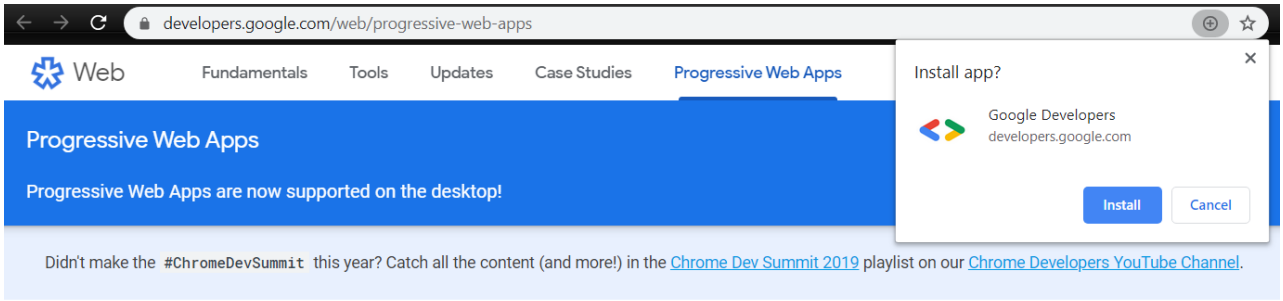
Progressive Web Apps

In this lesson, you will learn about progressive web apps and why you should build them for your service.

We'll cover the following

What are progressive web apps?#

Progressive Web Apps or *PWAs* are apps, with the look and feel of native apps, that can run in the browser of both mobile and desktop devices. They can also be installed on the device of the user from the browser. When installed on the device, progressive web apps run in their own window without an address bar or a browser tab just like the Native apps. When you open a PWA in the browser tab, in the address bar you'll see the install option with a plus sign. Clicking on it will install the app on your device with a shortcut on the home screen.



But don't we already have responsive mobile websites for the browsers? Why do we need progressive web apps? What good is that?

The need for PWAs#

Today, businesses are kind of inclined towards writing progressive web apps, as opposed to responsive websites, because they have the same look and feel of the Native apps. The general trend is that businesses entertain the search engine traffic via their responsive mobile websites and then try to direct that traffic to their Native mobile apps. I've talked about this before.

Now, instead of directing the users to their Native apps, businesses can offer the same Native app user experience to the users directly in the browser. Also, if the user wishes, they can install the app from the browser on his device. Progressive web apps function just like the Native apps with having access to the underlying OS and the device hardware.

Also, since progressive web apps are developed using the open web technologies like *HTML, CSS, and JavaScript*, and with the help of frameworks like *Angular, React, Ionic, and Google Polymer*, there is no Native tech learning curve. Just write the code once, and run it everywhere.

PWAs run in both the mobile and the desktop browsers and can even be installed on the desktops. These apps can work offline and have push notifications just like native apps. They can be indexed by search engines and users can share the links of the apps with their friends. You don't

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need to update them every now and then as we generally do with Native apps. So, every time you open an installed PWA on your device you will see the latest version of it.

Okay!! So, that means there is a possibility of Native apps going obsolete. Right?

Will PWAs replace Native apps?#

No!! PWAs are not a replacement for Native apps. Native apps still hold good for the use cases I discussed in the previous lesson. We definitely don't want to write an online mobile game that is CPU intensive with a PWA. A Native app will easily beat a PWA in terms of performance and user experience.

PWAs are more in competition with responsive mobile websites. I mean, why write a responsive website when you can develop something that provides an app-like experience? Imagine browsing an e-commerce website via a responsive mobile site and a progressive web app. One would prefer an app-like experience any day.

Let's have a look at some of the examples of progressive web apps.

Examples of progressive web apps#

BookMyShow PWA#

Bookmyshow.com (http://Bookmyshow.com) is India's leading event and

movie, online ticket-booking platform with over *50* million monthly visitors. They were experiencing a high bounce rate on their mobile website. To provide a better user experience to the visitors, they replaced their mobile website with a progressive web app.

After the launch of the PWA (https://developers.google.com/web/showcase/2017/bookmyshow), they observed an exponential increase, upto *80%* on the conversion rates. In terms of the app size, it's *54* times lighter than the Android app and *180* times smaller than their iOS app.

Flipkart PWA#

Flipkart.com (http://Flipkart.com), India's leading retail e-commerce website shut down its mobile website and moved forward with the app-only strategy. It was hard for the development team to provide an app-like immersive experience on their responsive mobile website.

However, with the launch of their progressive web app, the engagement rate increased three times, the conversion rate went up by *70%*, and there was a reduction in the data usage by three times. For a full account of this here you go (https://developers.google.com/web/showcase/2016/flipkart)

Twitter PWA#

Twitter has approx. *328* monthly active users. It launched its progressive web app in *2017* (https://developers.google.com/web/showcase/2017/twitter) and made it the default mobile web experience for the users. This increased the pages per session by *65%*, decreased the bonus rate *20%*, increase in Tweets sent *75%*.

This resource (https://pwa.rocks/) contains a list of businesses who have launched PWAs for their service.

Check out this Google developers' resource

(https://codelabs.developers.google.com/codelabs/your-first-pwapp/#0) to begin writing your first PWA.

This Mozilla documentation (https://developer.mozilla.org/en-US/docs/Web/Progressive_web_apps) is a good resource to gain more knowledge on progressive web apps.

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