

# Designing Mobile and Desktop User Experiences

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# Overview

## **Designing User Experiences**

- Design without a browser interface
- Create a mobile native experience
- Desktop-friendly PWAs



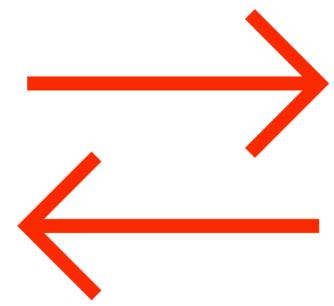
# Designing Without the Browser User Interface

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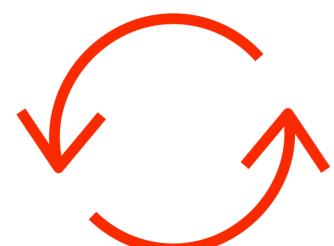
# An Installed PWA Has No Browser UI



No URL



No navigation buttons



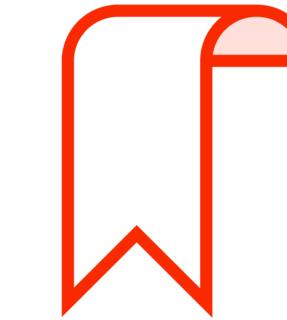
No reload action



No tabs



No progress indicators



No bookmarks

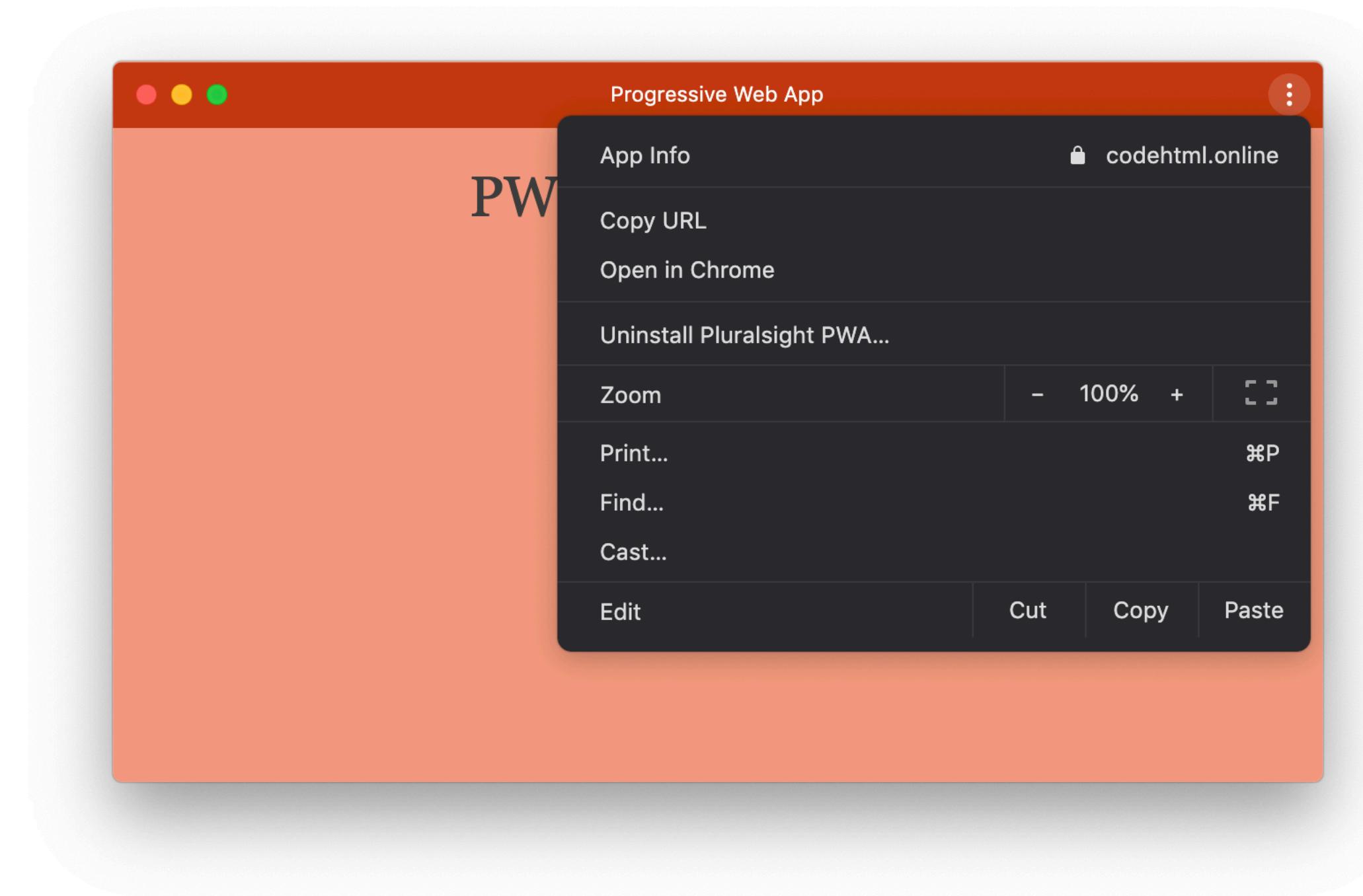
# Desktop Standalone Experience



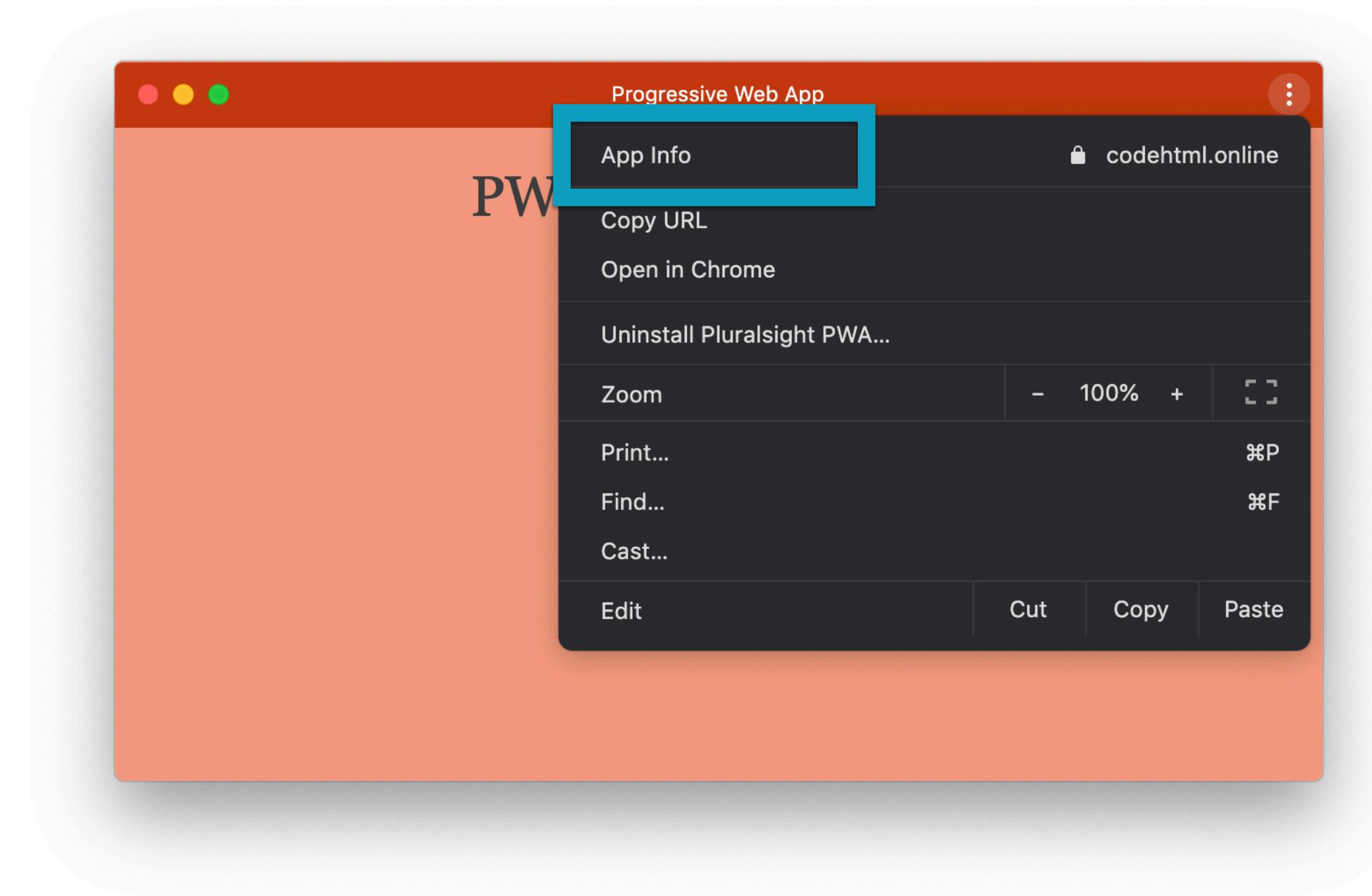
# Desktop Standalone Experience



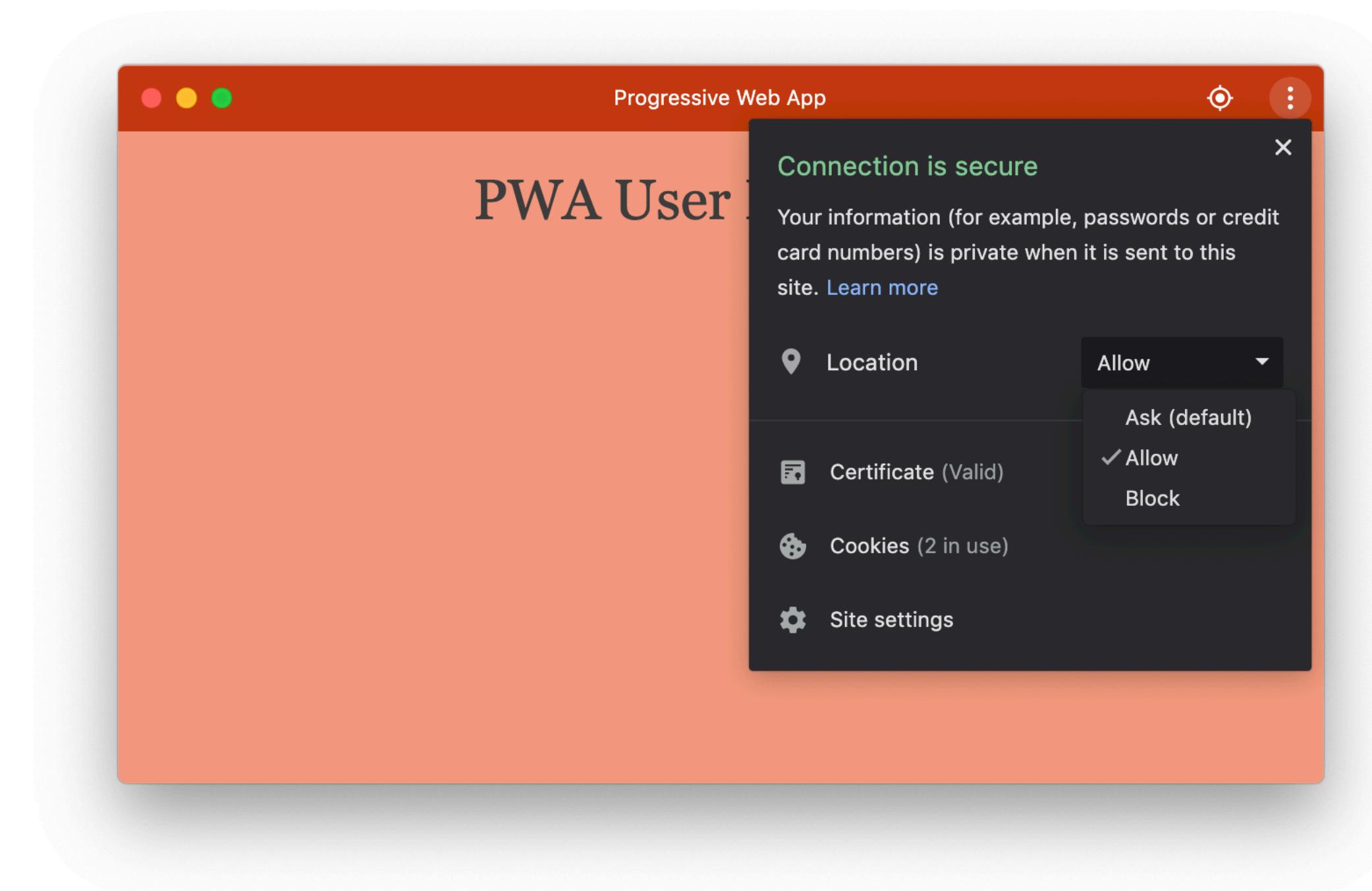
# Desktop Standalone Experience



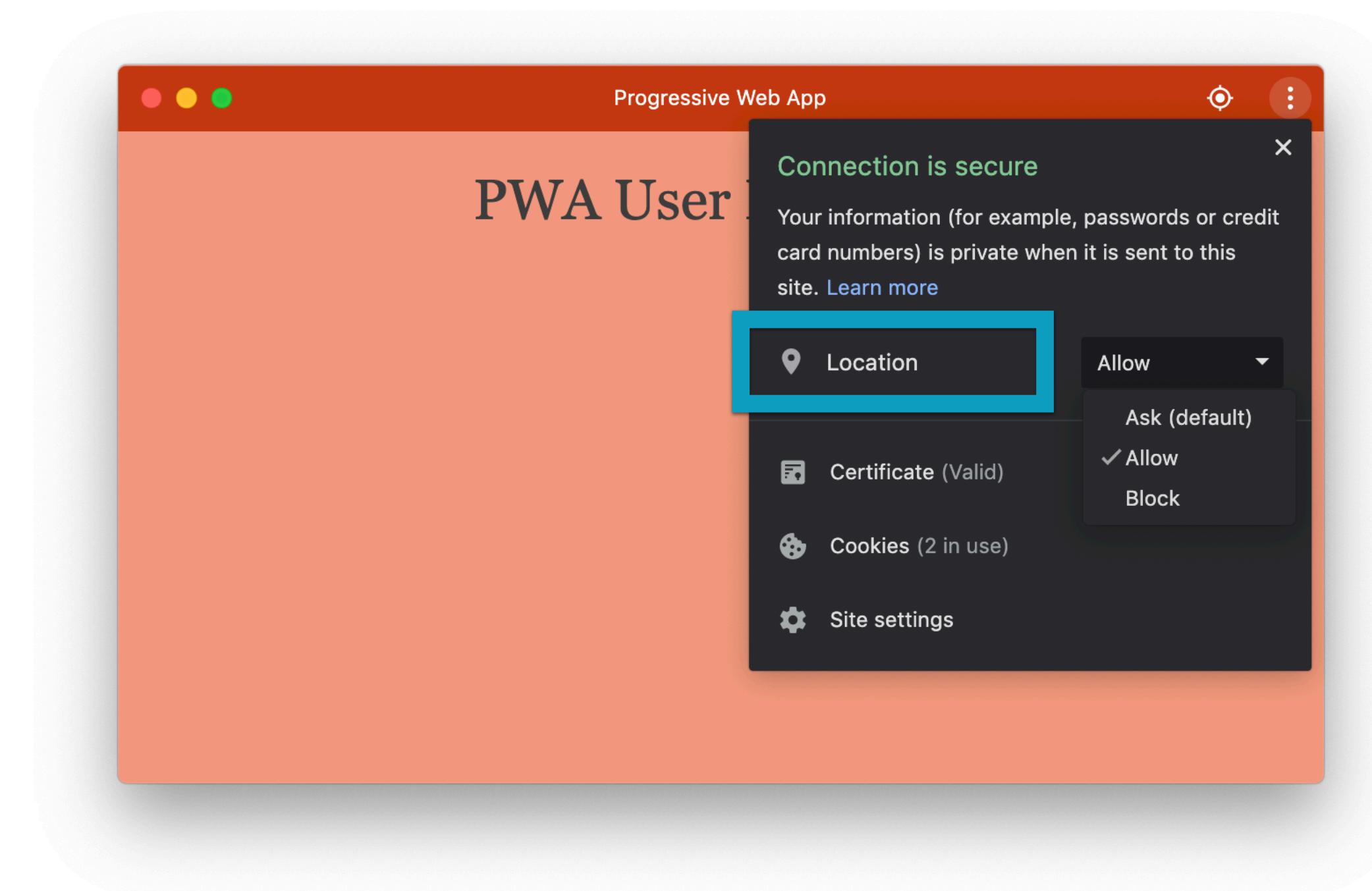
# Desktop Standalone Experience



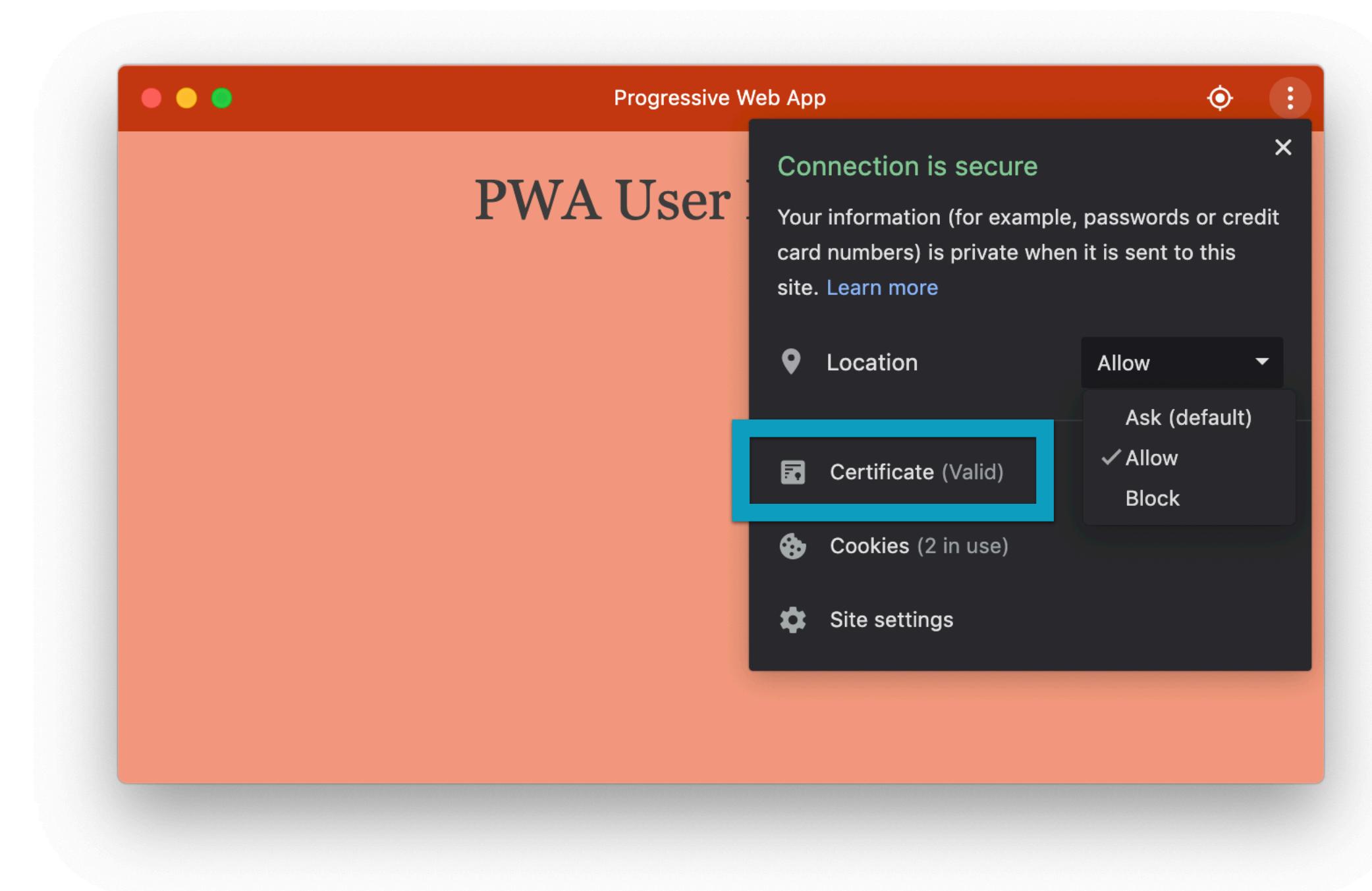
# Desktop Standalone Experience



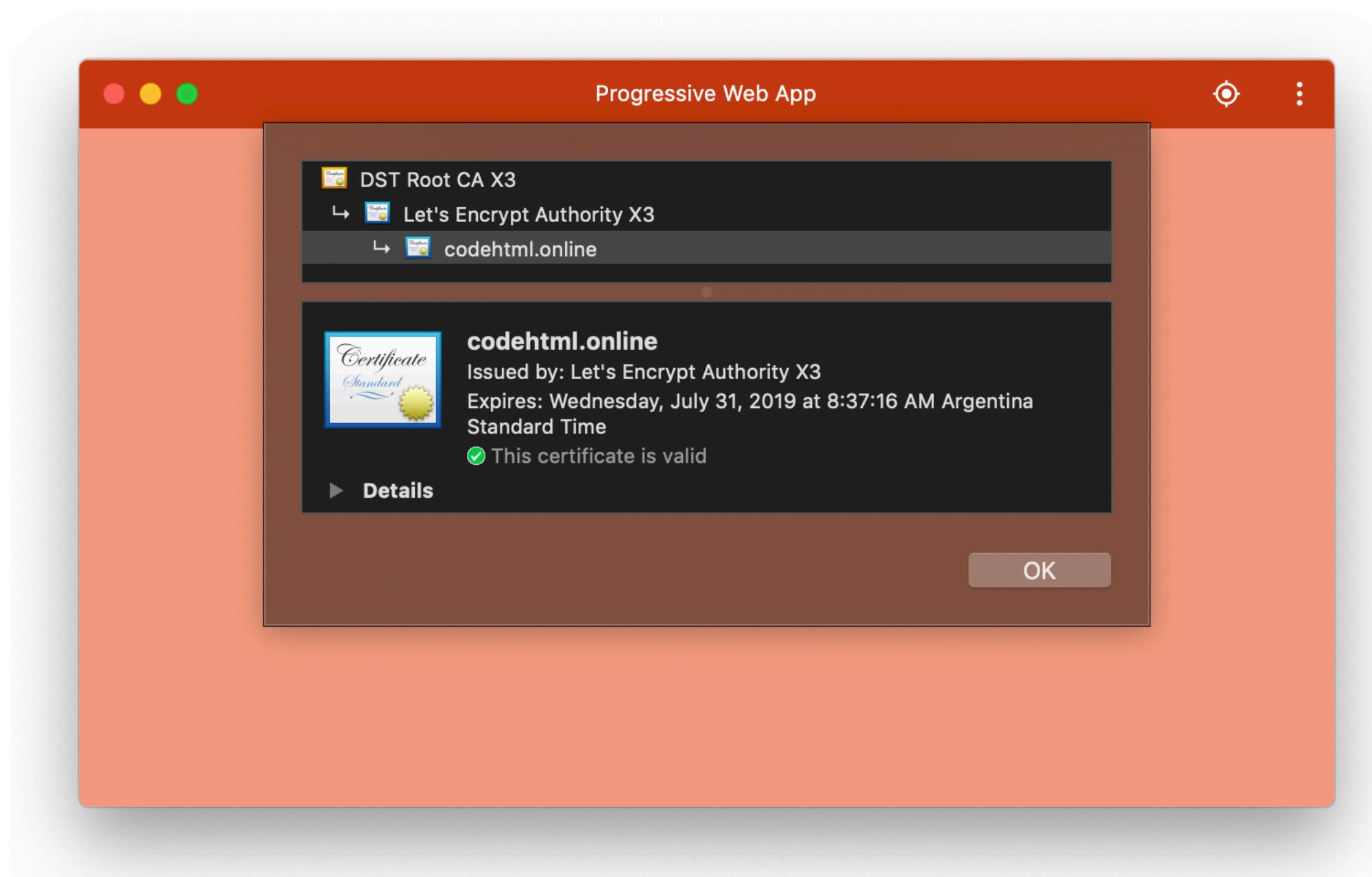
# Desktop Standalone Experience



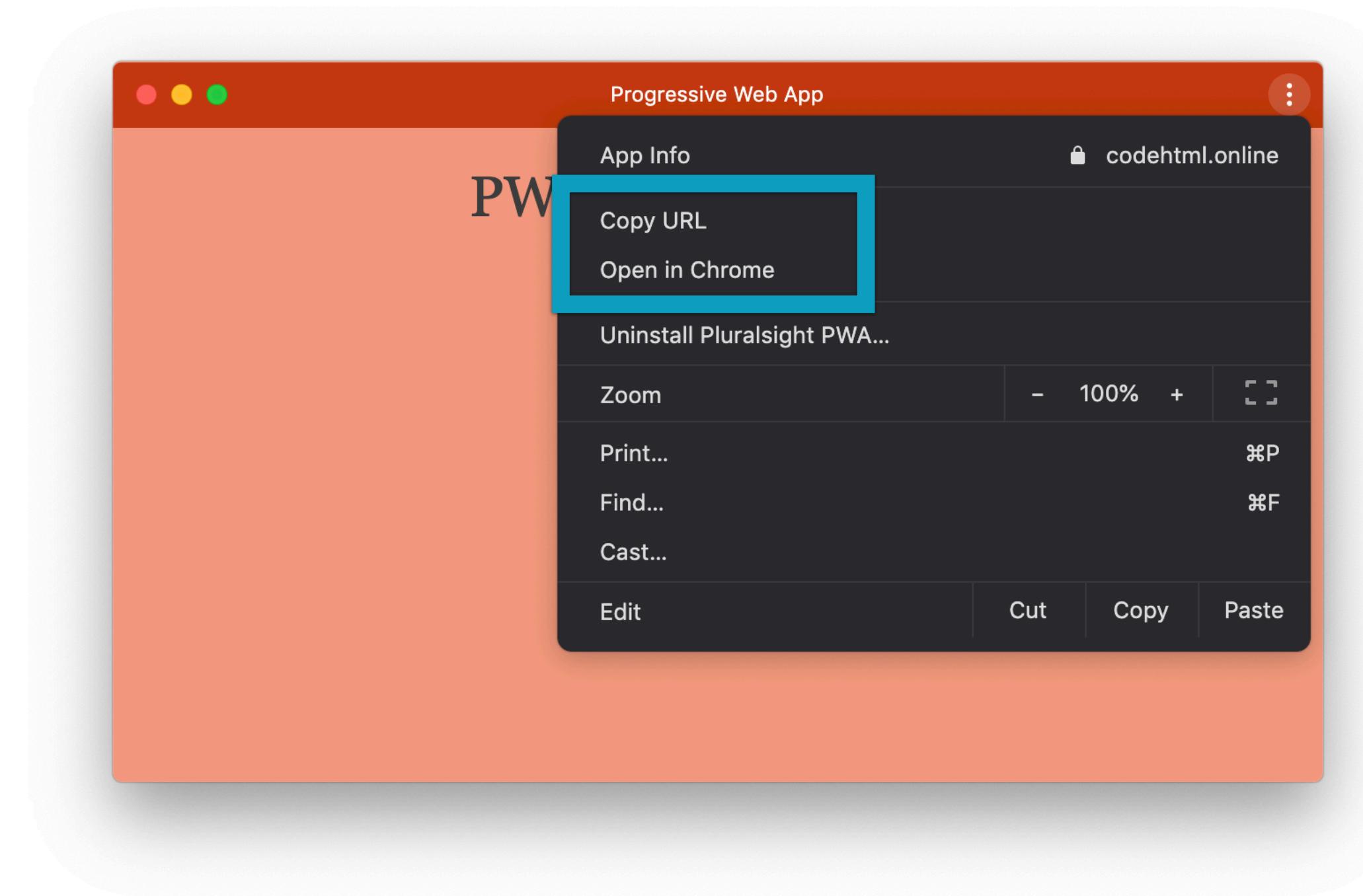
# Desktop Standalone Experience



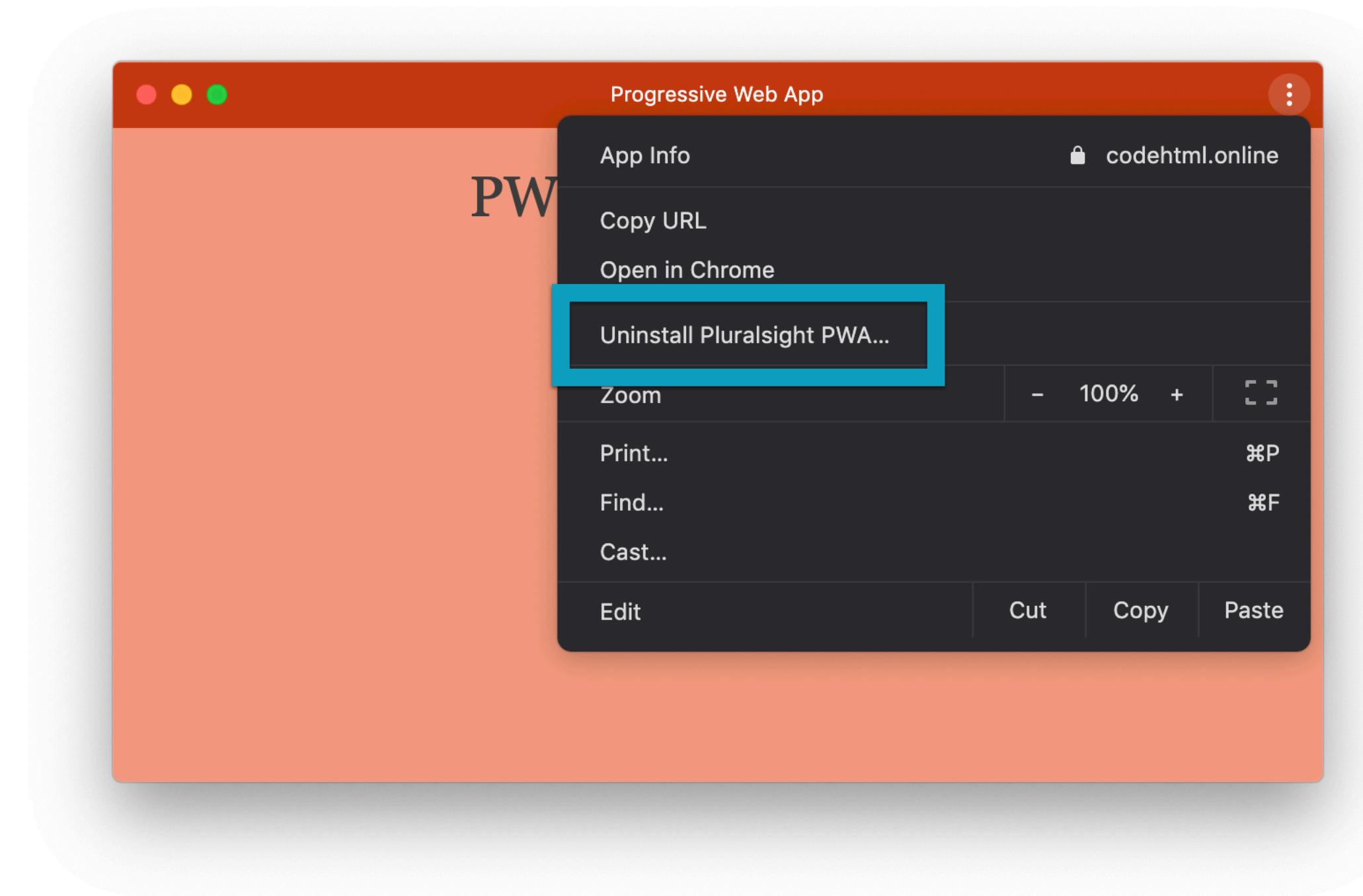
# Desktop Standalone Experience



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# Desktop Standalone Experience



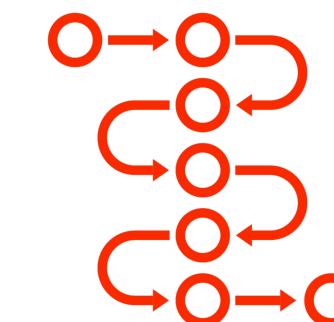
# An Installed PWA Has No Browser UI



No SSL certificate



No <title> usage

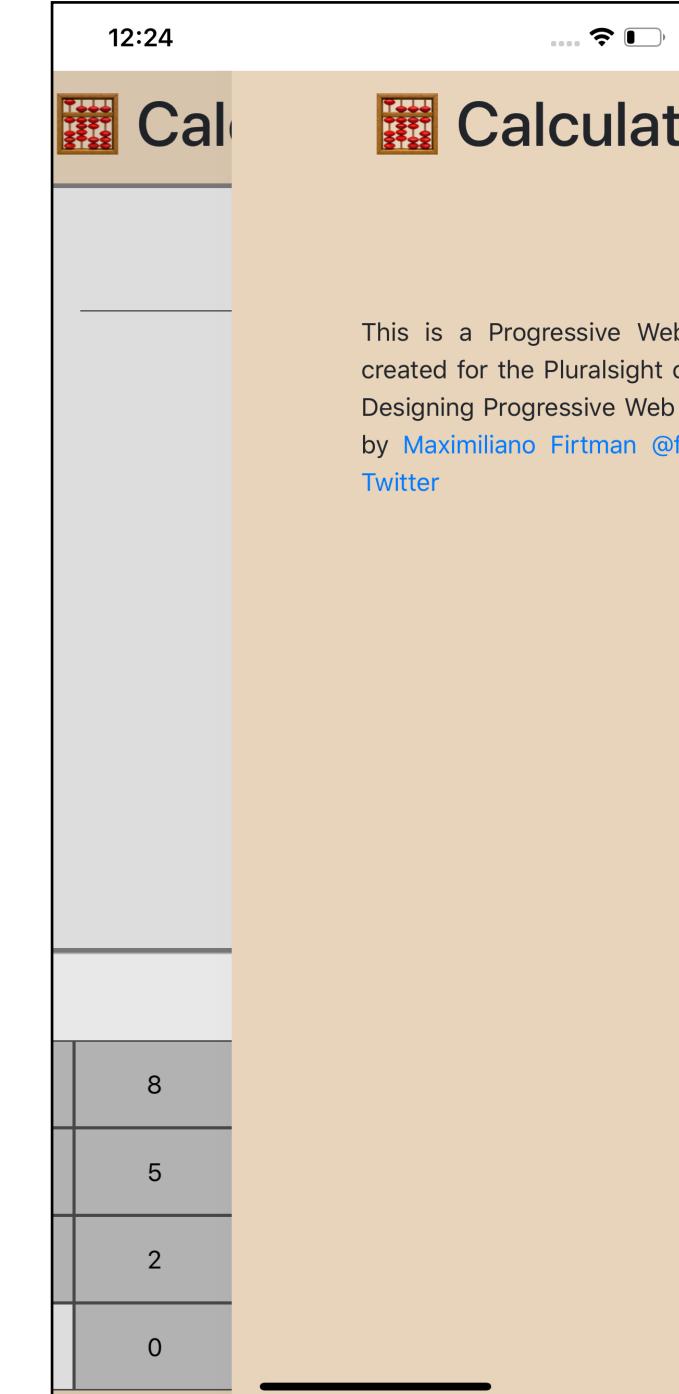
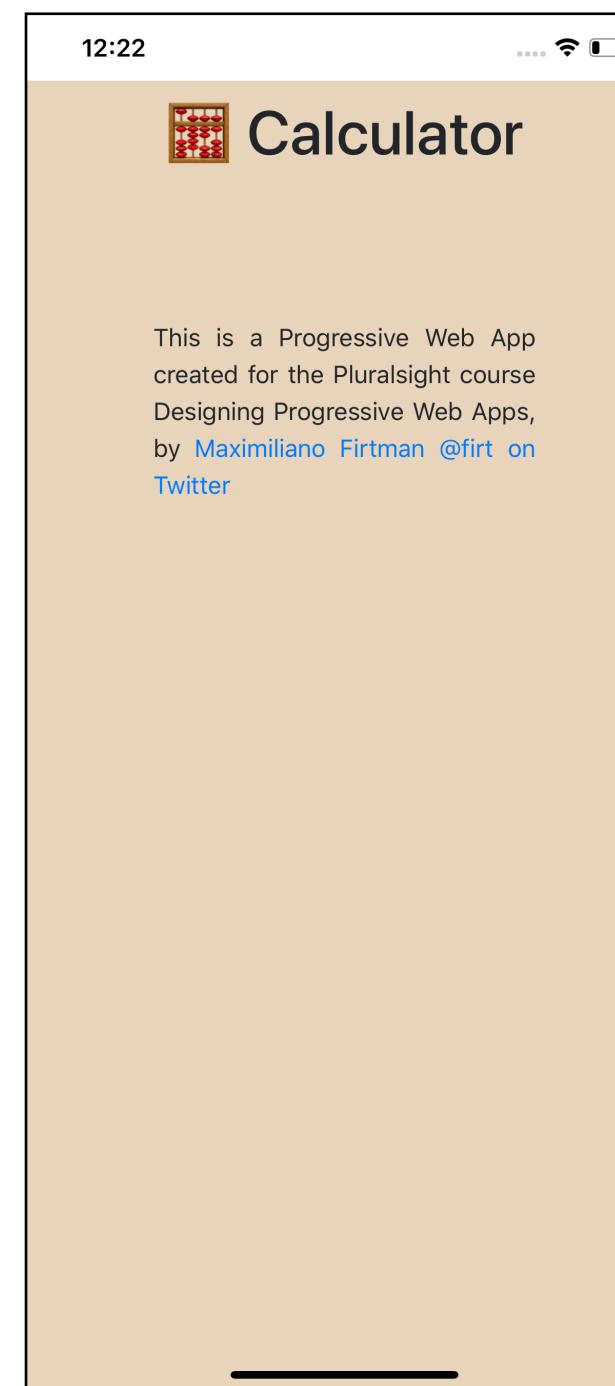


No Permissions Data

## On mobile devices

- iOS standalone
- Android standalone and fullscreen

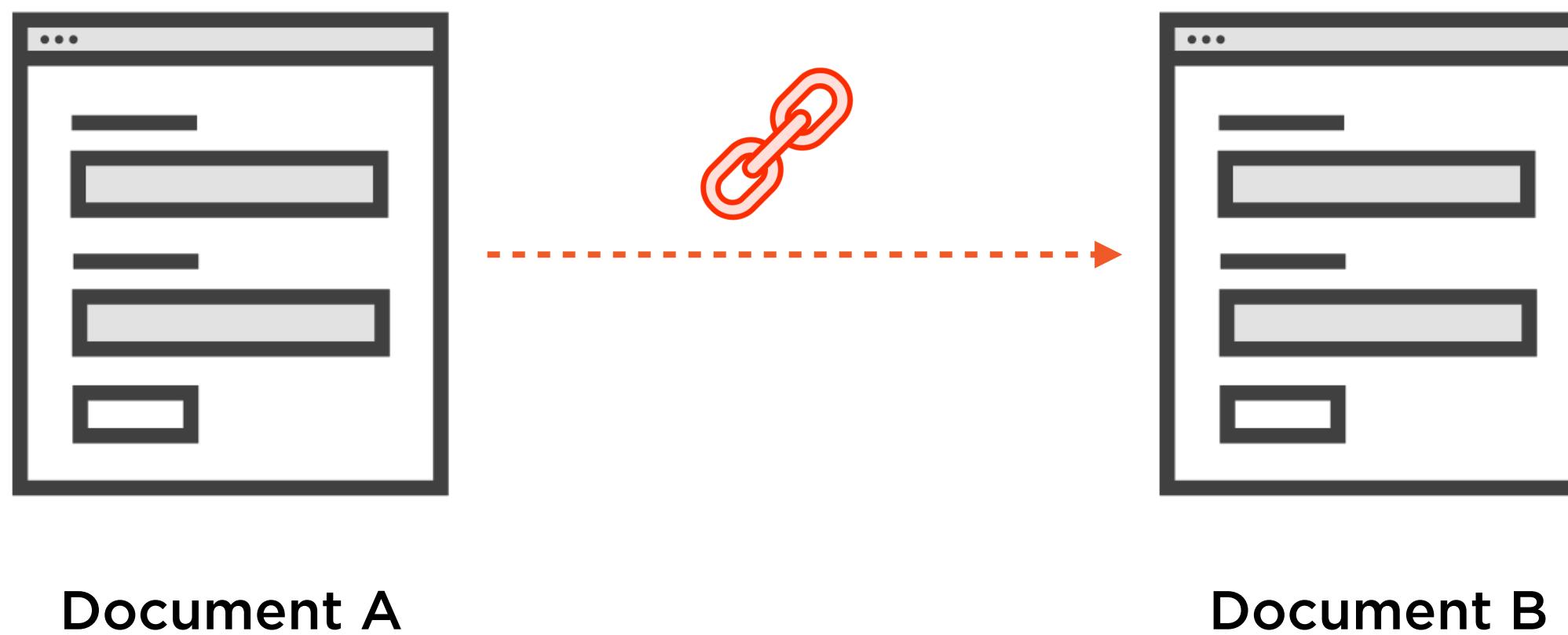
# Back Buttons



## Tips

- Provide a back button in your UI**
- Create a refresh button for unhandled exceptions**
- Use media queries for display mode**
- If security is important, use minimal-ui**
- Maximize web performance**
- Understand App's Lifecycle**

# Links within Your PWA



# PWA Scope

It's an origin and a path that defines where our PWA resides; for example: **domain.app** or **domain.com/app**

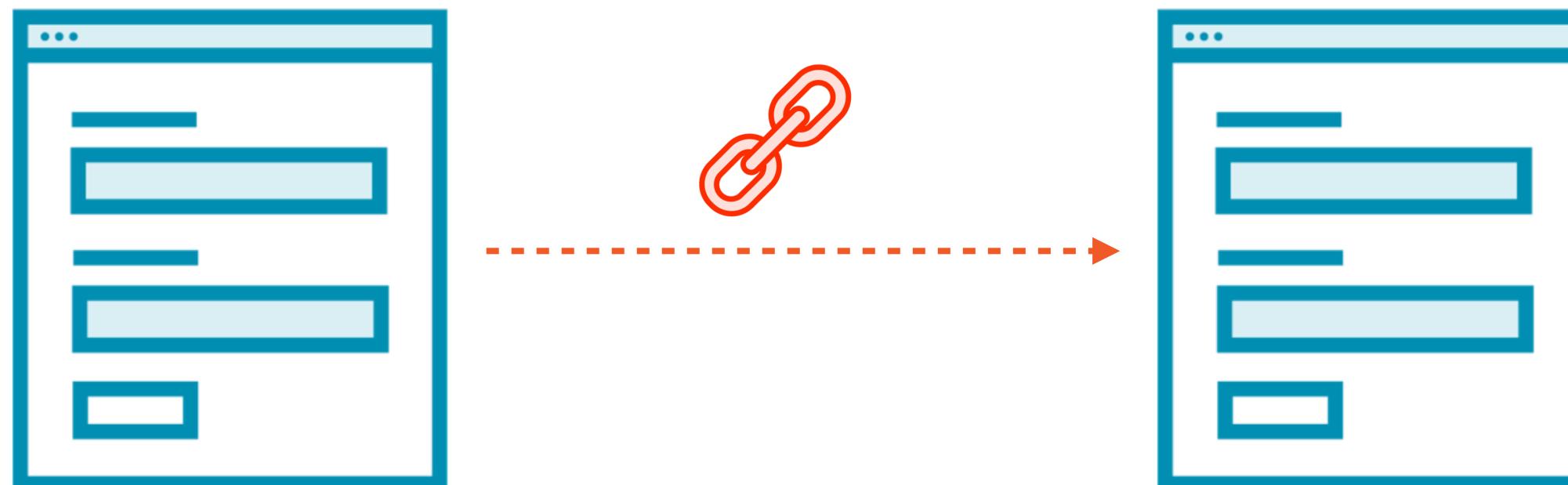
```
{  
  "name": "PWA Name",  
  "short_name": "PWA",  
  "theme_color": "#385770",  
  "background_color":  
    "#18481d",  
  "display": "standalone",  
  "orientation": "portrait",  
  "scope": "/",  
  "start_url": "/",  
  "icons": [ ]  
}
```

- **Scope**



**Web app manifest**

# Links within Your PWA



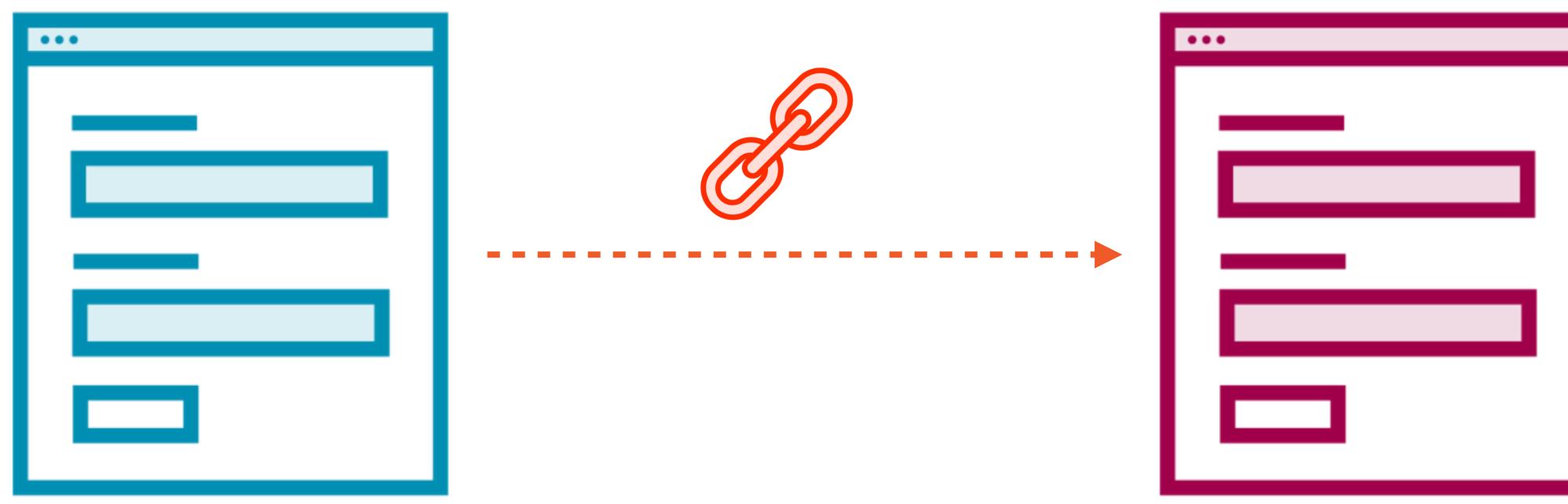
Document A

Document B



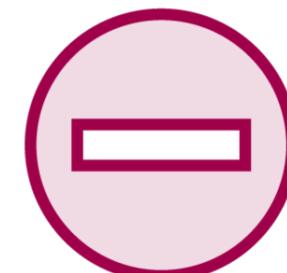
Same scope

# Links within Your PWA



Document A

Document B



Different scope

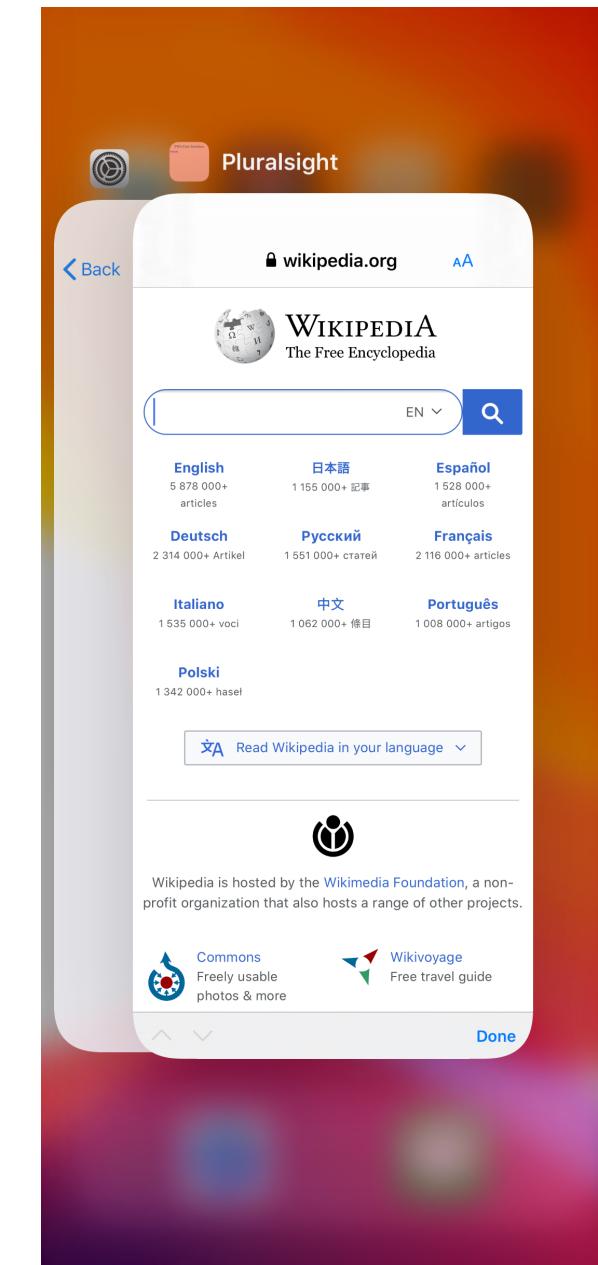
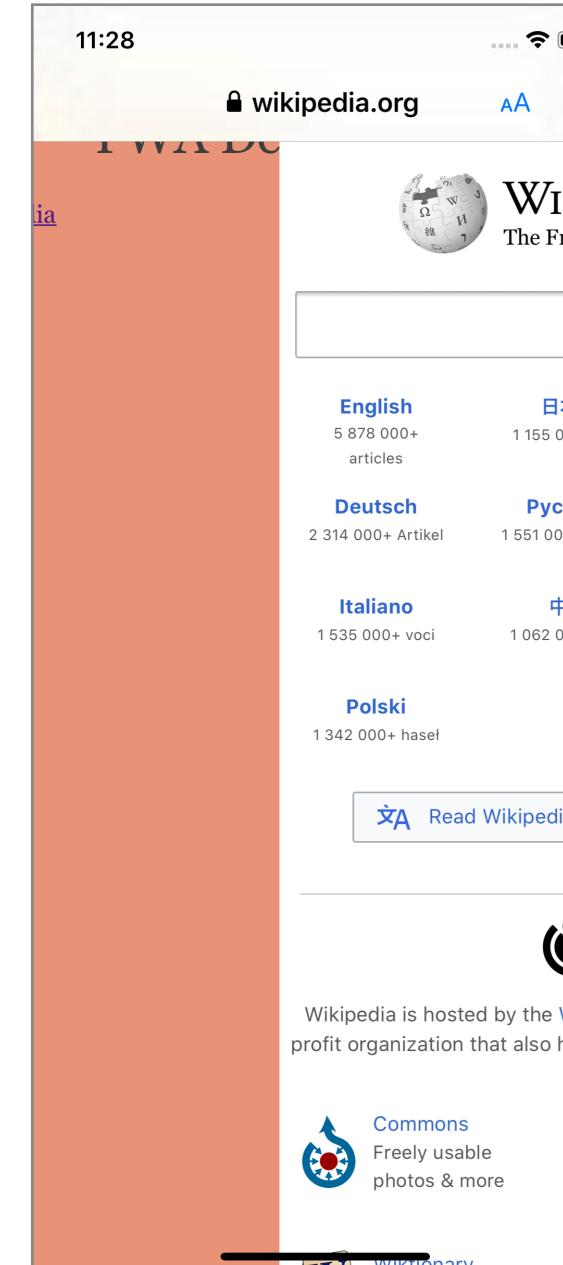
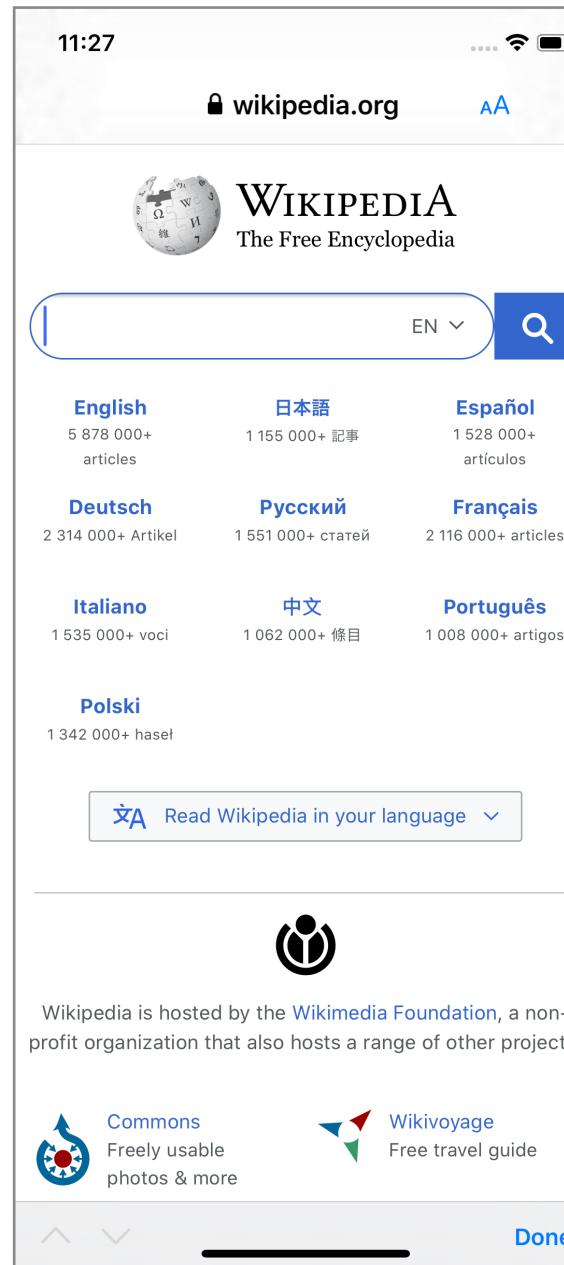
# Browsing Outside of Scope



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# Browsing Outside of Scope

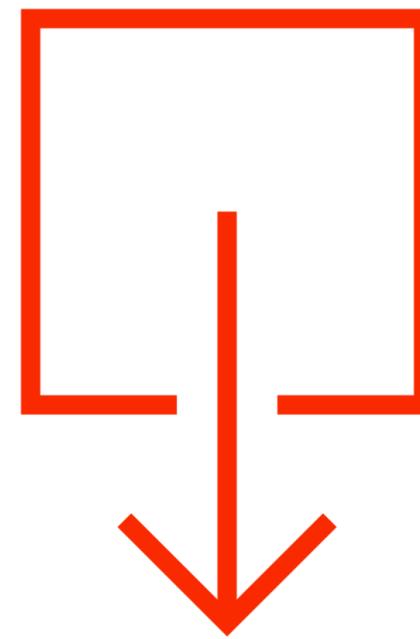




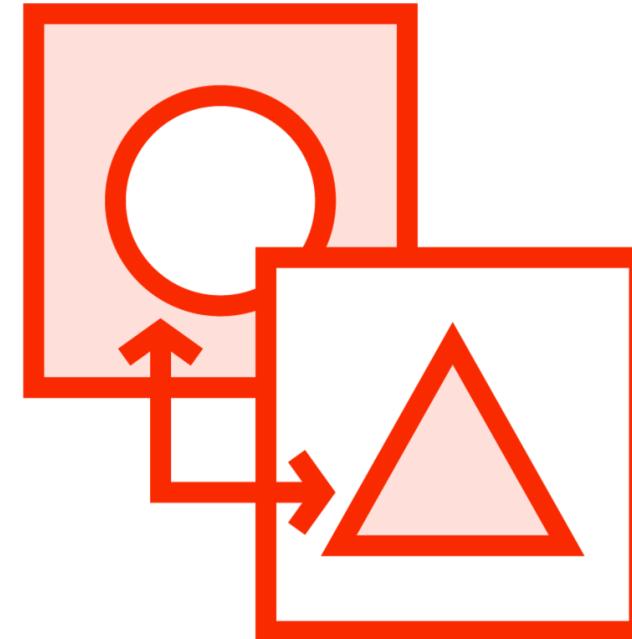
# Creating a Native Mobile User Experience

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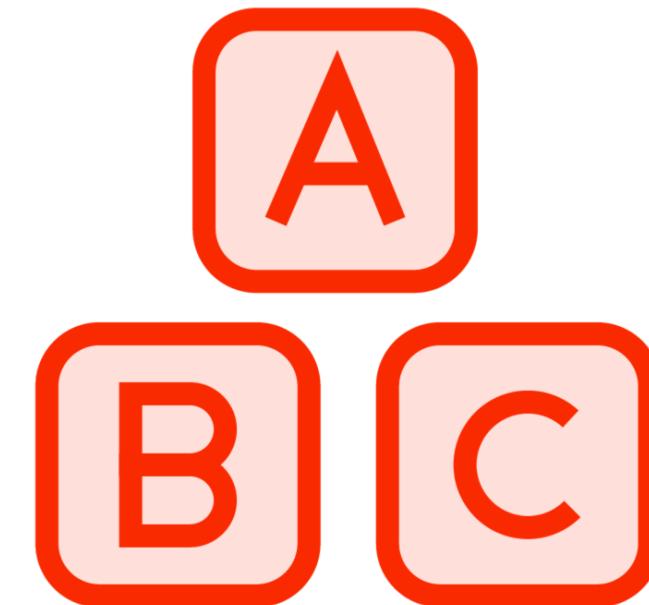
# PWA Issues That Won't Provide a Native Feeling



**Pull to Refresh**



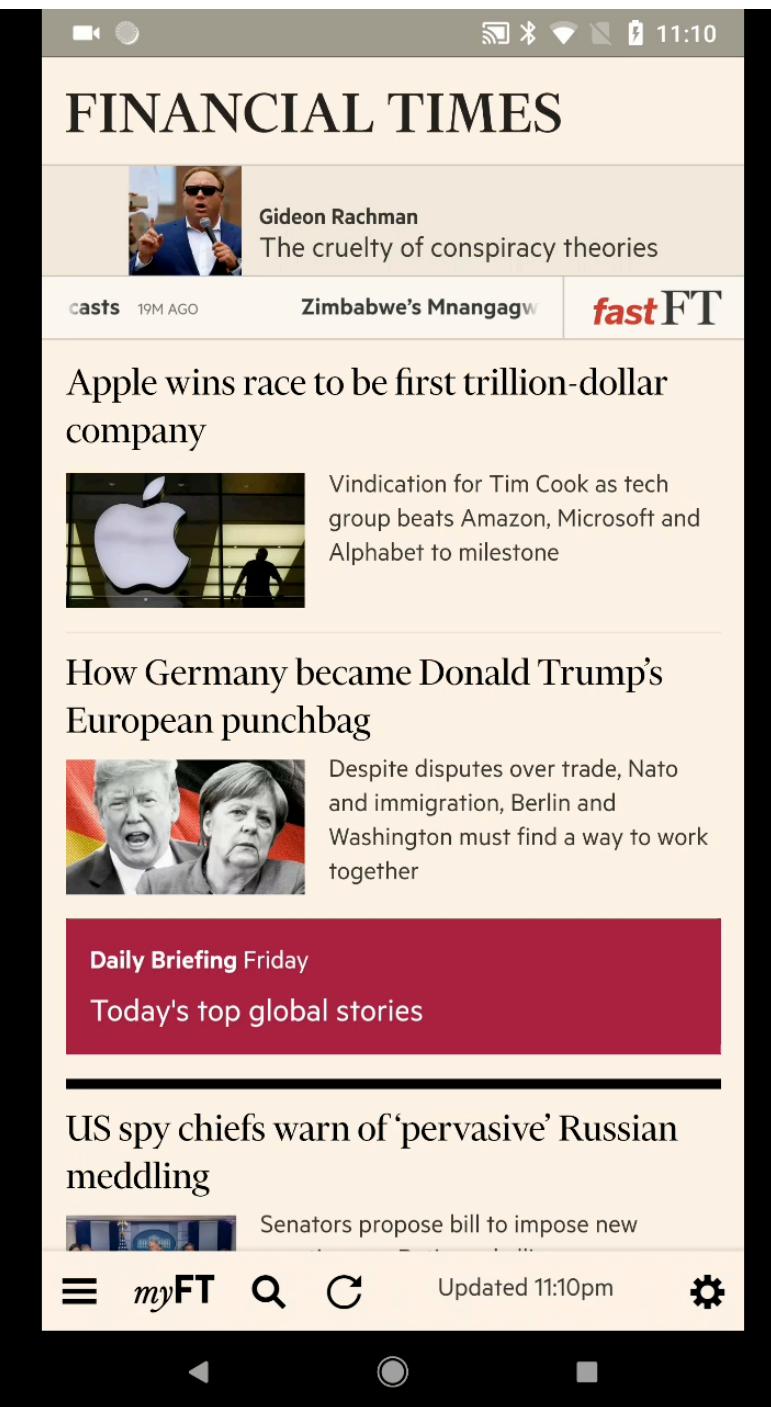
**App Translation**



**System Fonts**

Pull to Refresh

# Pull to Refresh



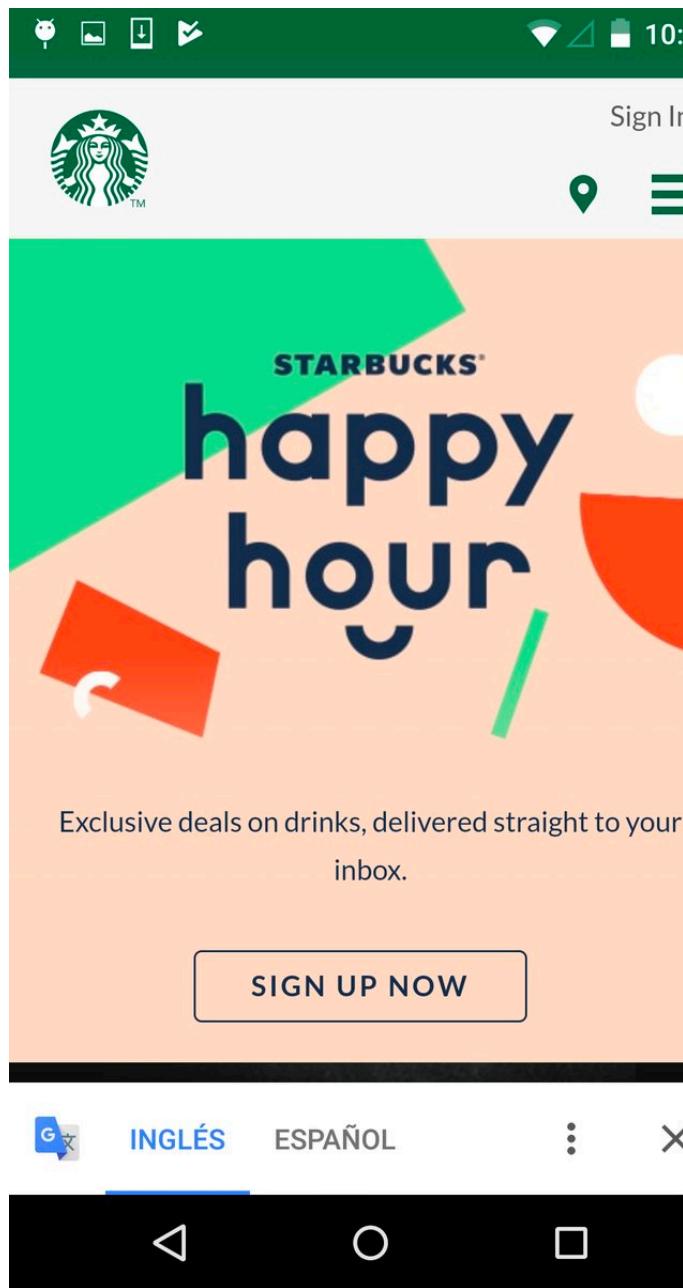
```
body {  
  overscroll-behavior-y: contain;  
}
```

Avoid Pull to Refresh

We use a W3C new spec: CSS Overscroll Behavior.

Use this with responsibility!

# Automatic App Translation



```
<meta name="google" content="notranslate">
```

## Avoid App Translation

We use a meta tag that is used by Chromium-based browsers to avoid the feature

Use this with responsibility!

```
if (matchMedia(' (display-mode: standalone)').matches) {  
  document.querySelector("head").innerHTML +=  
    '<meta name="google" content="notranslate">';  
}
```

## Avoid App Translation

You can mix this with media queries and apply it only on standalone mode

```
if (matchMedia(' (display-mode: standalone)').matches) {  
  document.querySelector("head").innerHTML +=  
    '<meta name="google" content="notranslate">';  
}
```

## Avoid App Translation

You can mix this with media queries and apply it only on standalone mode

```
if (matchMedia(' (display-mode: standalone)').matches) {  
  document.querySelector("head").innerHTML +=  
    '';  
}
```

## Avoid App Translation

You can mix this with media queries and apply it only on standalone mode

# System Fonts

```
font-family: -apple-system, BlinkMacSystemFont,  
"Segoe UI", Roboto, Oxygen-Sans, Ubuntu,  
Cantarell, "Helvetica Neue", sans-serif;
```

## Use System Fonts

On some platforms, only system fonts are available. But on other platforms all web fonts are usable, so we can fallback to system fonts if we want to.

# Demo

## **Make a Native UI Feeling**

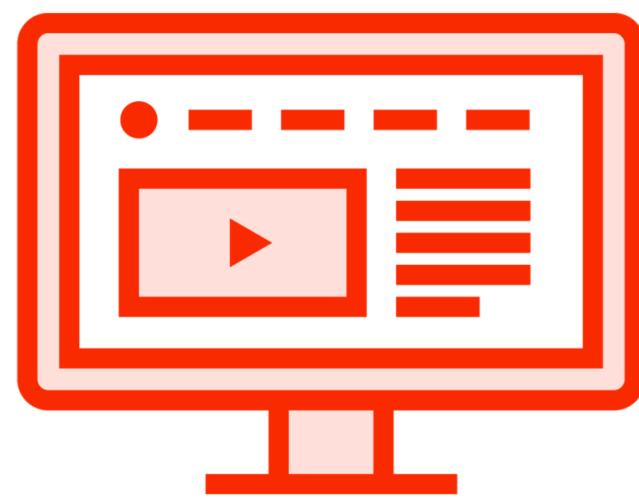
- Use System Fonts
- Disable App Refresh
- Disable App Translation



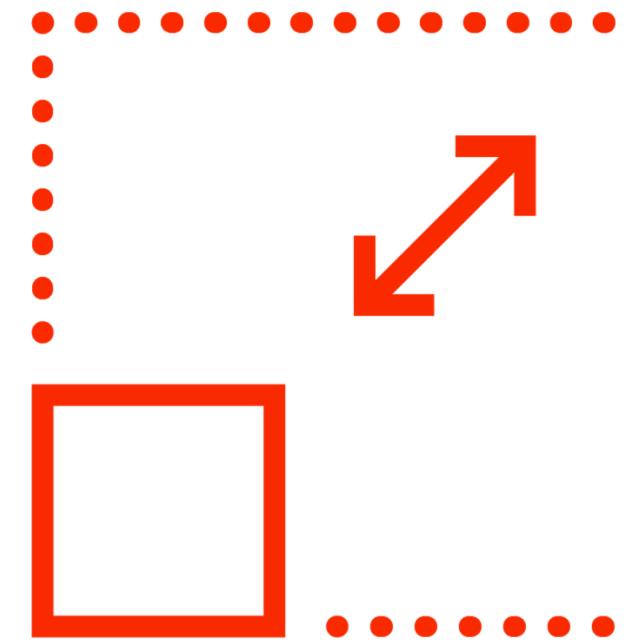
# Making a Desktop-friendly PWA

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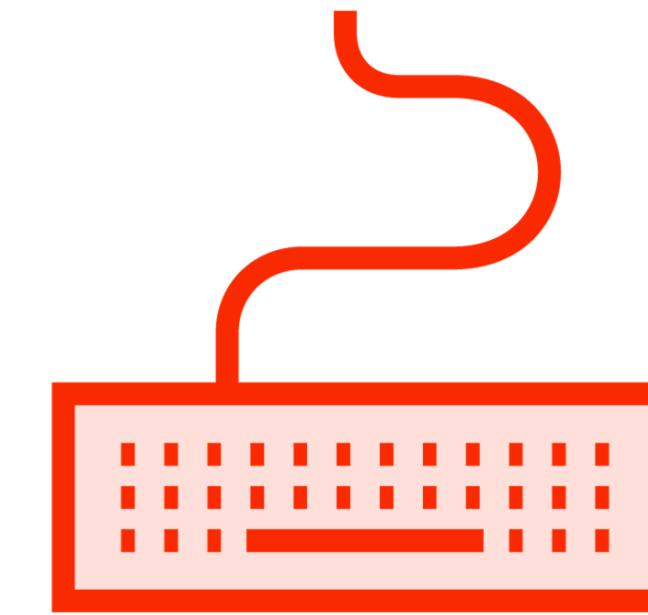
# Make Your PWA Desktop-friendly



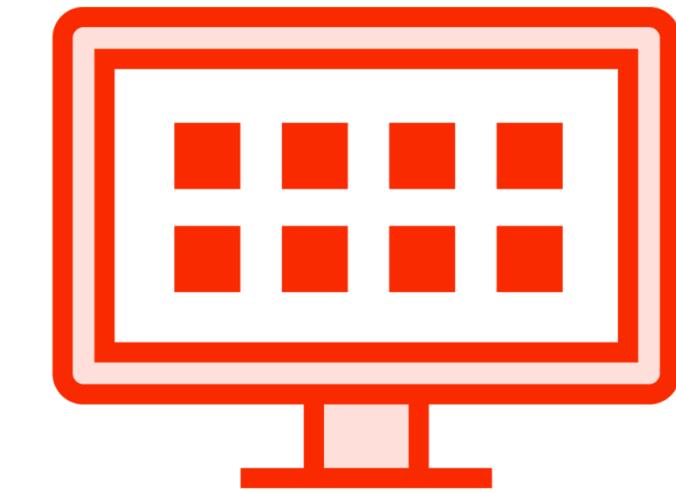
**Responsive  
Web Design**



**Mini-Window**



**Keyboard and  
Pointer support**



**Multiple  
Windows**

# Demo

## **Making a desktop-friendly PWA**

- Add Keyboard support
- Support Mini-Window



# Summary

## **Designing User Experiences**

- Design without a browser interface
- Create a mobile native experience
- Desktop-friendly PWAs

Up Next:  
Making an App-friendly Stylesheet

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