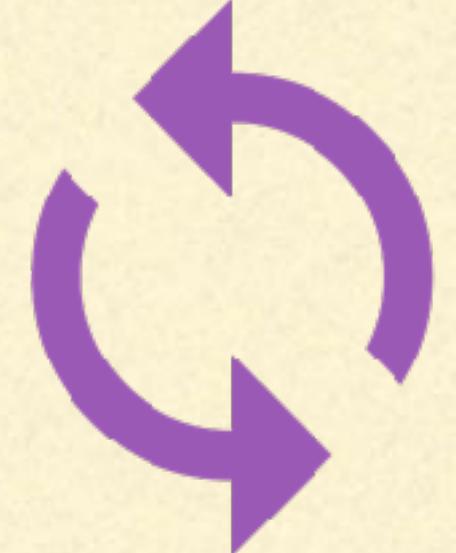
DEMO

Caching

<https://pwa-web.wenghan.me>

<https://pwa-web.wenghan.me>

BACKGROUND SYNC





HTTP

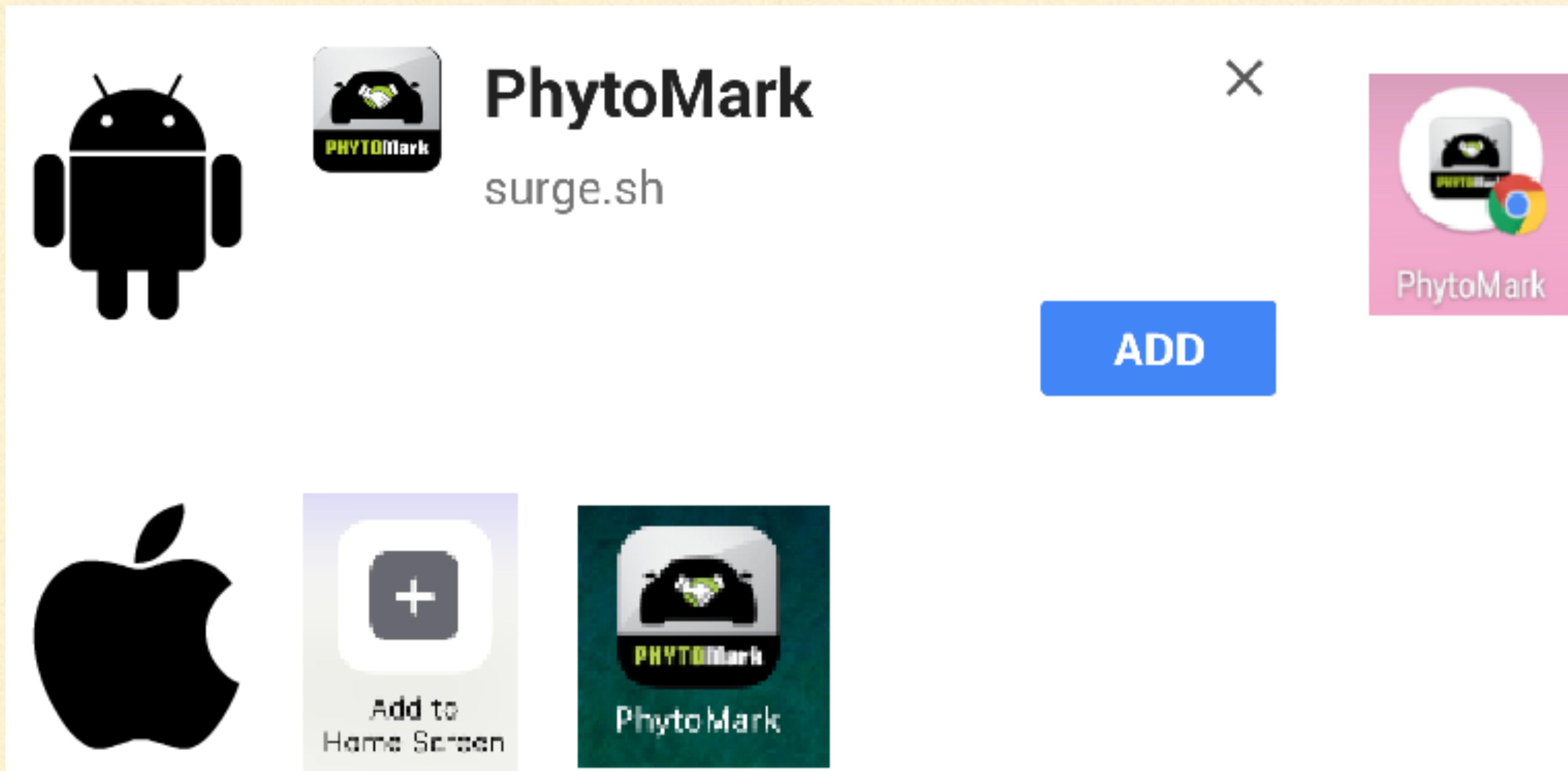
HTTP



ADD TO HOMESCREEN

⚠ Non-standard

This feature is non-standard and is not on a standards track. Do not use it on production sites facing the Web: it will not work for every user. There may also be large incompatibilities between implementations and the behavior may change in the future.



REQUIREMENT

- Service Worker Registered
- Serve over HTTPS
- manifest.json
- Minimum Benchmark



MANIFEST

- Meta Tag for Website
- Declare how the app look like as icon
- Orientation. Start url and more!



```
{  
  "name": "PhytoMark",  
  "short_name": "PhytoMark",  
  "theme_color": "#99CB73",  
  "background_color": "#99CB7",  
  "display": "standalone",  
  "orientation": "portrait",  
  "Scope": "/",  
  "start_url": "/",  
  "icons": [  
    {  
      "src": "/images/icons/  
icon-72x72.png",  
      "sizes": "72x72",  
      "type": "image/png"  
    },  
  ],  
  "splash_pages": null  
}
```



```
<meta name="apple-mobile-web-app-capable" content="yes">
<meta name="apple-mobile-web-app-status-bar-style" content="black">
<meta name="apple-mobile-web-app-title" content="PhytoMark">
<link rel="apple-touch-icon" href=".//images/icons/icon-72x72.png" sizes="72x72">
```



```
<meta name="msapplication-TileImage" content=".//images/icons/icon-144x144.png">
<meta name="msapplication-TextColor" content="#99CB73">
```

index.html or any html

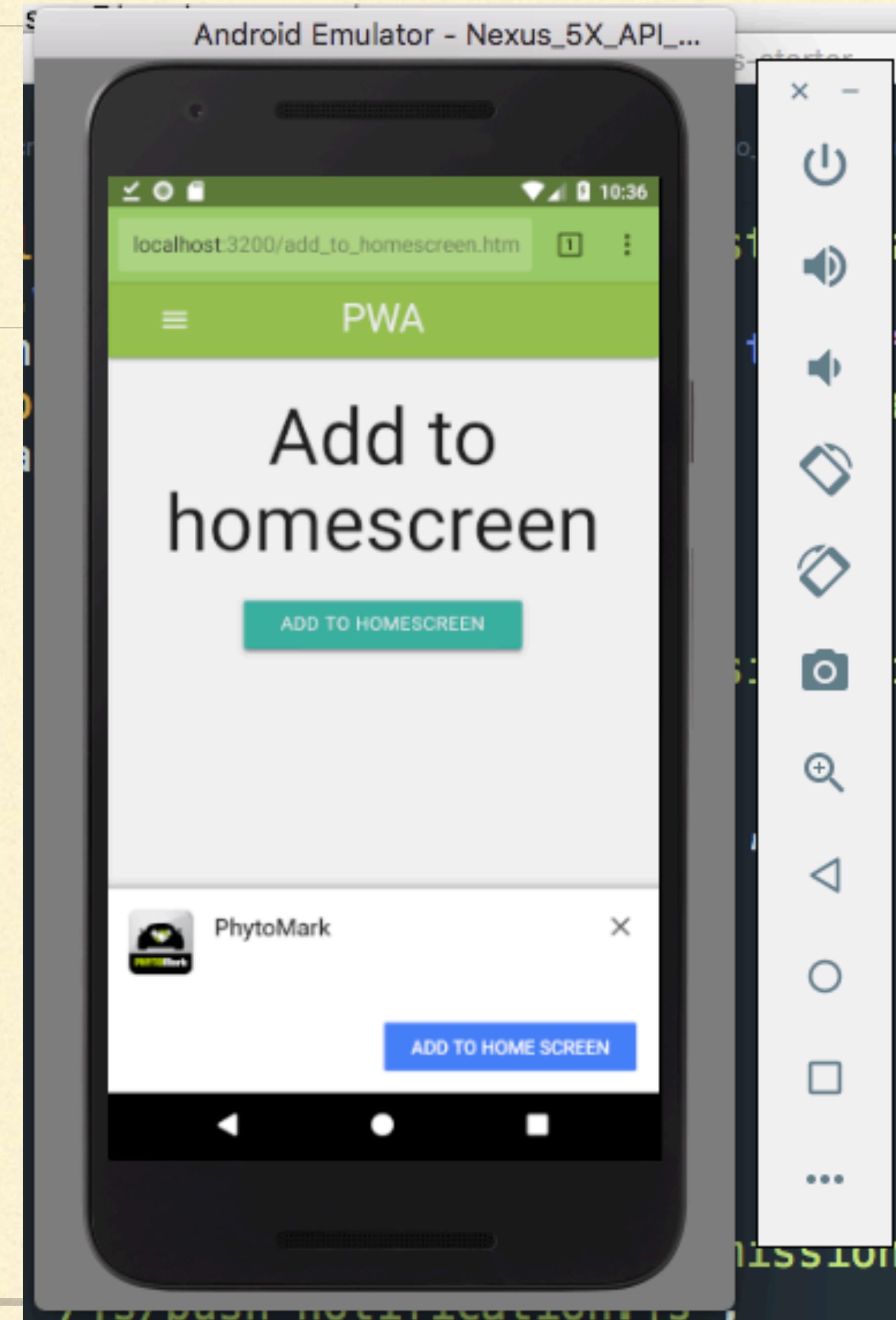
Minimum Benchmark “based on time and number of visits”

<https://developers.google.com/web/fundamentals/app-install-banners/>

<https://pwa-web.wenghan.me>

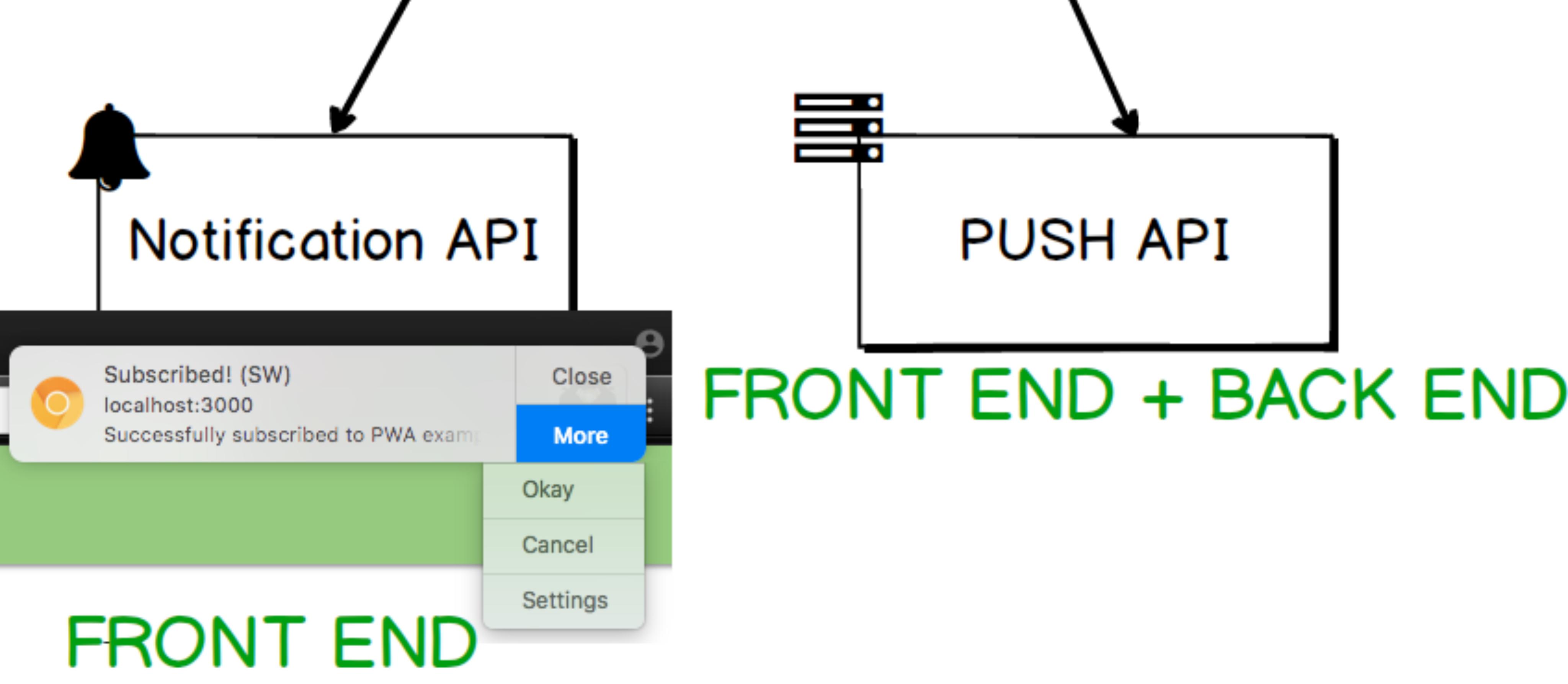
JUST IN CASE

- <https://barcamp.surge.sh>
- <https://barcamp1.surge.sh>
- <https://barcamp2.surge.sh>
- <https://barcamp3.surge.sh>



DEMO
ADD TO
HOMESCREEN

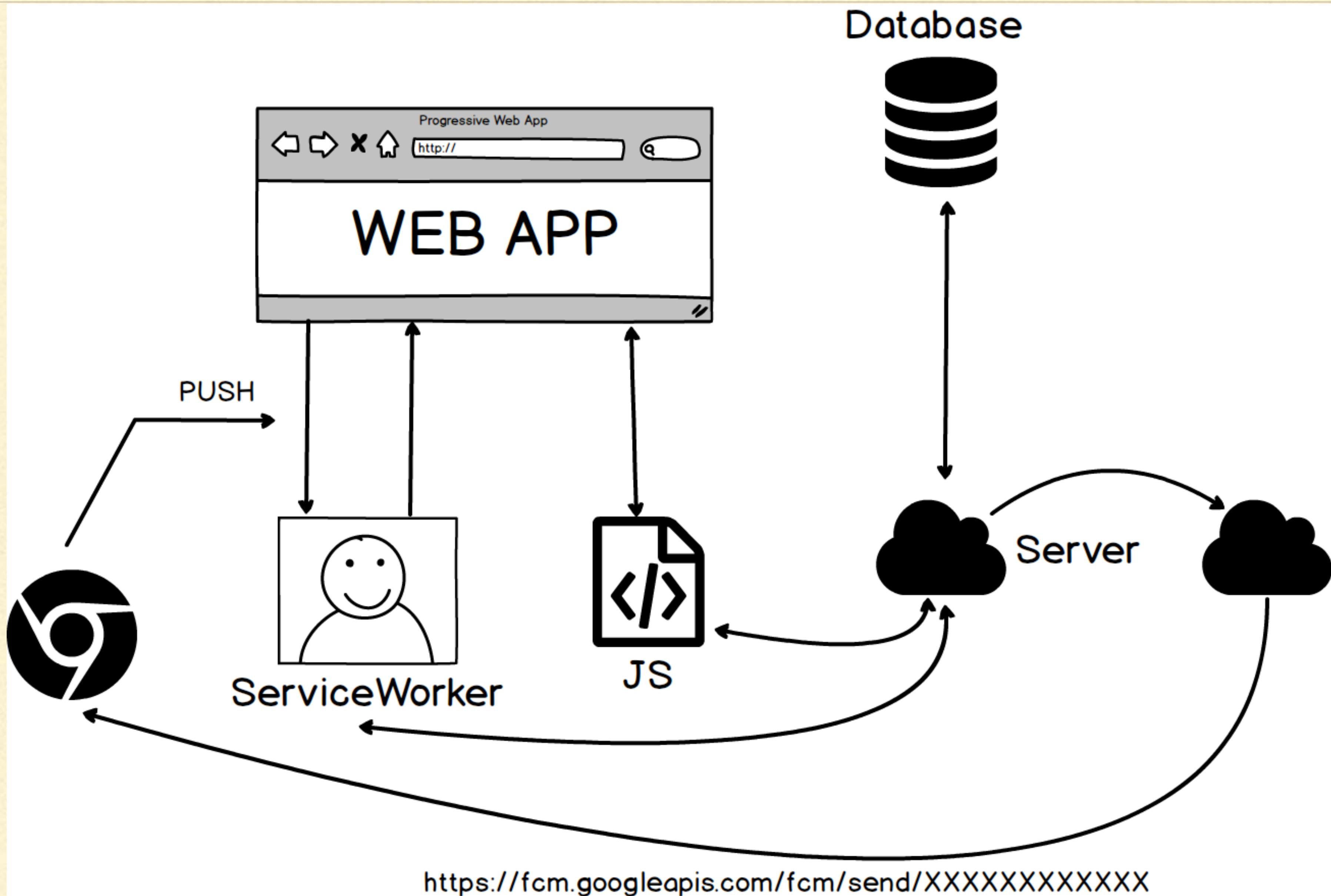
PUSH NOTIFICATION



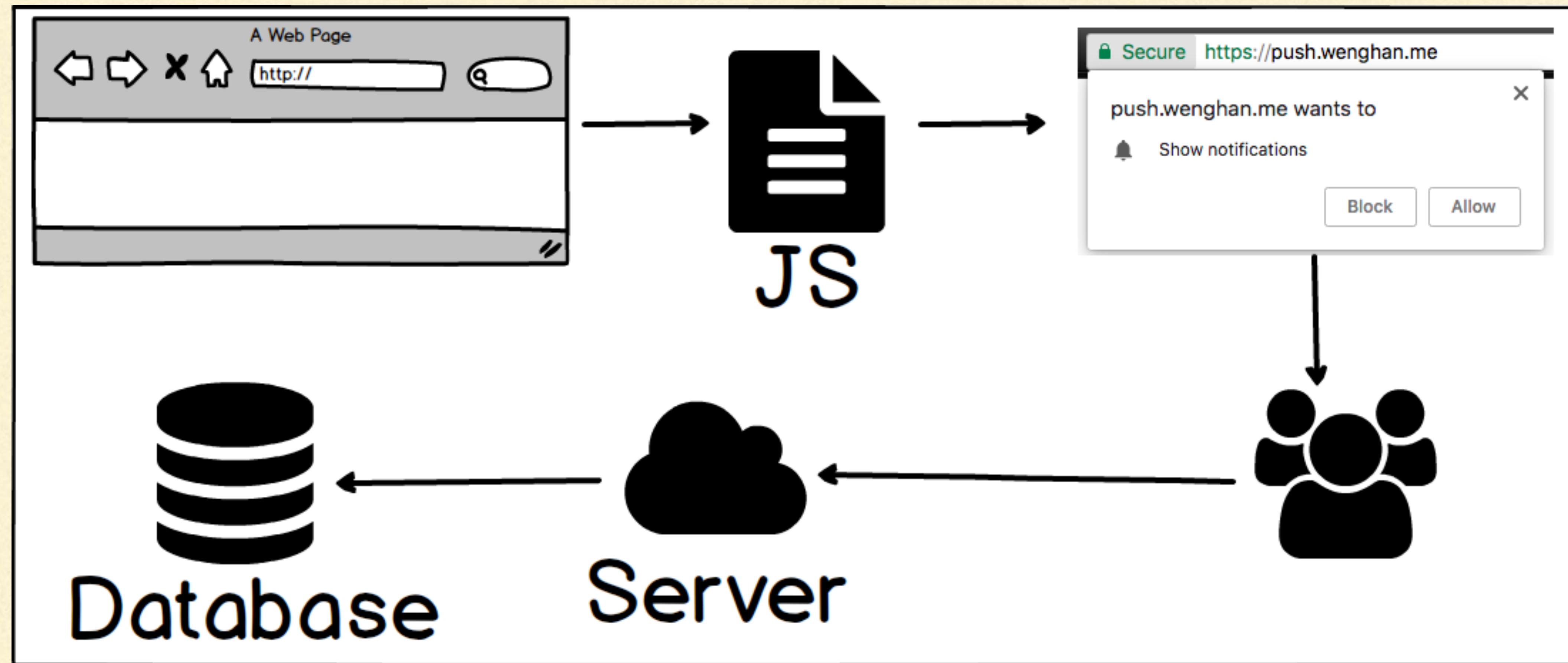
Safari Push Notifications

Use the Apple Push Notifications Service to send notifications to your website users, right on their Mac desktop — even when Safari isn't running. Safari Push Notifications work just like push notifications for apps. They display your website icon and notification text, which users can click to go right to your website.





Push notification

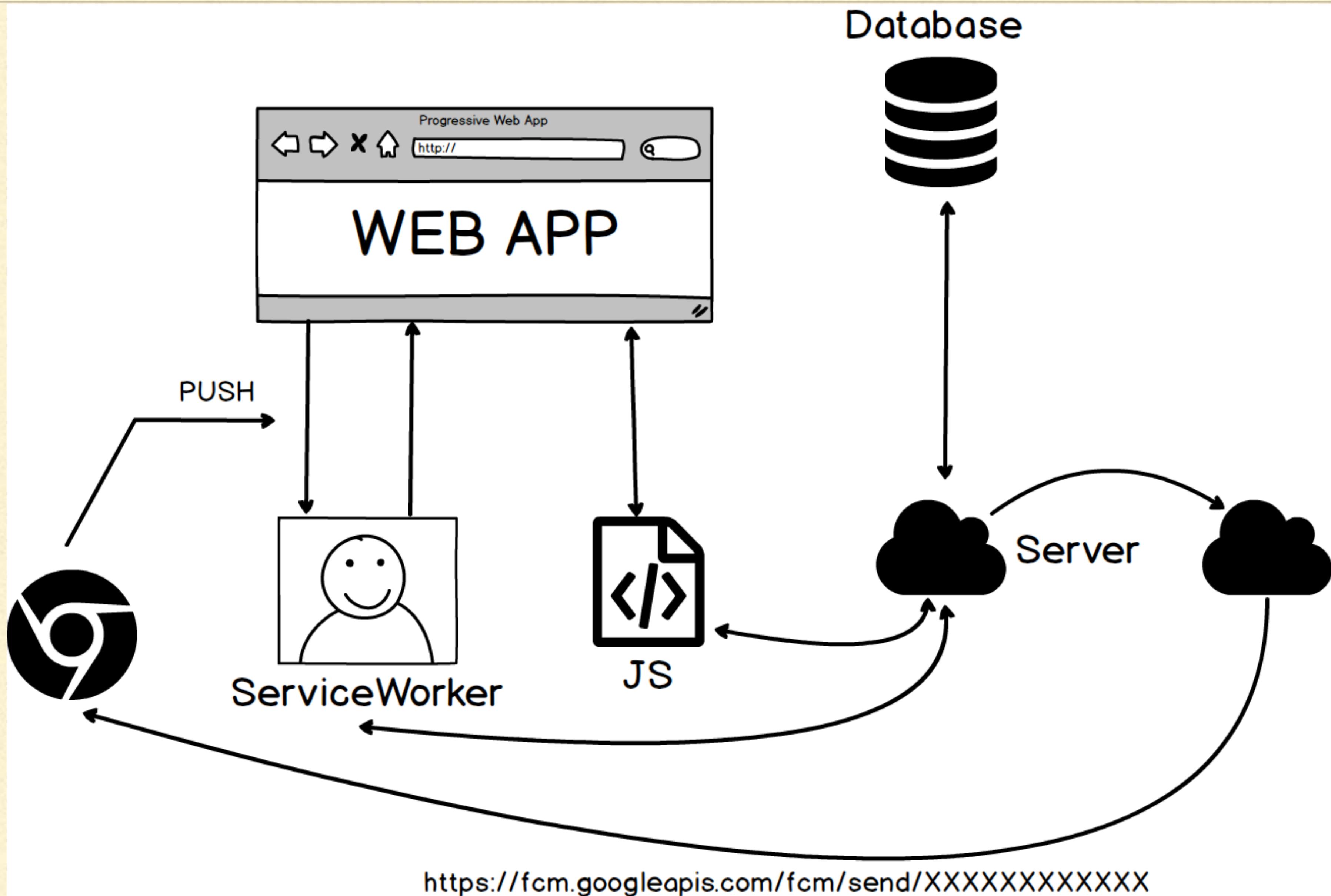


User have to accept to make Push Notification works.

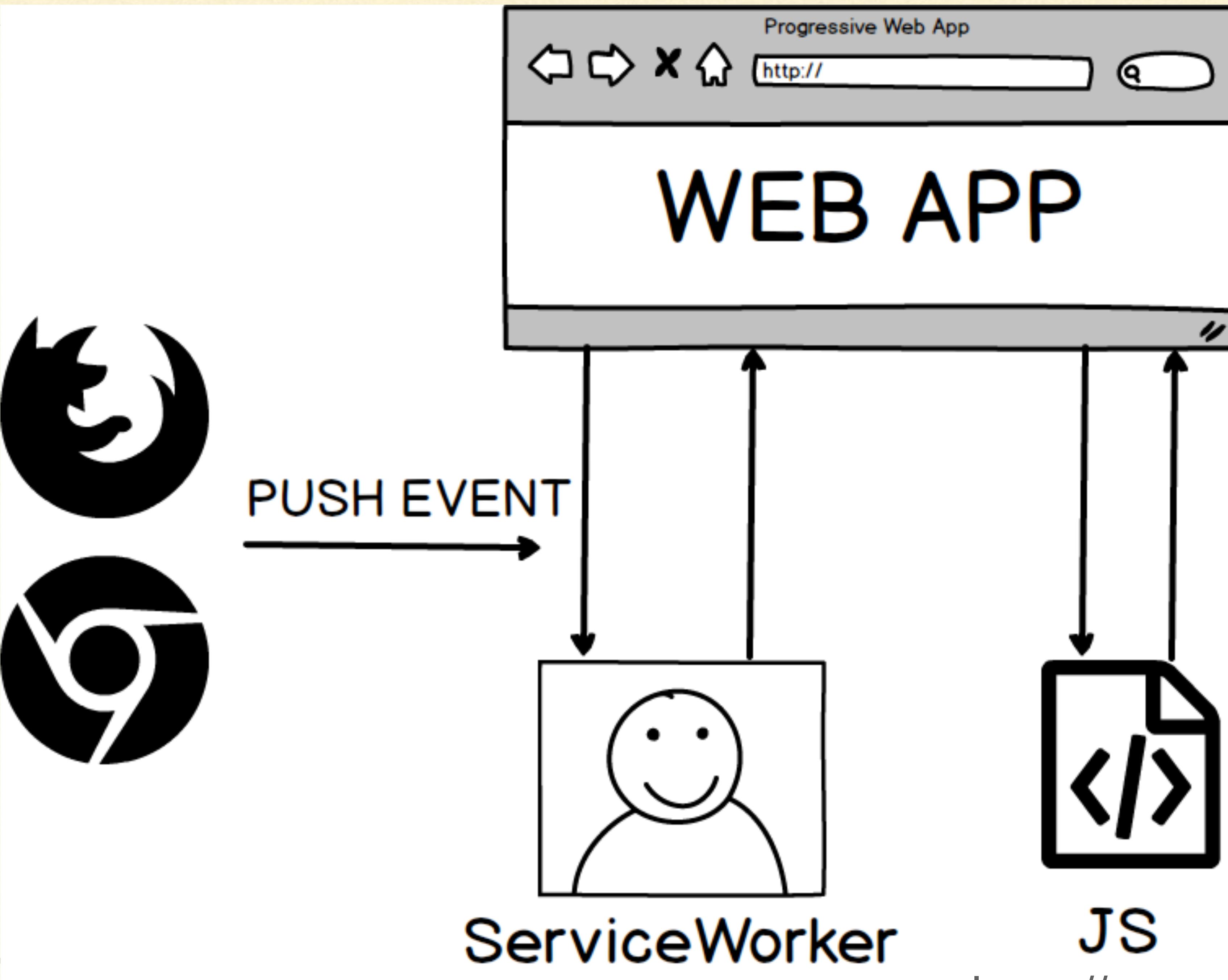
```
{  
  subscription: {  
    endpoint: "https://updates.push.services.mozilla.com/wpush/v2/XXX"  
    keys: {  
      auth: "XXXXXXX",  
      p256dh: "XXXXXXX"  
    }  
  }  
}
```

SEND TO BACKEND

VAPID KEY



Push notification



DEMO PUSH NOTIFICATION

<https://barcamp.surge.sh>

<https://pwa-web.wenghan.me>

DEMO
OTHER COOL
STUFF

<https://barcamp.surge.sh>

<https://pwa-web.wenghan.me>

2:55

echrome.github.io/samples/payment [2] :

PaymentRequest Free Shipping Sample

Available in [Chrome 53+](#) | [View on GitHub](#) | [Browse Samples](#)

Background

Payment Request API samples

 PaymentRequest Free Shipping Sample x

googlechrome.github.io

Order summary

Donation	USD \$55.00
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Shipping

Eiji Kitamura
Ripping Hills Mori Tower 4...ato-ku, TOKYO, 106-6144
1111-1111
Free shipping worldwide

Payment

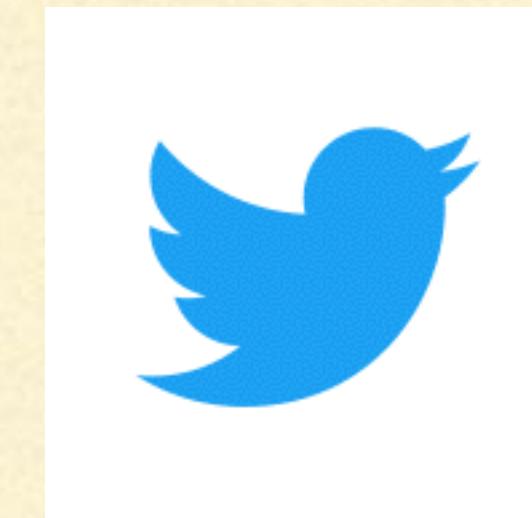
Visa •••• 4242, Eiji Kitamura

VISA

EDIT PAY

PAYMENT REQUEST API

<https://developers.google.com/web/fundamentals/payments/>



AliExpress™

<https://www.pwastats.com>

