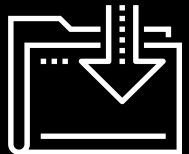


Progressive Web Apps (PWAs)

Coding Boot Camp
Unit 19

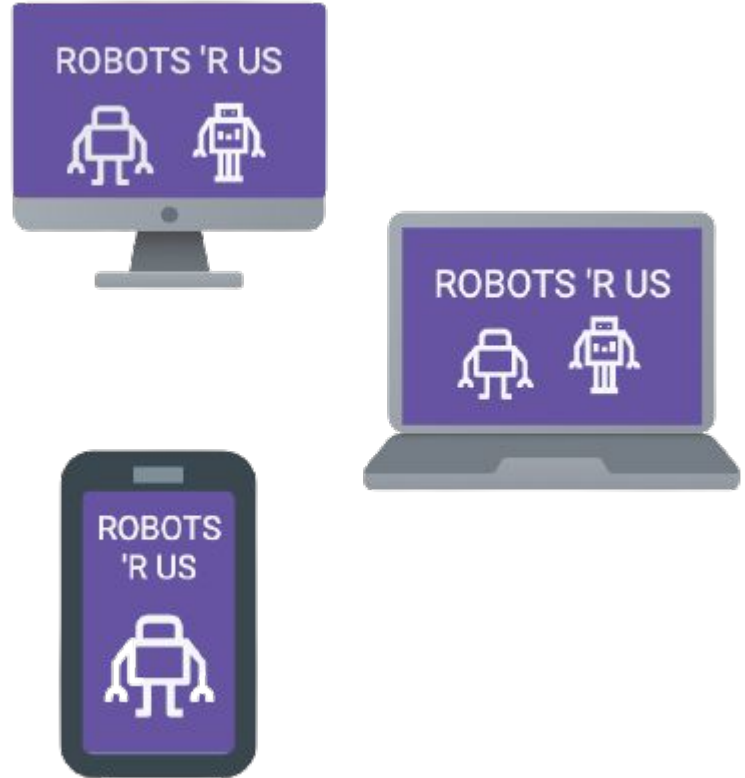




What is a PWA?

PWA Is a Design Pattern

A Progressive Web App (PWA) is a design pattern that uses web technologies to build a fast, flexible web application that will perform like a native app on any device.

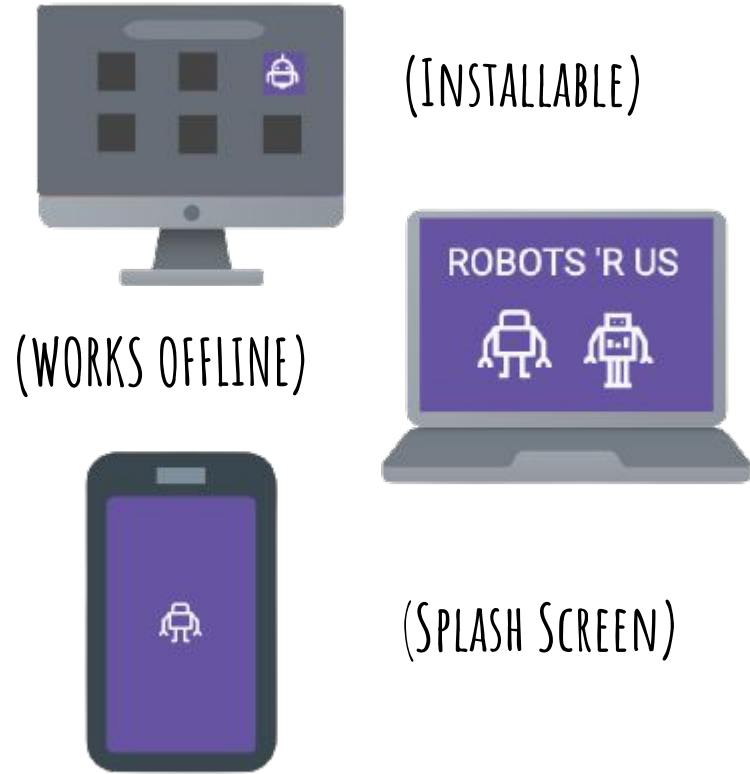




**Are PWAs dependent on
specific technology?**

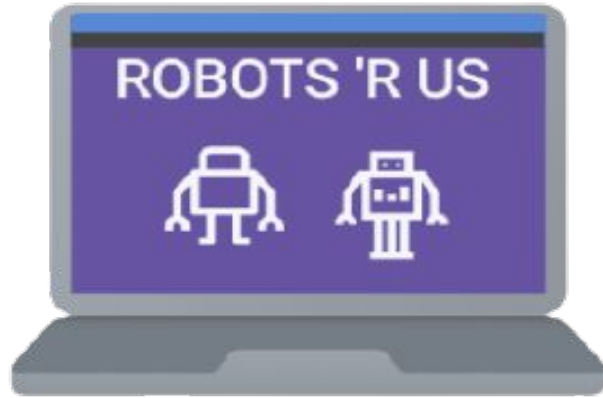
PWAs Are Focused on Optimizations, Not Specific Tech

PWAs do not rely on a single, specific technology. Instead, they use a variety of tools to build and optimize web applications to take advantage of features already available on the user's device and browser.



A PWA Is an Optimized Web App

A PWA is simply a web app built using standard technologies that works in a browser and is optimized to improve performance and user experience.



(WEB APPLICATION)



(WEB APPLICATION OPTIMIZED
USING PWA DESIGN PATTERN)



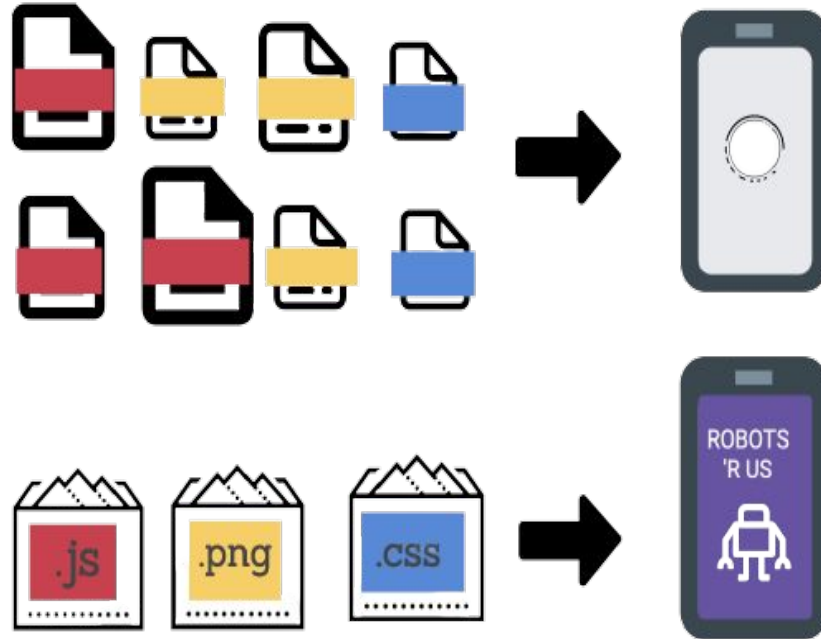
What makes an app a PWA?

PWA Design Pattern Optimizations

- PWA are optimized to be fast.
- PWAs are optimized to work offline.
- PWAs are installable by users directly on their devices.
- PWAs are secure.

PWAs Are Fast

To give the user the look and feel of a native app, assets are bundled. This gives users a faster, more performant app.



PWAs Work Offline

A PWA also uses a service worker, which allows a user to access visited pages even if the app is offline.



(WEB APPLICATION)



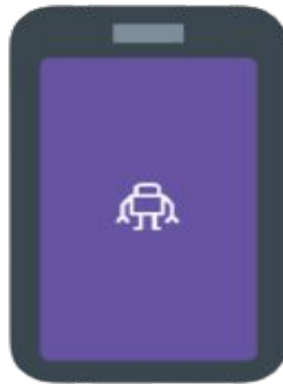
(PROGRESSIVE WEB
APPLICATION)

PWAs Are Installable

A PWA uses a special set of instructions for the browser called a `manifest.json`, which adds a splash screen and makes the app installable directly on the user's device.



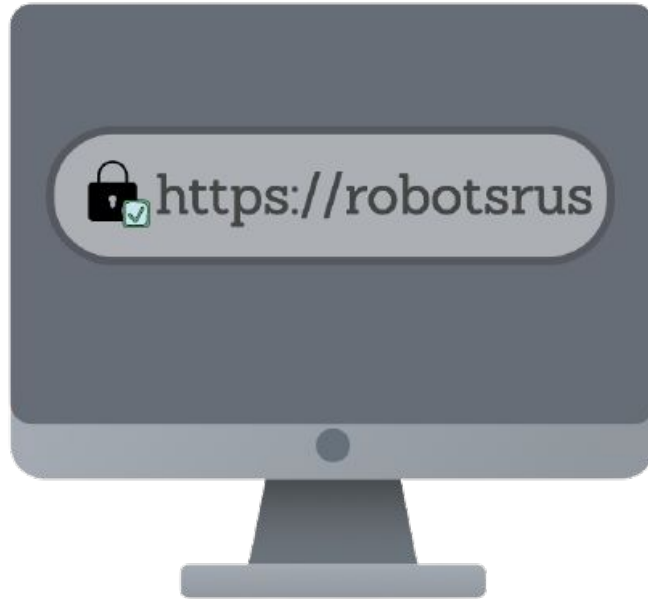
(INSTALLABLE)



(SPLASH SCREEN)

PWAs Are Secure

A PWA works on a secure connection to help keep users and their data safe.



(HTTPS STANDS FOR HYPERTEXT TRANSFER PROTOCOL SECURE)



What are the key benefits of PWAs?

Key Benefits of PWAs

- PWA is an adaptable design pattern with principles that can be applied to any web application.
- PWAs focus on optimizing web applications to be faster and more performant.
- PWAs enhance web applications by taking advantage of the user's browser capability to provide a native app experience on any device.
- PWAs are cost effective! With PWAs, there is no need to build a separate mobile and desktop application. A single app works for all devices.
- PWAs can be directly installed by the user. There is no need for costly app stores!
- PWAs deliver the speed and features that users expect in a modern app.



Instructor Demonstration

Mini-Project