Developing Progressive Web Applications

3-Day Instructor-Led Training

[Progressive Web Apps ILT - Codelabs](https://google-developer-training.gitbooks.io/progressive-web-apps-ilt-codelabs/content/)

[Progressive Web Apps ILT - Concepts](https://google-developer-training.gitbooks.io/progressive-web-apps-ilt-concepts/content/)

*Note: Timing and order is subject to change*

# Day 1

Introduction

[Why build Progressive Web Apps?](https://docs.google.com/presentation/d/18IOdAivMSRDsqEnwvJL_eaEWhqBgFUjFWEamoWZ5djc/edit#slide=id.p4)

[Your audience, your content](https://docs.google.com/presentation/d/154nnHaw5kgj9fwMu8PQA6nr0f6nZmzwwr0Oq-0j6GfY/edit#slide=id.p4)

[Design for all your users](https://docs.google.com/presentation/d/1sFCDjsELeqpaFTzrCdZC0DMK-27NA_ard4mBxFhid0s/edit#slide=id.p4)

Break

[New techniques for responsive design](https://docs.google.com/presentation/d/1uG20FaNBMQGNjMZGN1SelJ05HVBm5u6fRSCj5ldFftg/edit#slide=id.p4)

[Lab: Laying out a responsive app](https://google-developer-training.gitbooks.io/progressive-web-apps-ilt-codelabs/content/docs/lab_responsive_design.html)

Lunch

[Working with Responsive Images](https://docs.google.com/presentation/d/1rXdSHcN7i11AApafDfqb_uCKNPuyt89WuDFI07Bejqc/edit#slide=id.p4)

[Lab: Responsive images](https://google-developer-training.gitbooks.io/progressive-web-apps-ilt-codelabs/content/docs/lab_responsive_images.html)

[Core technologies](https://docs.google.com/presentation/d/1CxS9SD8DEm5qsonsg_M41A6lmZrdLwrBXuayQBGoK3g/edit#slide=id.p4) (fetch and promises intro)

[Introduction to Service Workers](https://docs.google.com/presentation/d/1bFVDRa71JK0ilr6lS6y9Twqp9gy8jzV1O8FFbG4A3qk/edit#slide=id.p4)

Break

[Lab: Scripting the Service Worker](https://google-developer-training.gitbooks.io/progressive-web-apps-ilt-codelabs/content/docs/lab_scripting_the_service_worker.html)

[Offline Quickstart](https://docs.google.com/presentation/d/1ECzY93trT-cJdj8xIxqUYpCcBi5NQOm8q-WQJW1k8zI/edit#slide=id.p4)

[Lab: Offline support for an existing content site](https://google-developer-training.gitbooks.io/progressive-web-apps-ilt-codelabs/content/docs/lab_offline_quickstart.html) (offline quickstart)

Wrap up day 1

# Day 2

Day 2 intro

[Working with Promises](https://docs.google.com/presentation/d/1zoC41pP9aMR02pc7F8rz0GlaNMs7yzWmIqKQYn5D18A/edit#slide=id.p4)

[Lab: Promises](https://google-developer-training.gitbooks.io/progressive-web-apps-ilt-codelabs/content/docs/lab_promises.html)

[Working with the Fetch API](https://docs.google.com/presentation/d/1Rr_7rP3_XaUsr3m0CKXqWSzW3G4PeFWgp_-INoV7Xfc/edit#slide=id.p4)

[Lab: Fetch API practice](https://google-developer-training.gitbooks.io/progressive-web-apps-ilt-codelabs/content/docs/lab_fetch_api_practice.html)

[Caching files with the Service Worker](https://docs.google.com/presentation/d/1yKsDW9wu5xbx2pXDKlSBTg7h1i48CoQd2A8QvHw-lag/edit#slide=id.p4)

Break

[Lab: Caching files with the service worker](https://google-developer-training.gitbooks.io/progressive-web-apps-ilt-codelabs/content/docs/lab_caching_files_with_the_service_worker.html)

[Intro to PWA architectures](https://docs.google.com/presentation/d/1Xu8FDXCPi7SGOArRgLKjrXWArvAUB4ESdKw9ecWqw0s/edit#slide=id.p4)

[Working with Indexed DB](https://docs.google.com/presentation/d/1SIawAWNYN33lkiuTIpmK6biwZLolsd74bRLTwADKpRs/edit#slide=id.p4)

Lunch

[Lab: Indexed DB](https://google-developer-training.gitbooks.io/progressive-web-apps-ilt-codelabs/content/docs/lab_indexed_db.html)

[Working with live data in the service worker](https://docs.google.com/presentation/d/1wk9XH8yV3NT8fsEp5KpWktfKRl5myYWnhkqbHkPtBx4/edit#slide=id.p4)

Real Estate App exercise (data management strategies)

Break

[Auditing an existing site with Lighthouse](https://docs.google.com/presentation/d/15qTZjhk6cfr-qnH5dSBNJ9SjDmYTMelyfEq7UJVk0Zc/edit#slide=id.p4)

[Lab: Lighthouse](https://google-developer-training.gitbooks.io/progressive-web-apps-ilt-codelabs/content/docs/lab_auditing_with_lighthouse.html)

Q&A, Wrap-up of day 2

# Day 3

Intro to day 3

[Gulp setup](https://docs.google.com/presentation/d/1GgHeG2iUemP3Qz3n8fLT1j2v8T-tADSJqsC07MzgAa4/edit#slide=id.p4)

[Lab: Gulp setup](https://google-developer-training.gitbooks.io/progressive-web-apps-ilt-codelabs/content/docs/lab_gulp_setup.html)

[sw-toolbox and sw-precache](https://docs.google.com/presentation/d/1bdXNNc6Ua43SXtwREfZjIQ4Tiv3piPE3ViWJmc2uNKY/edit#slide=id.p4)

[Lab: sw-toolbox and sw-precache](https://google-developer-training.gitbooks.io/progressive-web-apps-ilt-codelabs/content/docs/lab_sw-precache_and_sw-toolbox.html)

Break

[Intro to Web Push & Notifications](https://docs.google.com/presentation/d/1vd6cFL0Vg3-ciDq2xpN0HxN_UowyKjJsTrCOdulkExM/edit#slide=id.p4)

[Lab: Integrating Web Push](https://google-developer-training.gitbooks.io/progressive-web-apps-ilt-codelabs/content/docs/lab_integrating_web_push.html)

Lunch

[Discoverability & Analytics](https://docs.google.com/presentation/d/1wx9oneZOL5cyriYIuDOQchbji4UVxRjdoplzvncEztA/edit#slide=id.p4)

[Lab: Integrating analytics](https://google-developer-training.gitbooks.io/progressive-web-apps-ilt-codelabs/content/docs/lab_integrating_analytics.html)

[Payment integration](https://docs.google.com/presentation/d/16_g5RhUf8xoxPhsiQkTCkpFVXBkk-hSMqsZ0CKvcNqQ/edit#slide=id.p4)

e-Commerce app walkthrough

ec Lab: Adding the service worker

ec Lab: Adding to the homescreen

ec Lab: Gulp setup

ec Lab: Using sw-precache and sw-toolbox

ec Lab: Implementing the payments API

Wrap-up and feedback