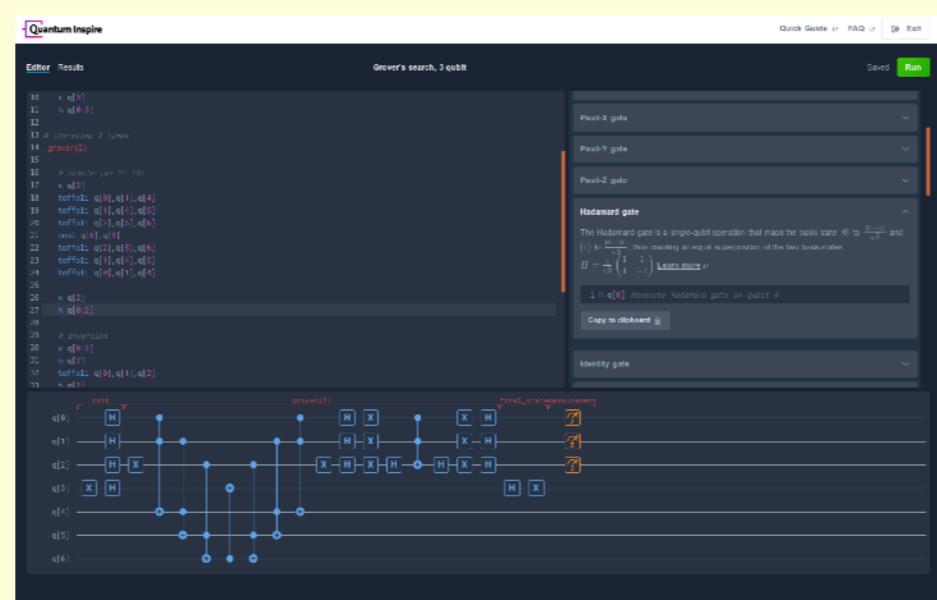
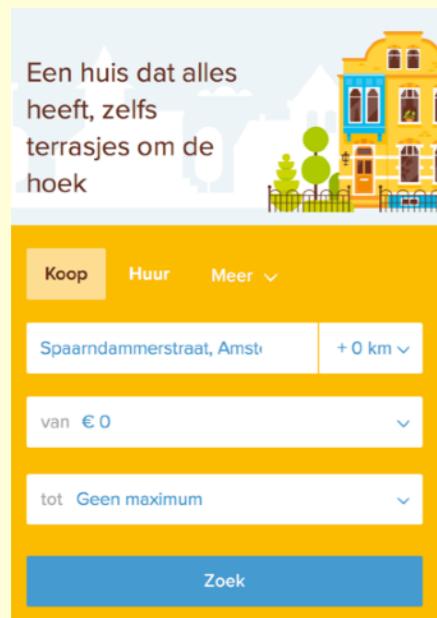




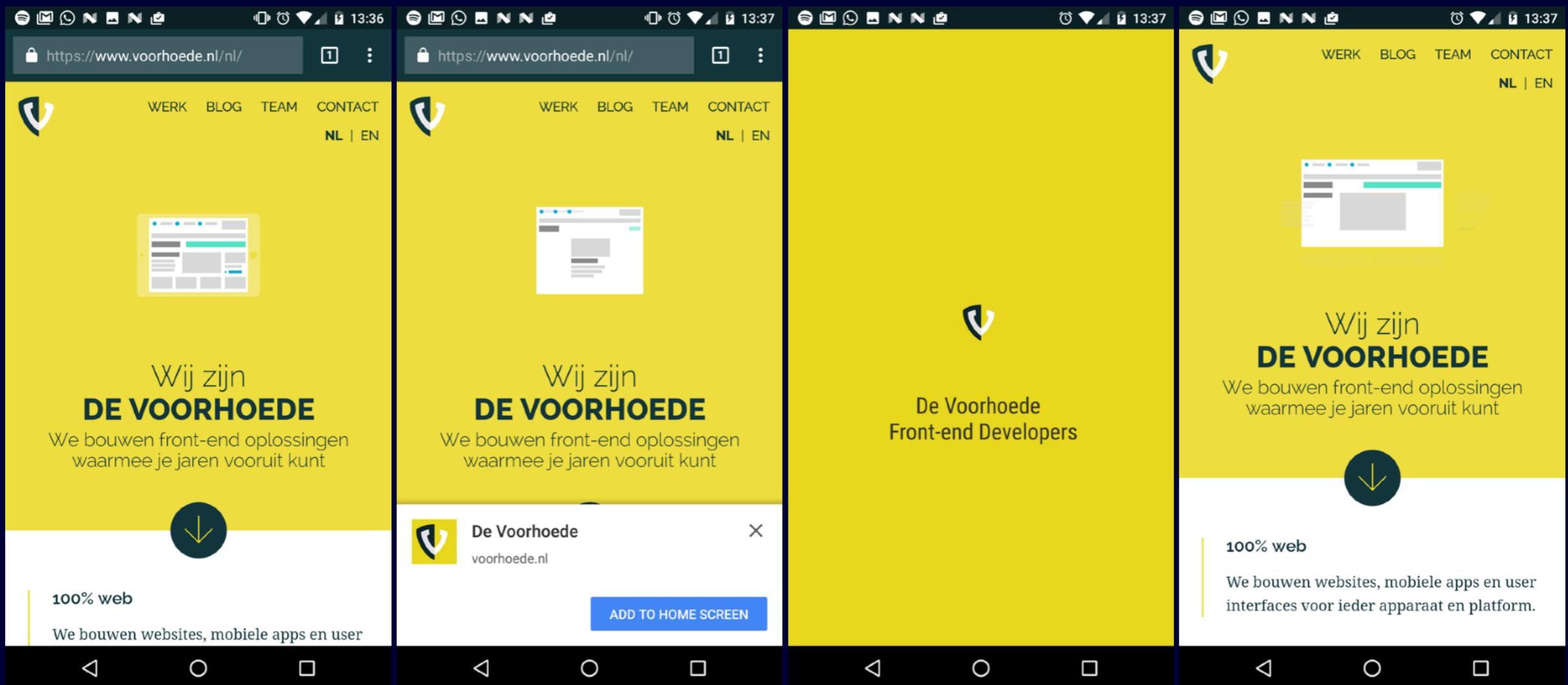
Bringing PWAs to the stores

Declan Rek

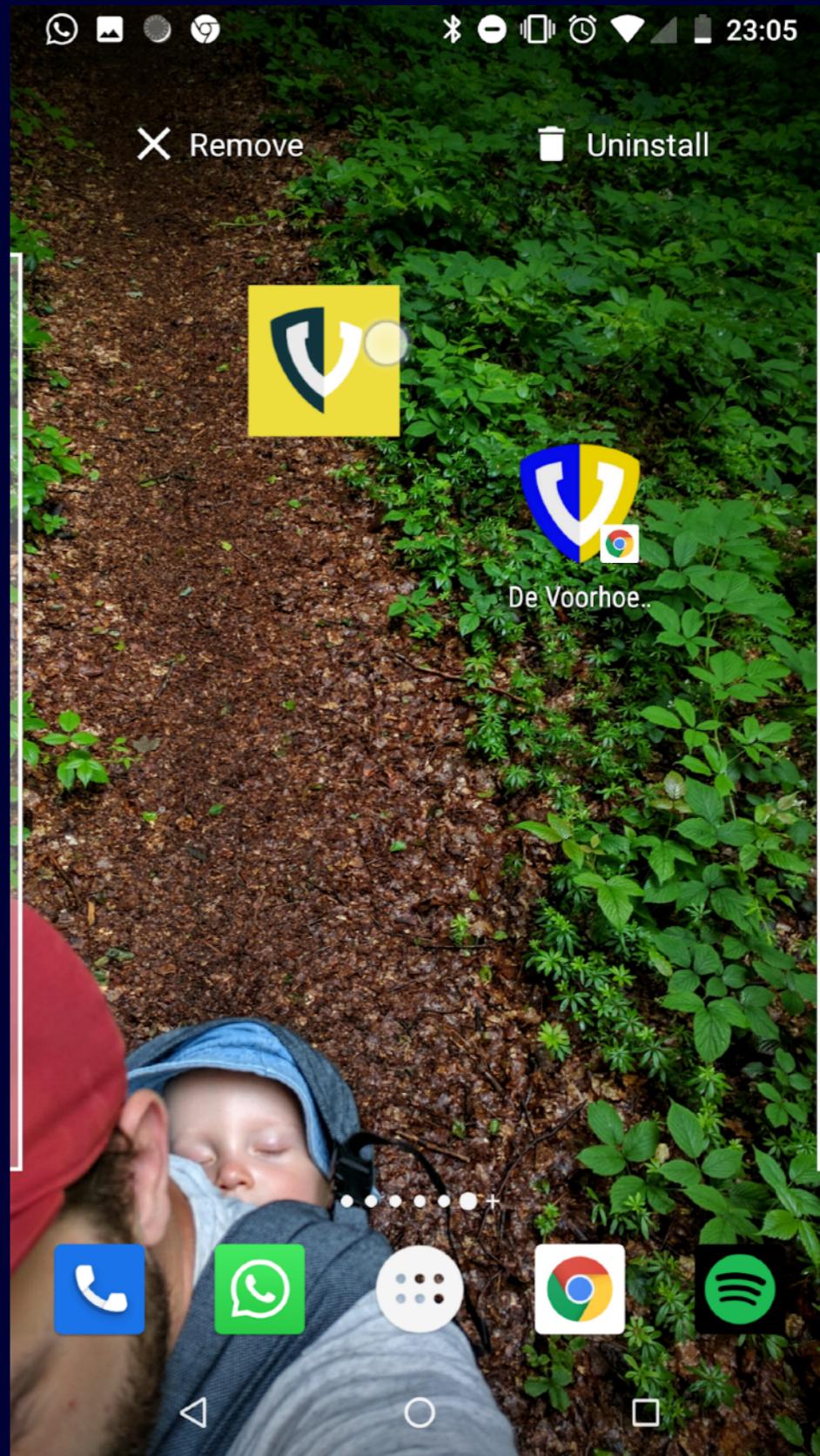
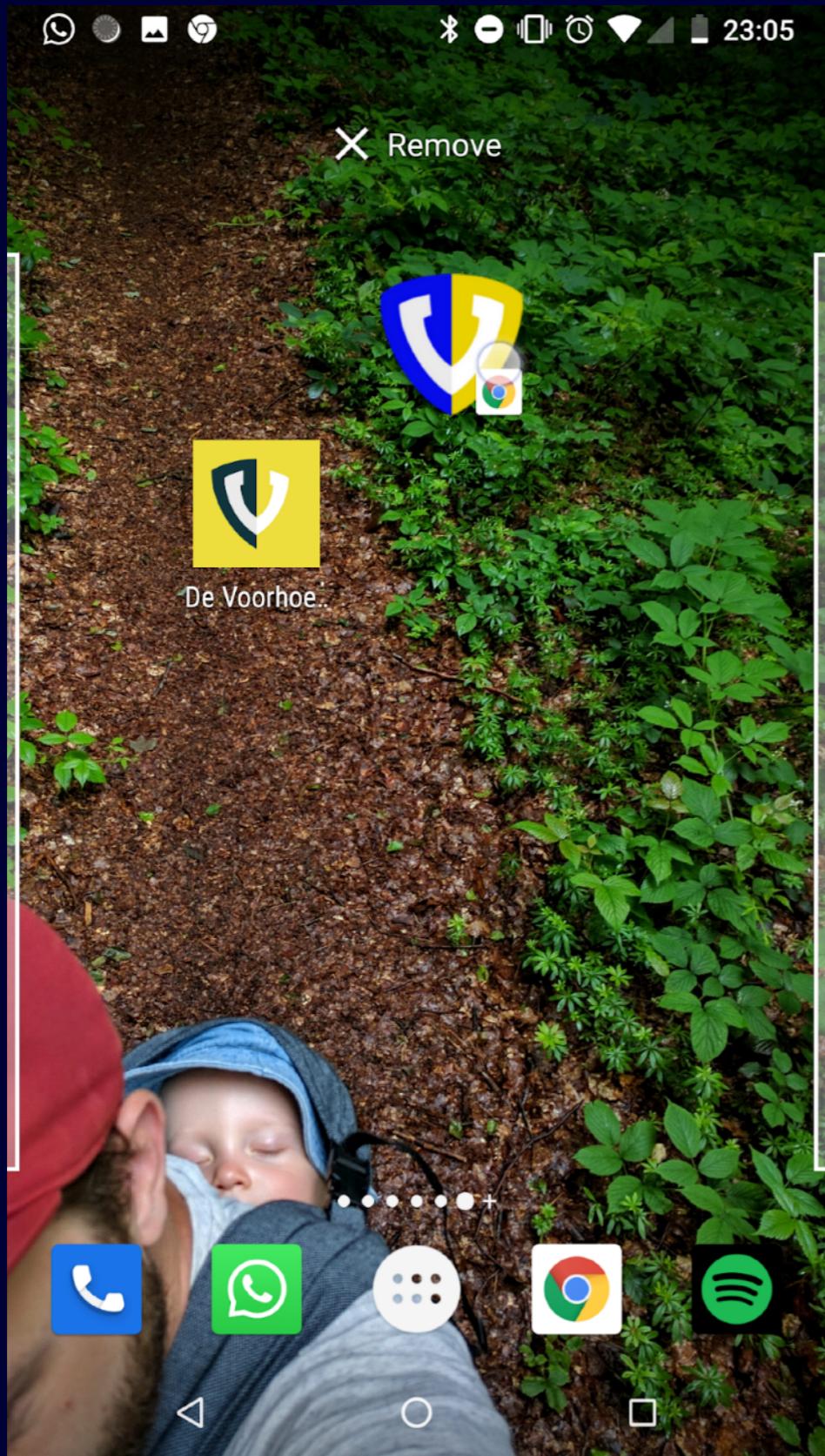
You might know us from

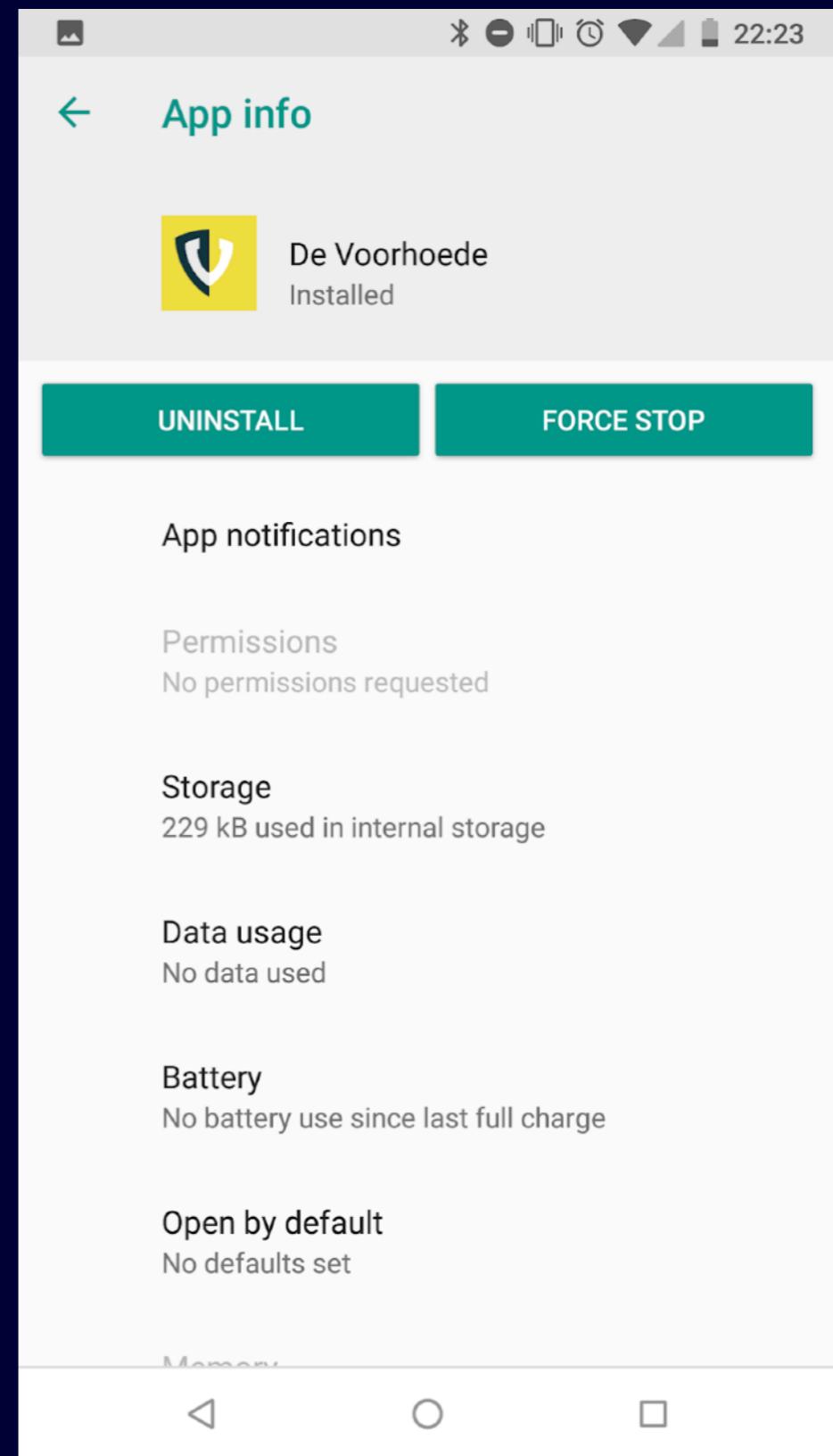
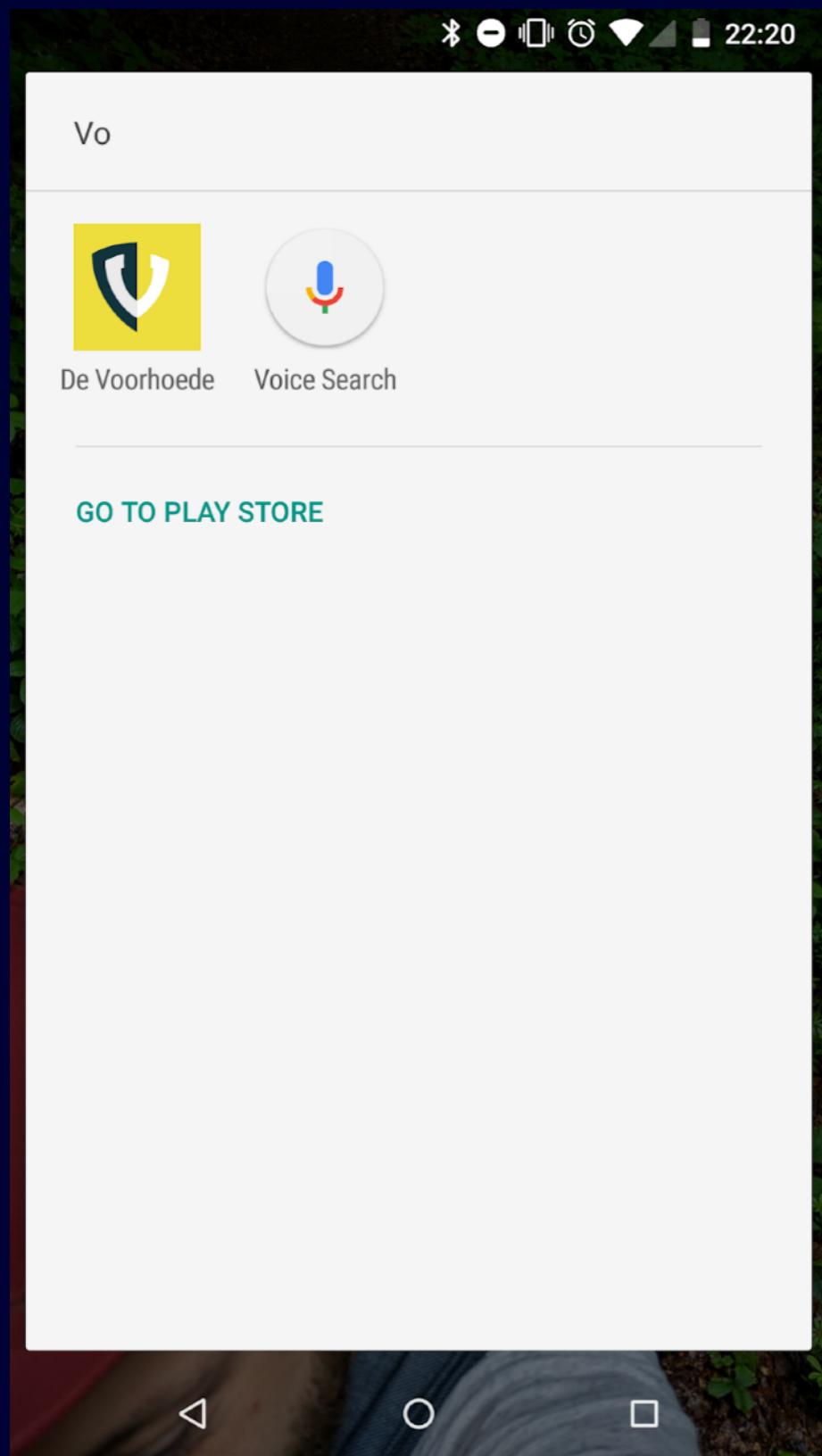


The state of installability









Home | TROUW Web Authentication API - Web

trouw.nl

KLANTENSERVANT

www.trouw.nl wants to
Show notifications

Block Allow

KRANT NIEUWSBRIEF PUZZELS

INLOGGEN ZOEKEN ABONNEREN

deVerdieping
Trouw

HOME RELIGIE EN FILOSOFIE GROEN DEMOCRATIE SAMENLEVING CULTUUR OPINIE


MAKREELRILLETTES MET COURGETTESALADE EN
FOCACCIA
KLIK HIER VOOR HET RECEPT VAN VANDAAG

 WAT
ETEN
WE
VANDAAG?
VANDAAG 16:45 KANAAL 24

SORTEER OP: UITGELICHT | NET BINNEN



Akkoord over publieke omroep: veel minder reclame



Er ligt een pensioenakkoord op tafel,
nu is het wachten op de FNV-leden



Instant static web pages with  x

Secure <https://www.voorhoede.nl/en/blog/instant-static-web-pages-with-service-worker/>

www.voorhoede.nl wants to

Show notifications

Block Allow

site implosion with Brotli and Gzip
crushed our server response size like a musty Austrian bun

Share on

f    

Back to blog overview

Receive our blog updates

Turn notifications off  RSS Feed

Chrome File Edit View History Bookmarks People Window Help

Websap! websap.herokuapp.com

WEBSAP! Hi Declan

bot

Welcome to the chat!

Hi there!

You can prevent the install banner by listening for 'beforeinstallprompt' like so:

```
window.addEventListener('beforeinstallprompt', (e) => {  
  e.preventDefault();  
  window.deferredPrompt = e;  
});
```

SENT

The screenshot shows a web browser window with the title 'Websap!' and the URL 'websap.herokuapp.com'. The page has a dark teal header with the 'WEBSAP!' logo and a user profile placeholder. Below the header, the text 'Hi Declan' is displayed. A message from the bot, 'Welcome to the chat!', is shown with a timestamp 'Sent Wednesday June 4 at 23:10'. The user responds with 'Hi there!' at 'Wednesday June 4 at 23:14'. The bot then provides instructions on how to prevent an install banner using a 'beforeinstallprompt' event listener and shows a sample code snippet:

```
window.addEventListener('beforeinstallprompt', (e) => {  
  e.preventDefault();  
  window.deferredPrompt = e;  
});
```

>About Version

https://websap.herokuapp.com/

Google https://websap.herokuapp.com

https://websap.herokuapp.com - Google Search

OS: Mac OS X
JavaScript: v8 7.7.16
Flash: 32.0.0.207 /Users/declanrek/Library/Application Support/Google/Chrome Canary/PepperFlash/32.0.0.207/PepperFlashPlayer.plugin

User Agent: Mozilla/5.0 (Macintosh; Intel Mac OS X 10_14_4) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/77.0.3815.0 Safari/537.36

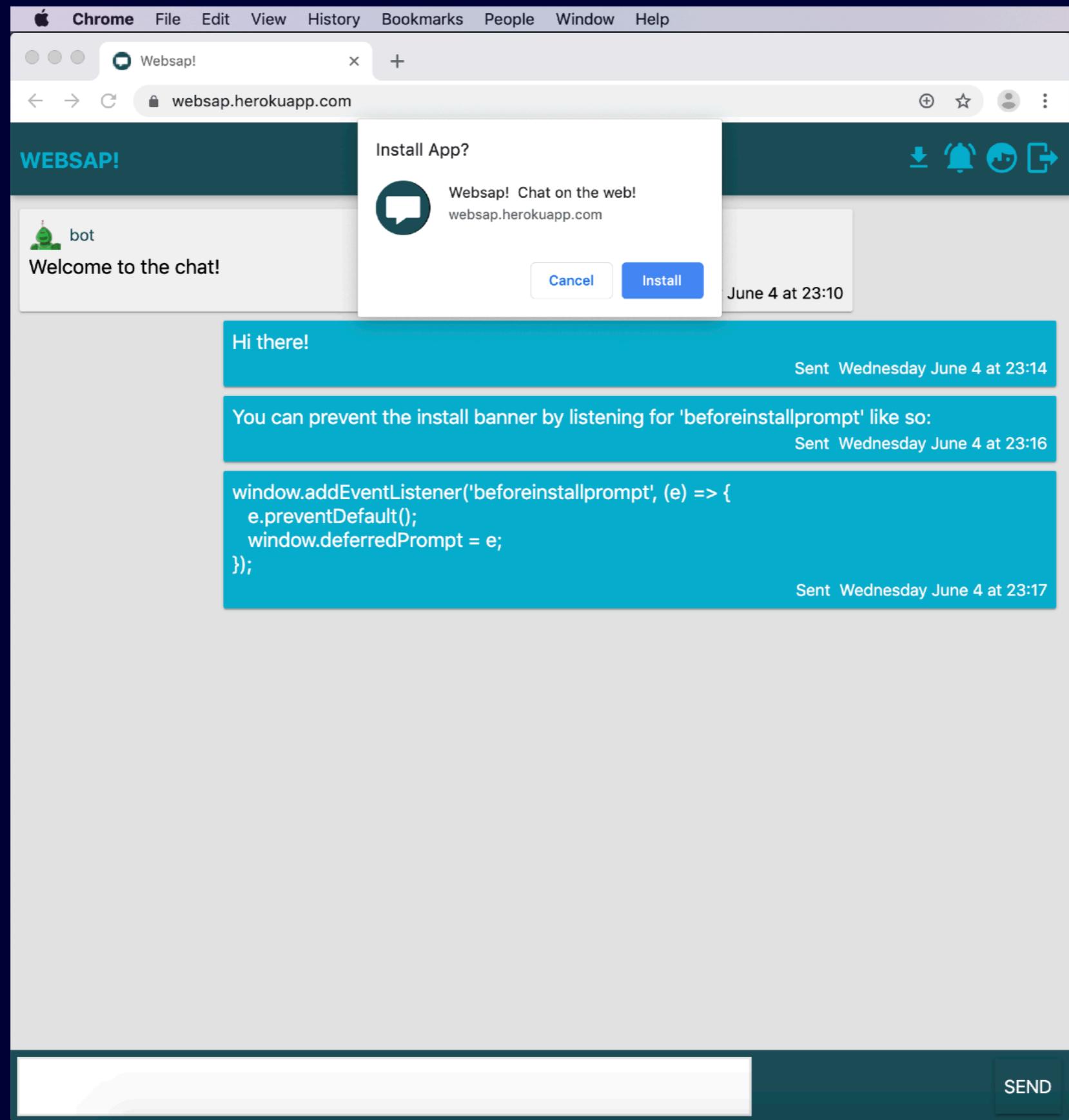
Command Line: /Applications/Google Chrome Canary.app/Contents/MacOS/Google Chrome Canary --flag-switches-begin --flag-switches-end

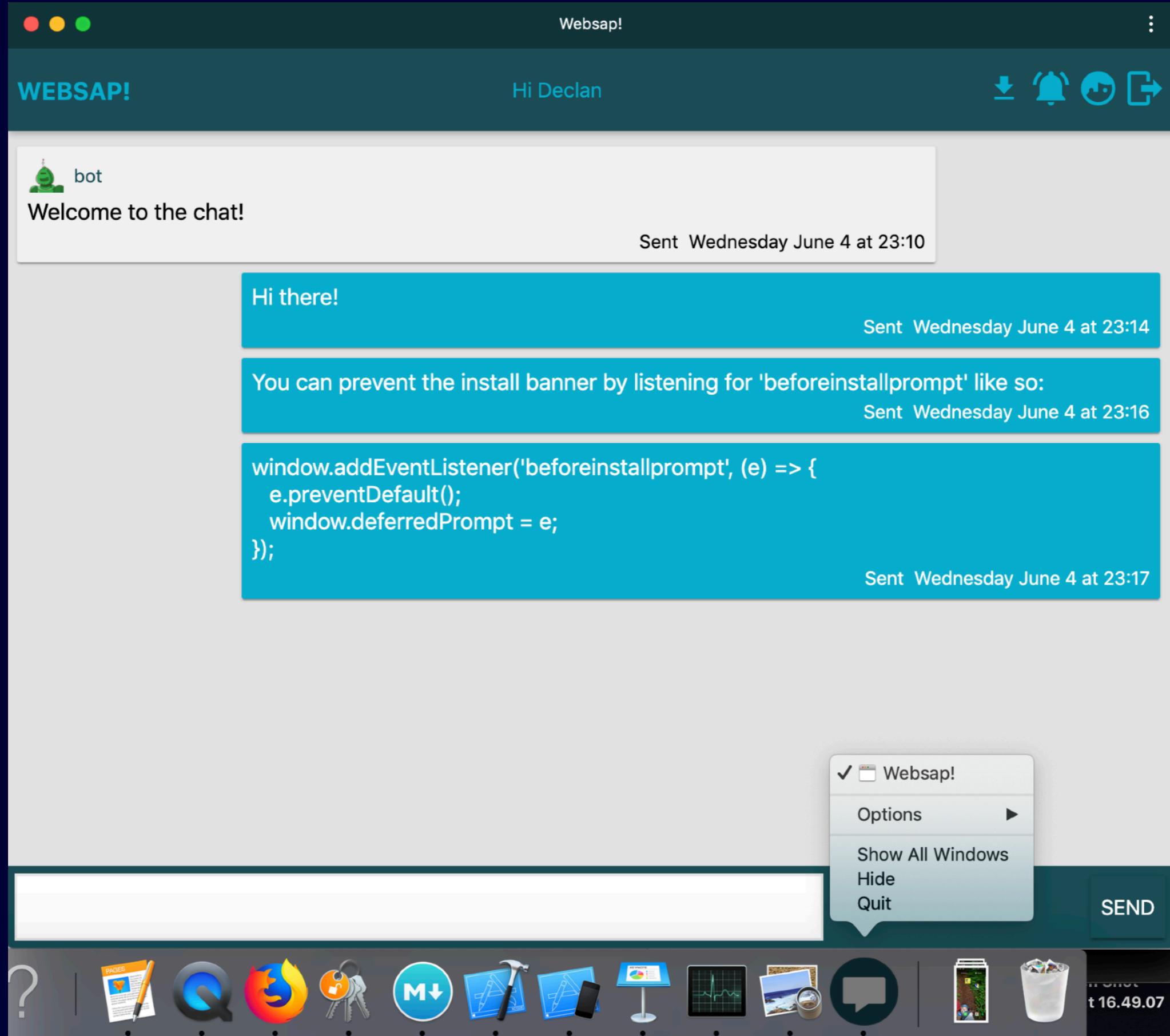
Executable Path: /Applications/Google Chrome Canary.app/Contents/MacOS/Google Chrome Canary

Profile Path: /Users/declanrek/Library/Application Support/Google/Chrome Canary/Profile 1

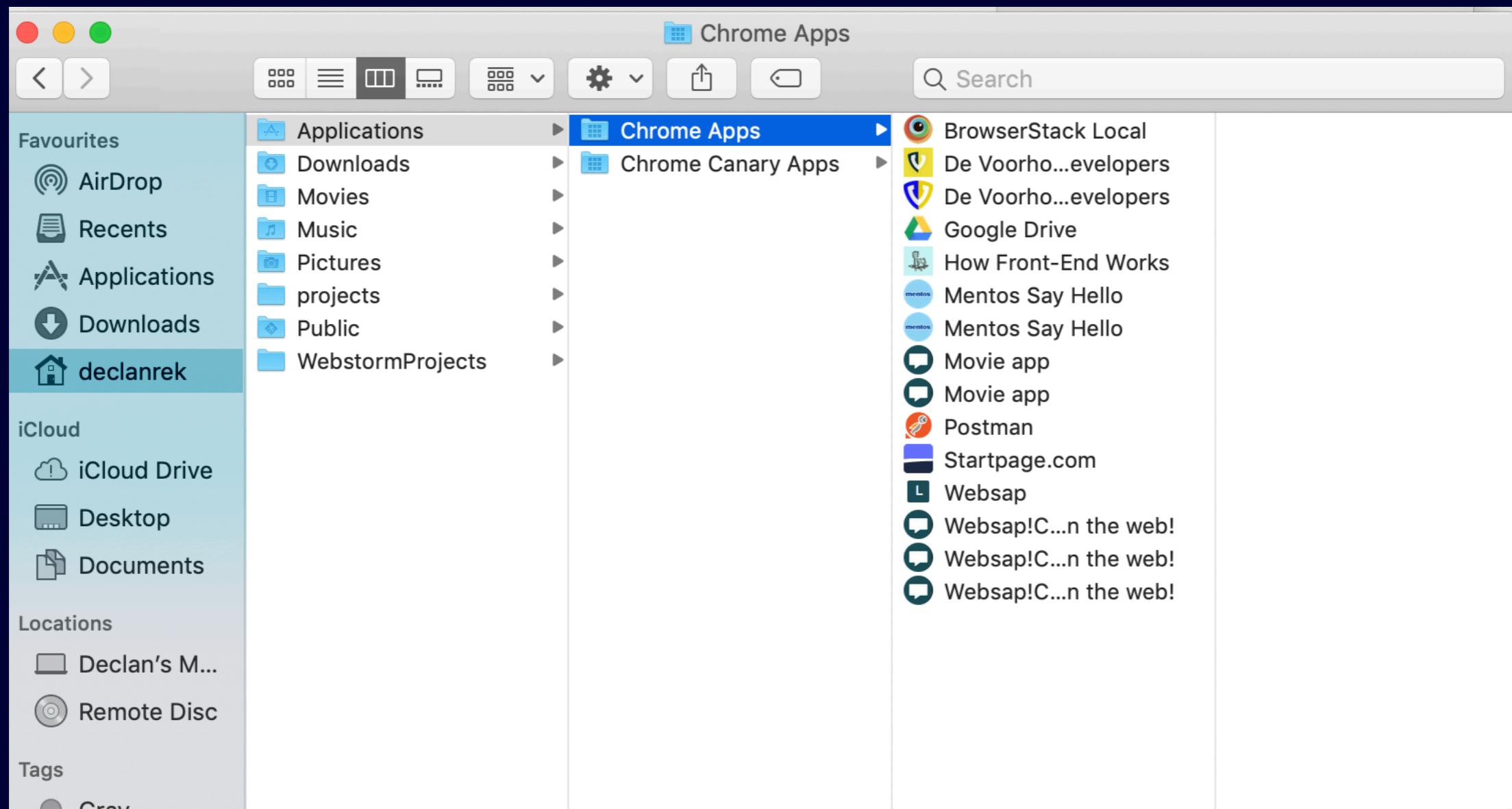
Variations:

- d01ab0d3-ca7d8d80
- 16e0dd70-3f4a17df
- 414bf2d2-3f4a17df
- 976622d1-abc3637b
- 2b6ab552-973e9b3e
- f88a4127-43c52a3b
- 273268f8-ca7d8d80
- d2e3e220-9a559339
- da89714-66b7486
- 8f029c91-ca7d8d80
- f235a73c-f23d1dea
- f33d9fff-16e66a43
- 7903da77-1410f10
- c7c4e160-9bdf44c5
- afb5d7b8-f23d1dea
- 6025934e-3f4a17df
- 7c1bc906-b5809d46
- d442dfb7-ca7d8d80
- 4fd665d-3f4a17df
- 71ed337-7c7ea110
- 7ecf6693-3f4a17df

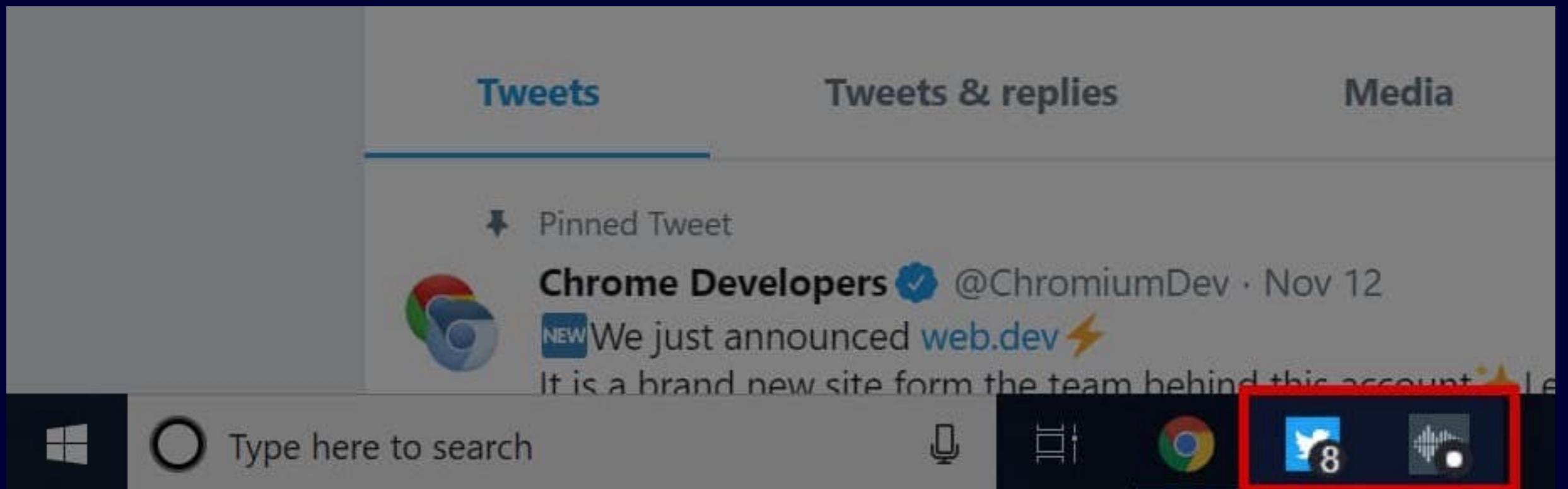




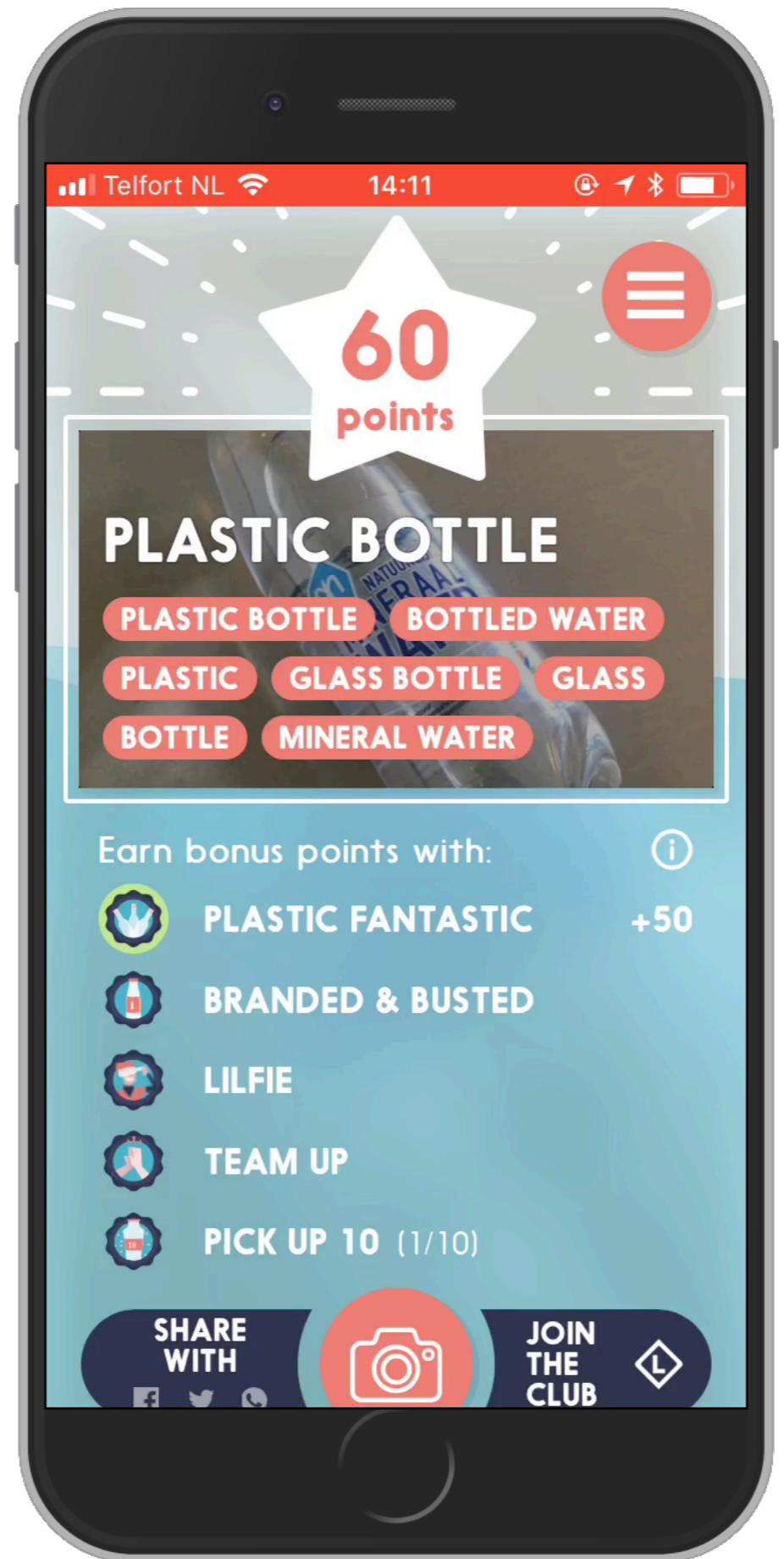
PWA's replace deprecated Chrome Apps



**Badging API (as origin trial),
Twitter with 8 notifications and another app showing a
flag type badge.**



[Badging API](#)



**But what about
the stores?**

WHY?!

PWA's are apps on the open web!?

We trained users to use native apps.
Replace an already native app.
Product owner.
iOS homescreen presence is a primary
feature.

Advantages over standard PWA

Home Screen Widget

App Shortcuts

Re-installement

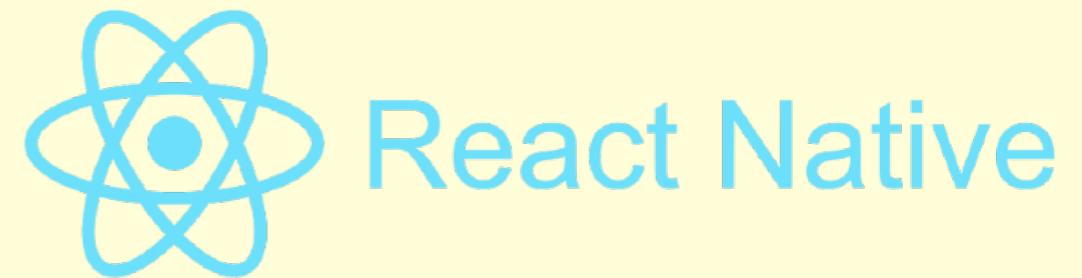
Monetization

Mix native screens with PWA

Reviews and ratings

Business insights

How we used to do it



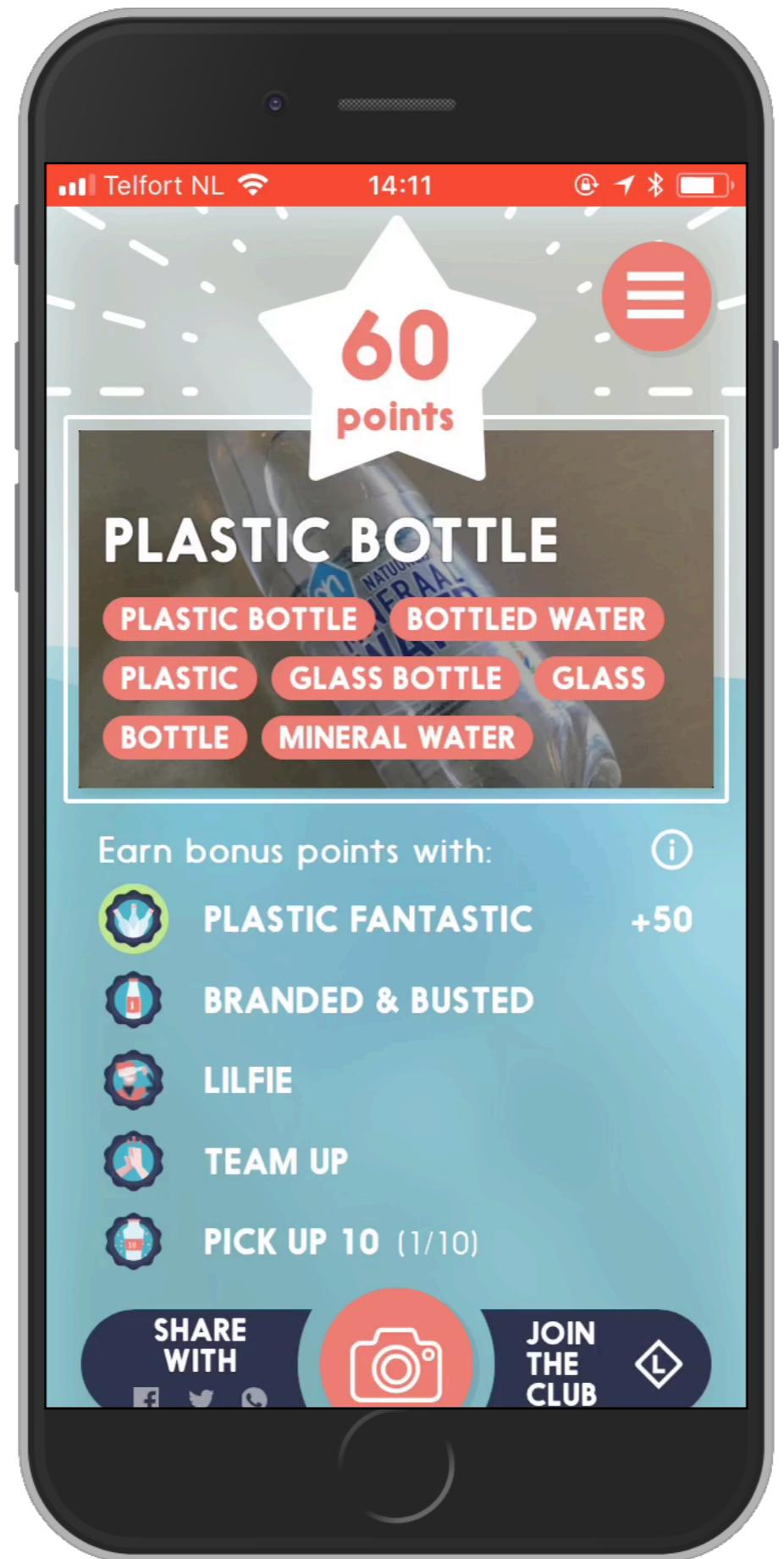


Trouw, Volkskrant en Parool

WebViews don't share state with the browser, add maintenance overhead and are generally less capable browsers.

developer.chrome.com/customtabs

We can do better

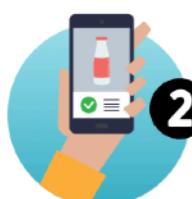




Help prevent plastic litter from
ending up in our waterways. Call
policymakers and CEOs to change
with your pics. Start now!



1 TAKE A PIC OF LITTER



2 THE MAGIC HAPPENS:
WE IDENTIFY WHAT'S IN
THE PICTURE



3 WE USE YOUR PICTURE
TO CONFRONT
COMPANIES WITH
THEIR LITTER

START CHALLENGE



Performance



Progressive Web App

Score scale: 90-100 50-89 0-49



Performance

Metrics

First Contentful Paint	0.9 s ✓	First Meaningful Paint	0.9 s ✓
Speed Index	1.3 s ✓	First CPU Idle	3.8 s ⓘ
Time to Interactive	3.8 s ✓	Estimated Input Latency	20 ms ✓

[View Trace](#)



Values are estimated and may vary.

Diagnostics

More information about the performance of your application.

1 Minimize Critical Requests Depth

4 chains found

✓ Passed audits

21 audits

Progressive Web App

These checks validate the aspects of a Progressive Web App. [Learn more](#).



Fast and reliable

1 Page load is fast enough on mobile networks

✓

2 Current page responds with a 200 when offline

✓

Play Store

Custom Tabs

App developers face a choice when a user taps a URL to either launch a browser, or build their own in-app browser using `WebView`s.

Custom Tabs gives the developer more control and opens Chrome in your native app.

developer.chrome.com/customtabs

23:08

X https://www.pickup10.org

PICK·UP·10

Help prevent plastic litter from ending up in our waterways. Call policymakers and CEOs to change with your pics. Start now!

1 TAKE A PIC OF LITTER

2 THE MAGIC HAPPENS: WE IDENTIFY WHAT'S IN THE PICTURE

This screenshot shows a mobile browser displaying the Pickup10 website. The top navigation bar includes icons for signal strength, battery level, and time (23:08). The address bar shows the URL https://www.pickup10.org. The main content features a large red banner with the text 'PICK·UP·10' and a call to action: 'Help prevent plastic litter from ending up in our waterways. Call policymakers and CEOs to change with your pics. Start now!'. Below this, there are two numbered steps: '1 TAKE A PIC OF LITTER' (illustrated with a hand holding a smartphone taking a photo of a bottle) and '2 THE MAGIC HAPPENS: WE IDENTIFY WHAT'S IN THE PICTURE' (illustrated with a hand holding a smartphone displaying a green checkmark and a list). The bottom of the screen shows standard Android navigation buttons.

1:52

X https://www.voorhoede.nl

De Voorhoede EN | NL

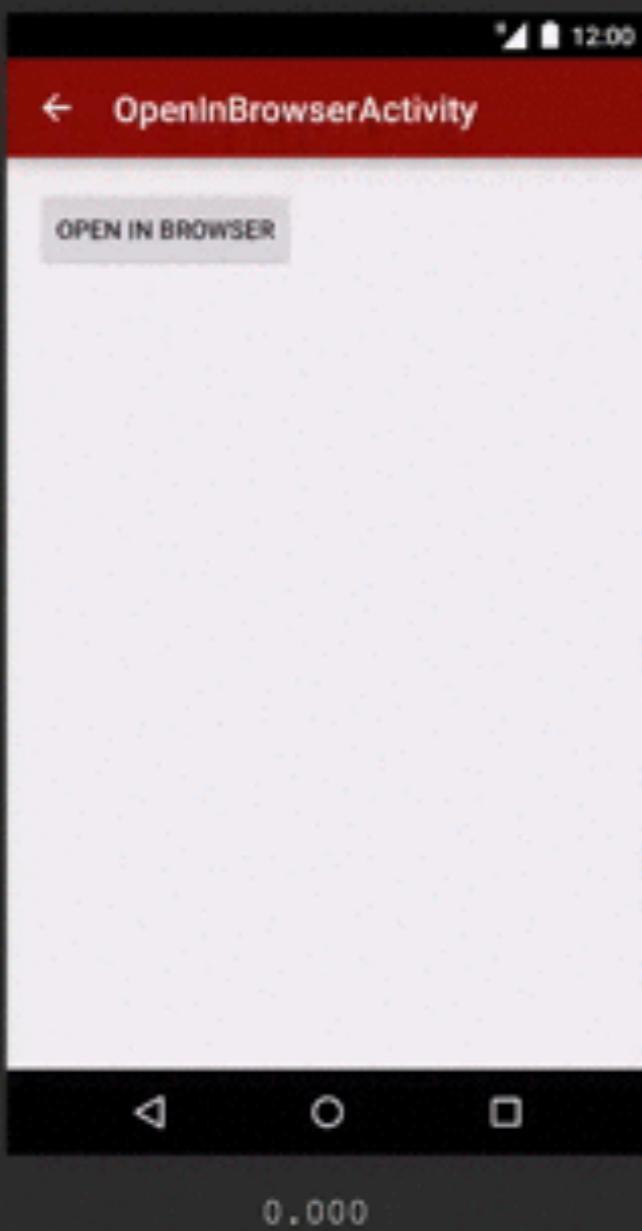
We are De Voorhoede

How can we help?

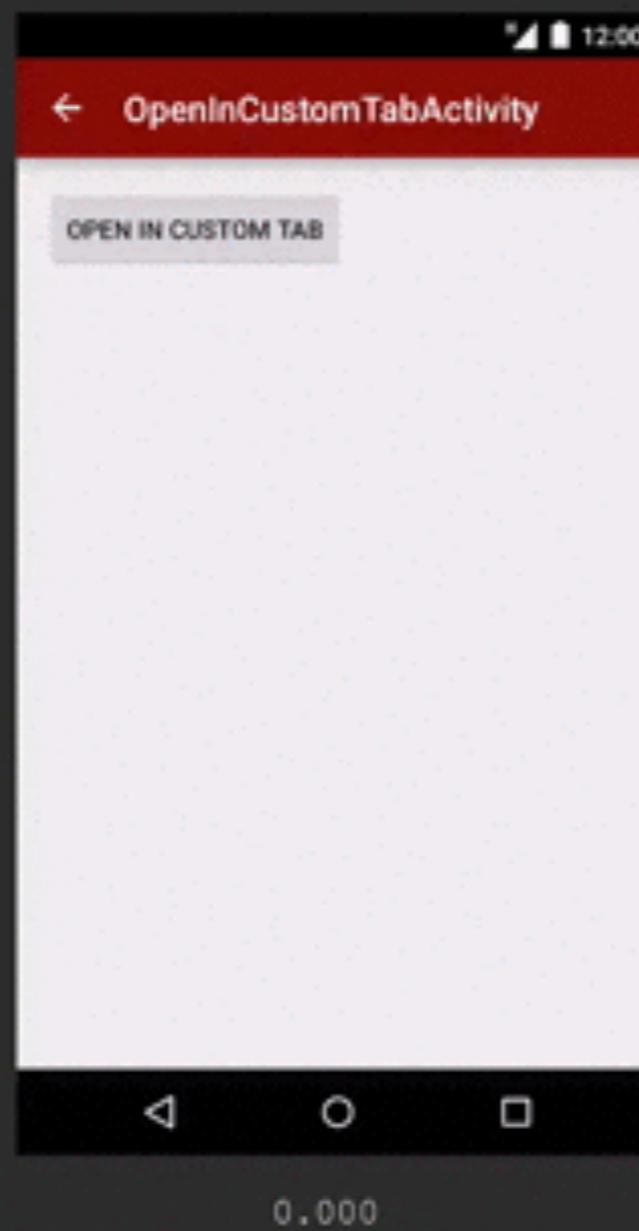
SCROLL

This screenshot shows a mobile browser displaying the De Voorhoede website. The top navigation bar includes icons for signal strength, battery level, and time (1:52). The address bar shows the URL https://www.voorhoede.nl. The main content features the De Voorhoede logo and language links (EN | NL). Below this, the text 'We are De Voorhoede' is displayed. The central focus is a large blue text 'How can we help?'. At the bottom, there is a yellow rectangular area containing a cartoon illustration of three stylized figures: a superhero-like figure, a woman in a bikini, and a man in a mask. A blue arrow points downwards next to the word 'SCROLL', indicating where to swipe to continue. The bottom of the screen shows standard Android navigation buttons.

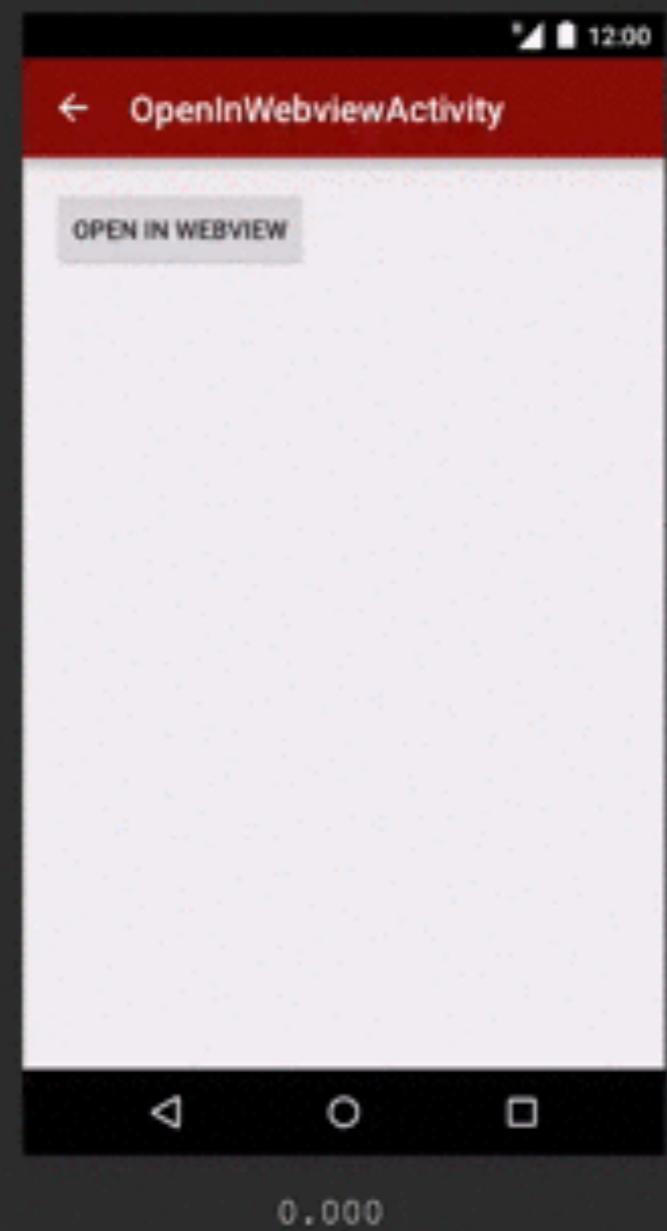
Chrome



Chrome Custom Tabs



WebView



developer.chrome.com/customtabs

Trusted Web Activity (TWA)

Open Chrome in standalone mode (without any toolbar or Chrome UI) within the scope of a native Android package

[Maximiliano Firtman](#)

≡ All applications

 Search for apps All applications Game services Order management Download reports Alerts Settings Alert - One of your apps needs attention

One or more of your apps were removed for violation of Google Play policies. Once you address the issues you can resubmit your apps.

Filter ▾

CREATE APPLICATION

App name	Active installs	New Google Play rating	Last update	Status	
 De Voorhoeede nl.voorhoeede.hybrid	—	★ —	Oct 18, 2016	Removed	
 Drinks com.voorhoeede.drinks	1	★ —	May 28, 2019	Published	
 Pick Up 10 com.voorhoeede.pickup10	12	★ —	Feb 20, 2019	Published	
 Trouw Beta be.persgroep.TR	—	★ —	Jan 17, 2017	Removed	

Page 1 of 1

The screenshot shows the Google Play Developer Console interface. The left sidebar has a tree view with categories like Dashboard, Statistics, Android vitals, Development tools, Release management (expanded), Release dashboard, App releases, Android Instant Apps, Artifact library, Device catalog, App signing (selected), Pre-launch report, Store presence, User acquisition, and User feedback. The main content area is titled "App signing". It shows a green checkmark icon and the text "App Signing by Google Play is enabled for this app." with a "Learn more" link. Below this is a section titled "How it works" with three numbered steps: 1. You digitally sign each release using your upload key before publishing it to a track in the Play Console. 2. Google Play uses the upload certificate to verify your identity and then re-signs your release using the app signing key for distribution. 3. Each Android device checks the release's app signing certificate matches the certificate of the installed app before updating it. A "Learn more about how App Signing by Google Play works." link is also present. The next section is "App signing certificate" with a "DOWNLOAD CERTIFICATE" button. It contains fields for MD5 certificate fingerprint, SHA-1 certificate fingerprint, and SHA-256 certificate fingerprint, each with a copy icon. Below this is a section titled "Upgrade your app signing key for new installs" with a "REQUEST KEY UPGRADE" button. At the bottom is a "Upload certificate" section with a "DOWNLOAD CERTIFICATE" button.

```
[  
{  
  "relation": [  
    "delegate_permission/common.handle_all_urls"  
  ],  
  "target": {  
    "namespace": "android_app",  
    "package_name": "com.voorhoede.pickup10",  
    "sha256_cert_fingerprints": [  
      "37:41:3A:FA:77:56:08:B6:A7:82:FC:33:7E:DC:A8:5F:EA:43:08:85:68:31:43:A5:37:43:94:88:7D:EF:C1:D3"  
    ]  
  }  
}  
]
```

<https://www.pickup10.org/.well-known/assetlinks.json>

[Pull requests](#) [Issues](#) [Marketplace](#) [Explore](#)[GoogleChromeLabs / svgomg-twa](#)[Watch](#) [17](#)[Star](#) [165](#)[Fork](#) [23](#)[Code](#)[Issues 3](#)[Pull requests 1](#)[Projects 0](#)[Wiki](#)[Security](#)[Insights](#)*No description, website, or topics provided.*[26 commits](#)[1 branch](#)[0 releases](#)[3 contributors](#)[Apache-2.0](#)[Branch: master ▾](#)[New pull request](#)[Create new file](#)[Upload files](#)[Find File](#)[Clone or download ▾](#)

 andrebau Merge pull request #29 from leandro2ki/release-readme	...	Latest commit 10c0f63 5 days ago
 .idea	Refactors configurations on build.gradle	19 days ago
 app	Fix Digital Asset Links	15 days ago
 gradle/wrapper	Initial Commit	5 months ago
 .gitignore	Initial Commit	5 months ago
 CONTRIBUTING.md	Initial Commit	5 months ago
 LICENSE	Initial Commit	5 months ago
 README.md	Update README file with Debugging digital asset links topic	5 days ago
 build.gradle	Initial Commit	5 months ago
 enable-debug.sh	Adds section on how to setup debug	5 months ago
 gradle.properties	Initial Commit	5 months ago
 gradlew	Initial Commit	5 months ago
 gradlew.bat	Initial Commit	5 months ago
 settings.gradle	Initial Commit	5 months ago
 README.md		

[Android Studio](#)[More ▾](#) Search[LANGUAGE ▾](#)[SIGN IN](#)

Android Studio

[DOWNLOAD](#)[WHAT'S NEW](#)[USER GUIDE](#)[PREVIEW](#)

android studio

Android Studio provides the fastest tools for building apps on every type of Android device.

[DOWNLOAD ANDROID STUDIO](#)

3.4.1 for Mac (1026 MB)

[DOWNLOAD OPTIONS](#)[RELEASE NOTES](#)

developer.android.com/studio

The screenshot shows the Android Studio interface with the following details:

- Project Structure:** The left sidebar shows the project structure under "svgomg-twa". The "build.gradle" file is selected and highlighted in blue.
- Code Editor:** The main editor area displays the build.gradle file content. It includes a license block and configuration for a TWA (Thick-Walled Application).

```
1  /*
2   * Copyright 2019 Google Inc.
3   *
4   * Licensed under the Apache License, Version 2.0 (the "License");
5   * you may not use this file except in compliance with the License.
6   * You may obtain a copy of the License at
7   *
8   *     http://www.apache.org/licenses/LICENSE-2.0
9   *
10  * Unless required by applicable law or agreed to in writing, software
11  * distributed under the License is distributed on an "AS IS" BASIS,
12  * WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.
13  * See the License for the specific language governing permissions and
14  * limitations under the License.
15  */
16
17 apply plugin: 'com.android.application'
18
19 def twaManifest = [
20     applicationId: 'com.voorhoede.pickup10',
21     hostName: 'pickup10.org', // The domain being opened in the TWA.
22     launchUrl: '/', // The start path for the TWA. Must be relative to the domain.
23     name: 'Pick Up 10', // The name shown on the Android Launcher.
24     themeColor: '#F26F69', // The color used for the status bar.
25     backgroundColor: '#49B9CD' // The color used for the splash screen background.
26 ]
27
28 android{
```
- Build Output:** The bottom-left panel shows the build history:
 - Build completed successfully at 2019-06-05 23:09 (447 ms)
 - Run build /Users/declanrek/projects/svgomg-twa (393 ms)
 - Load build (2 ms)
 - Configure build (97 ms)
 - Calculate task graph (25 ms)
 - Run tasks (243 ms)
- Toolbars and Icons:** Standard Android Studio toolbars for navigation, search, and Git integration are visible along the top and right edges.

Google Play

Search

De

Apps Categories Home Top Charts New Releases

?

My apps

Shop

Games Family Editors' Choice

Account Payment methods My subscriptions Redeem Buy gift card My wishlist My Play activity Parent Guide

PICK UP 10

Pick Up 10

De Voorhoede Lifestyle

PEGI 3

This app is compatible with your device.

Installed

TAKE A PIC OF LITTER
THE MAGIC HAPPENS: WE IDENTIFY WHAT'S IN THE PICTURE
WE USE YOUR PICTURE TO CONFRONT COMPANIES WITH THEIR LITTER
CONTINUE CHALLENGE
And challenge your friends
SHARE WITH

This is how it works!
Find litter, pick it up, take a picture and score points!
We'll save your pic and use magical image processing to find out what's in it.
TAKE A PIC

Earn points after it automatically gets identified
60 points
WATER BOTTLE
WATER BOTTLES BOTTLE PLASTIC
WATER PLASTIC BAGS LITTER
PLASTIC POLLUTION BEER
Earn bonus points with:
PLASTIC FANTASTIC +50
BRANDED & BUSTED
LILFIE
TEAM UP
PICK UP 10 (1/10)
SHARE WITH JOIN THE CLUB

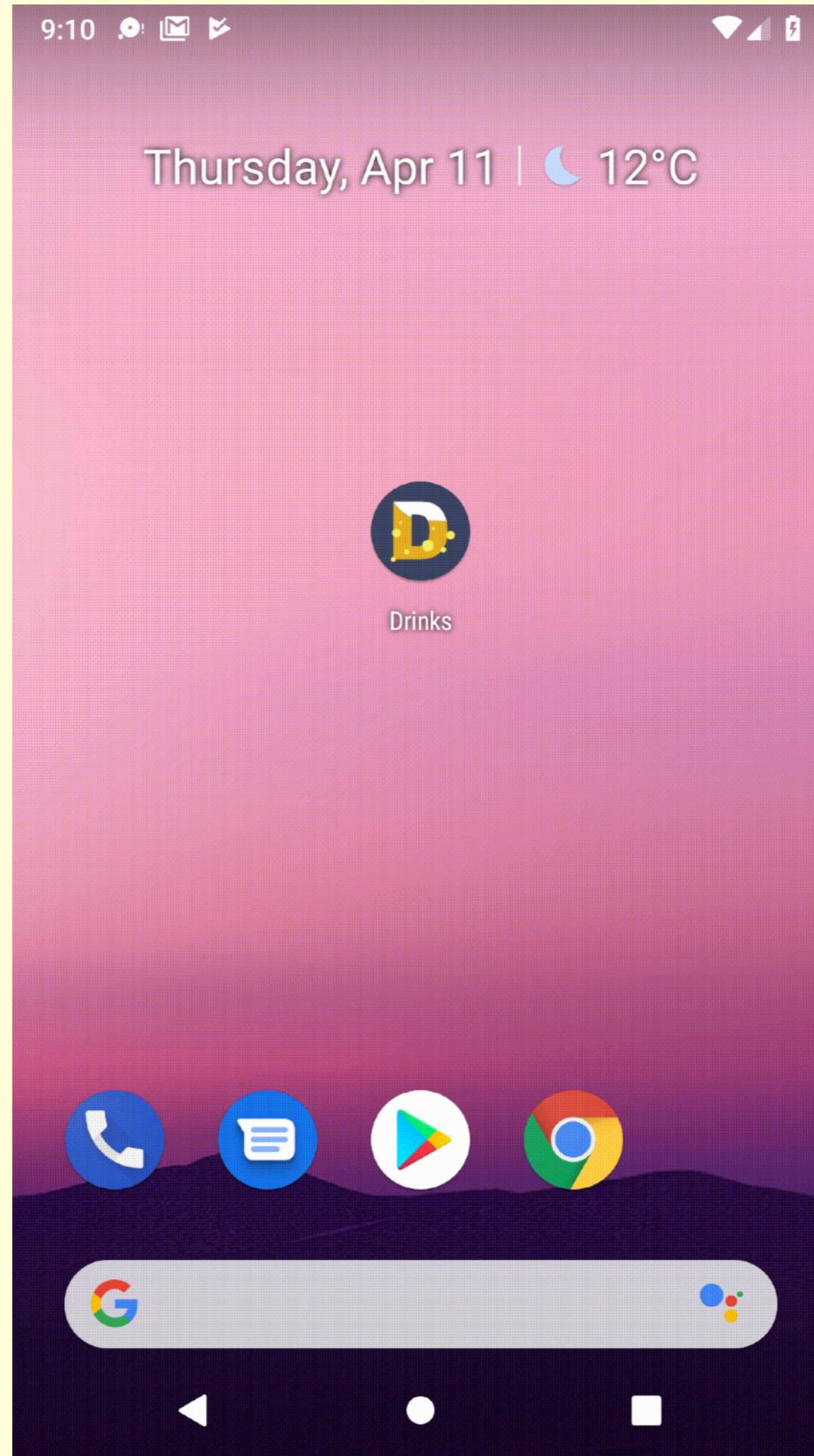
Pros

Relatively easy
Full Chrome
Always fresh

Cons

Android only
Native functionalities?
Monetization?

Adaptive Launcher Icon





Configure Image Asset

Android Studio

Icon Type: **Launcher Icons (Adaptive and Legacy)**

Preview

xxxhdpi

Show Safe Zone Show Grid

Name: **ic_launcher**

Foreground Layer Background Layer Legacy

Layer Name: **ic_launcher_foreground**

Source Asset

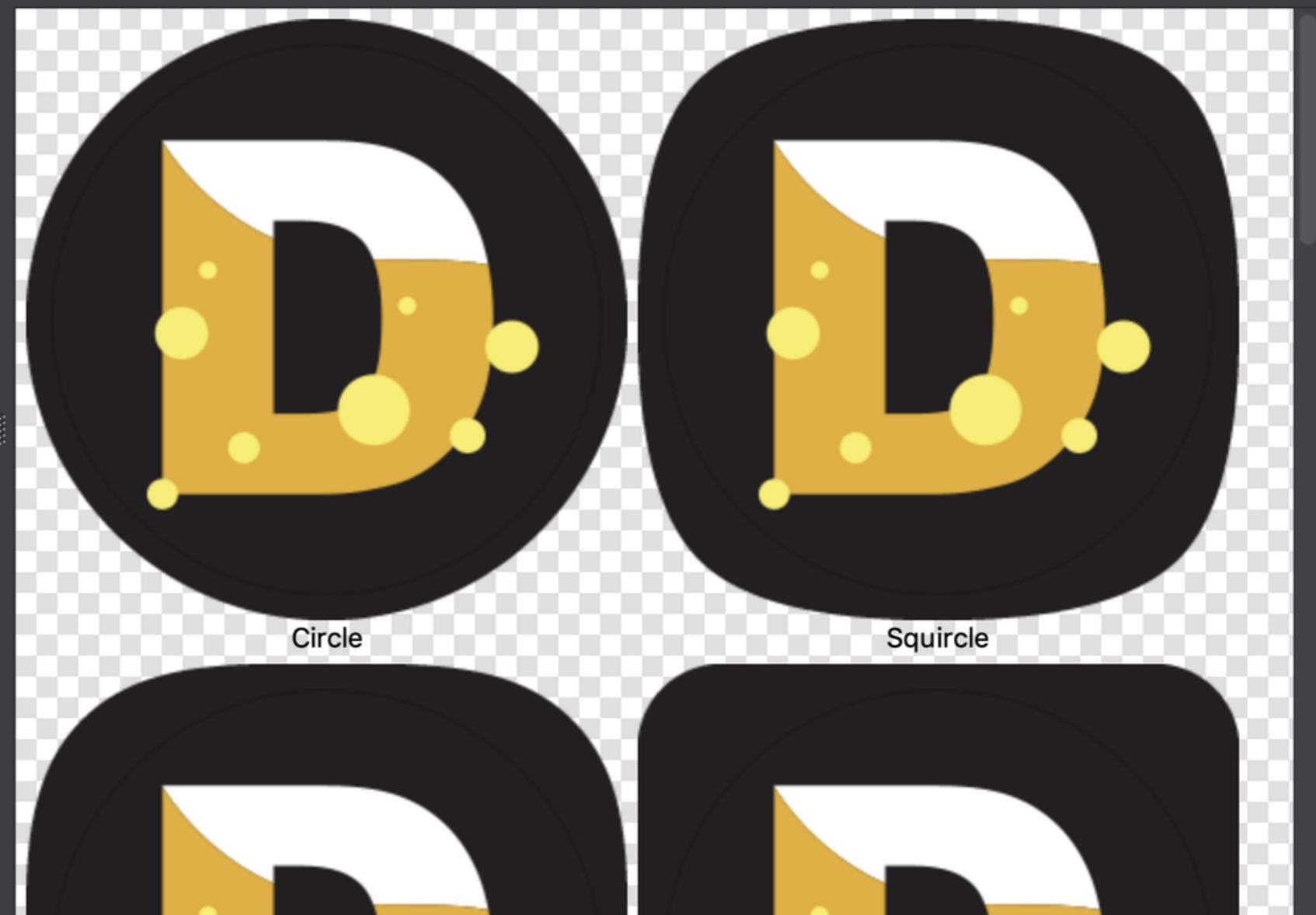
Asset Type: Image Clip Art Text

Path: **/Documents/drinks-app/drinks.svg**

Scaling

Trim: Yes No

Resize:  57 %



⚠ An icon with the same name already exists and will be overwritten.



Cancel

Previous

Next

Finish



```
"prefer_related_applications": true,  
"related_applications": [  
  {  
    "platform": "play",  
    "url": "https://play.google.com/store/apps/details?id=com.voorhoede.pickup10",  
    "id": "com.voorhoede.pickup10"  
  }  
]
```

This will show an install prompt for the native app instead of your PWA

Only prompt for add to home screen if no related apps are installed.



```
window.addEventListener("beforeinstallprompt", e => {
  if (navigator.getInstalledRelatedApps) {
    e.preventDefault(); // Stop automated install prompt.
    navigator.getInstalledRelatedApps().then(relatedApps => {
      if (relatedApps.length == 0) {
        e.prompt();
      }
    });
  }
});
```

developers.google.com/get-installed-related-apps

If related apps are installed, hide PWA stuff. E.g. push subscription button



```
window.addEventListener("load", e => {
  if (navigator.getInstalledRelatedApps) {
    navigator.getInstalledRelatedApps()
      .then(apps => {
        if(apps.length > 0) { /* Hide the UI */ }
      });
  }
});
```

developers.google.com/get-installed-related-apps

Unsubscribe from push notifications if there are installed related apps

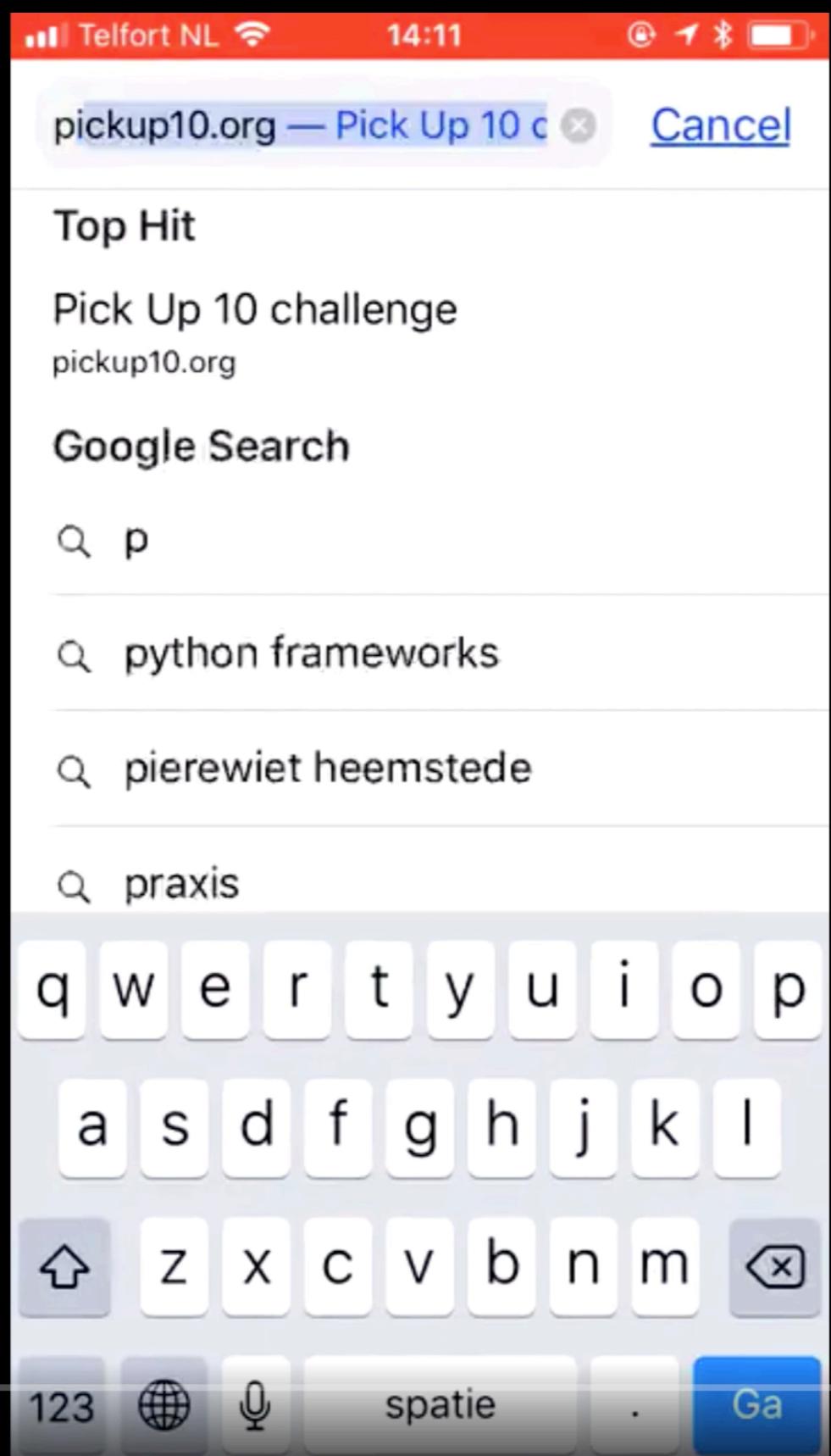


```
window.addEventListener("load", e => {
  if (navigator.getInstalledRelatedApps) {
    let sw = navigator.serviceWorker.ready;

    navigator.getInstalledRelatedApps()
      .then(apps => (apps.length > 0) ? sw.then(reg => reg.pushManager) : undefined)
      .then(pushManager => {
        if(pushManager) pushManager.unsubscribe();
      });
  }
});
```

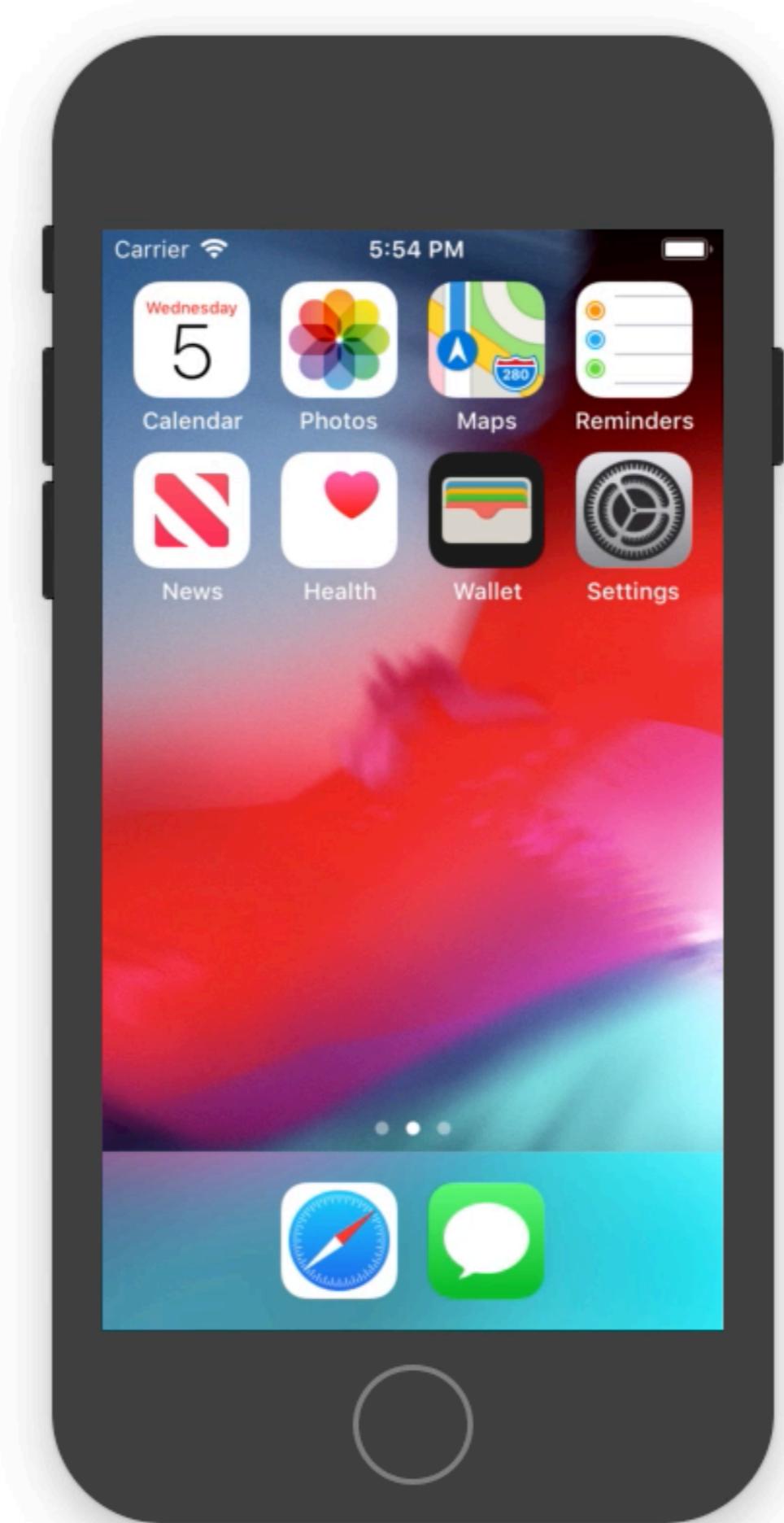
developers.google.com/get-installed-related-apps

App Store





```
export default class App extends React.Component {
  onNavigationStateChange = (event) => {
    if (!isInternalUrl(event.url)) {
      this.webview.stopLoading();
      WebBrowser.openBrowserAsync(event.url);
    }
  };
  render() {
    return (
      <View>
        <StatusBar barStyle="light-content" />
        <SafeAreaView forceInset={{ bottom: 'never' }}
                      style={{ flex: 1, backgroundColor: '#49B9CD' }}>
          <WebView source={{ uri: 'www.pickup10.org' }}
                   onNavigationStateChange={this.onNavigationStateChange}
                   />
        </SafeAreaView>
      </View>
    );
  }
}
```



Pros

Native functionality
Webview stays fresh

Cons

Webview
Store releases

Microsoft Store

Prequisites

PWA

APPX package(Visual Studio / PWA Builder)

Microsoft Store app developer account



Generate AppX

Enter your [Dev Center](#) details below in order to generate an AppX package you can upload to the store.

[Cancel](#)[Submit](#)

Publisher Display Name

Enter a Name or Company Name

Publisher Identity

Found under Account Settings, Windows Publisher ID.

CN=

Package Identity Name

**WINDOWS**

Overview

Products

Attract

Engage

Monetize

Analyze

CROSS-DEVICE EXPERIENCES**Pick Up 10**
Application

Application overview

Add-ons

Analytics

Product management

Product Identity

Manage app names

Manage packages

WNS/MPNS

Services

Identity details

Your product has a unique identity, assigned by the Store. If you build your package manually, you'll need to include its identity details. (If you're using Visual Studio, this is done automatically.) [Learn more](#)

Include these values in your package manifest:

Package/Identity/Name	DeVoorhoeve.PickUp10
-----------------------	----------------------

Package/Identity/Publisher	_____
----------------------------	-------

Package/Properties/Public herDisplayName	De Voorhoeve
---------------------------------------------	--------------

Together, these elements declare the identity of your app, establishing the "package family" to which all of its packages belong. Individual packages will have additional details, such as architecture and version.

Microsoft | Partner Center De Voorhoeve

PWA Pick Up 10 Application

WINDOWS

- Overview
- Products
- Attract
- Engage
- Monetize
- Analyze

CROSS-DEVICE EXPERIENCES

- Add-ons
- Analytics
- Product management
- Services

Submission 1

A previous submission failed certification at April 10, 2019 12:07 PM (UTC). Please read the certification report(s) listed below and make all needed changes. If we removed your app from the Store and you want to update it to follow policy, [contact the certification team](#).

Certification reports

Date (UTC)	Result	Link
April 10, 2019 12:07 PM	Failed	View report

Pricing and availability
We can't show details for this section right now. Please refresh the page or try again later.

Properties Lifestyle Complete ✓

Age ratings Complete ✓

Packages windows.appx Validated Complete ✓

Store listings [Add/remove languages](#) [Export listings](#) Complete ✓

Import listings
Languages supported in packages
English (United States) Complete

Submission options Publish as soon as possible Recommended

<https://partner.microsoft.com/en-us/dashboard/>



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voorhoede.nl/pwamaster

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