

Meet Magento™ INDIA IN

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Progressive Web Apps

The Future Of Web App Development

Agenda

- What is PWA?
- Limitations of Native Apps
- Characteristics Of PWA
- Benefits to Merchants
- PWA Architecture
- Magento PWA Studio
- Tools and Libraries in PWA
- Case Studies



A progressive web app uses modern web capabilities to deliver an app-like user experience. They evolve from pages in browser tabs to immersive top-level apps, leveraging the web's low friction.

The Current Limitations of Native Apps



Characteristics Of PWA

Progressive

Responsive

Connectivity

Safe

Installable

Linkable

Low Data
Commitment

Discoverable

Factors Enhancing User Experience



Fast



Integrated



Reliable



Engaging

Benefits to Merchants

Enhanced Customer Experience

Increase Average Order Value

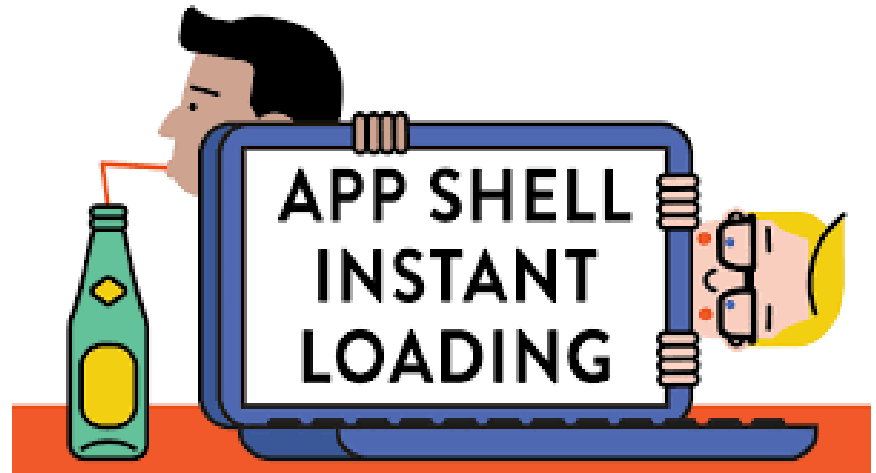
Single Web Codebase for Mobile and
Desktop

Freedom to Deploy

PWA Architecture

Application Shell

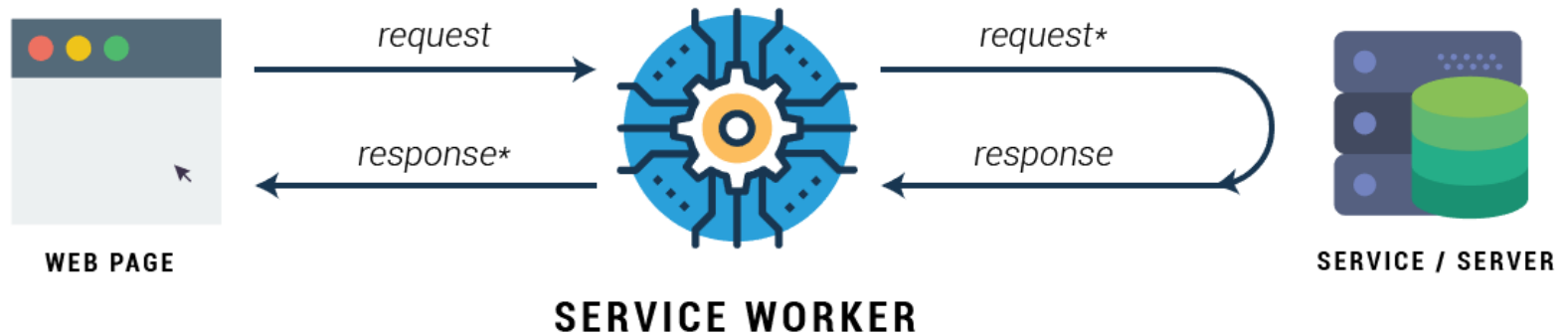
- Application shell is minimal HTML, CSS and JS needed to render the UI of your website. It should contain only UI elements, without any dynamic data. As it is stored in the cache on the first load, every subsequent time that user opens the app (or the website), UI will load immediately, making PWA fetch only dynamic data.



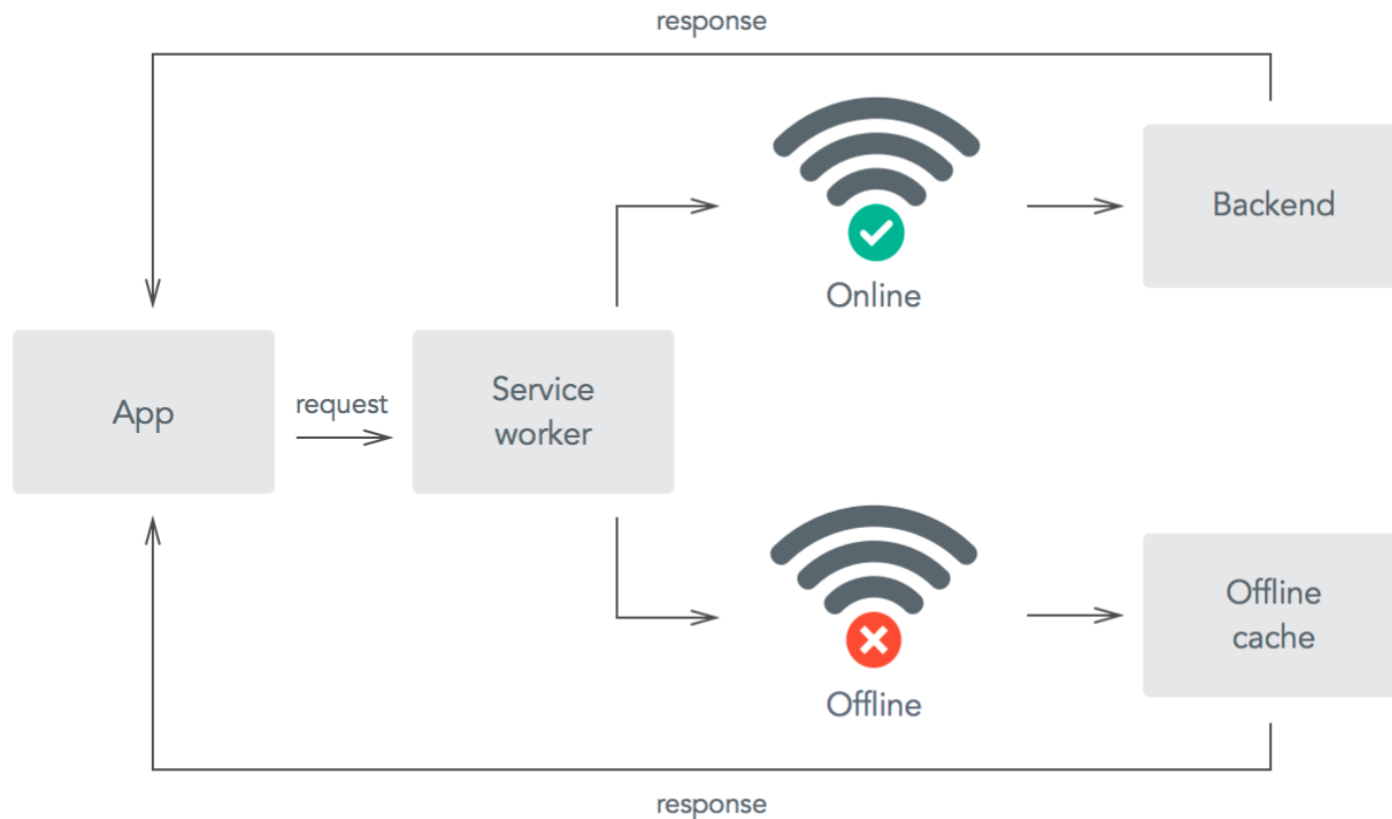
PWA Architecture

Service Worker

- A service worker is a script that runs in the background, to update a user page or site even when no one is using the website. Progressive web applications use service workers for caching and resource retrieval.
- A service worker is a script that registered with the browser and stay registered with browser even offline.



How To Handle Offline On Web?





PWA Studio

The Magento PWA Studio project is a set of developer tools that allow for the development, deployment, and maintenance of a PWA storefront on top of Magento 2. It uses modern tools and libraries to create a build system and framework that adheres to the Magento principle of extensibility.

Official Repository:

<https://github.com/magento-research/pwa-studio>

Features of Magento's PWA Studio

Tools to
personalize
content and add
local
preferences

Build and
manage all
channels and
experiences via
one code base,
one deployment
and app

Intuitive user
experience with
innovative
commerce and
CMS theming.

Purpose-built
developer tools
for fast
prototyping

[pwa-buildpack](#)

Contains the main build and development tools for a Magento PWA.



[peregrine](#)

Contains a collection of UI components for a Magento PWA.



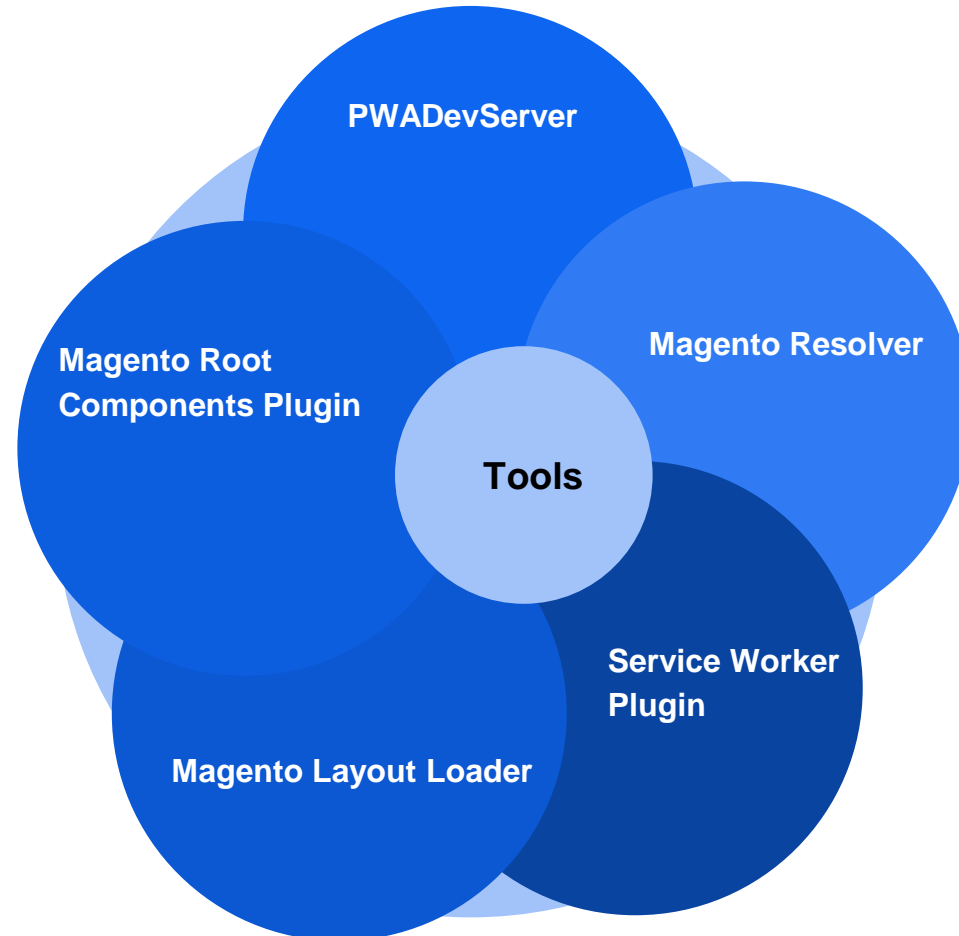
[Venia storefront](#)

A proof of concept Magento 2 storefront built using the PWA Studio tools.

PWA Studio Tools

PWA-Buildpack

- Buildpack is a set of webpack plugins and tools which is used for development of Magento PWA themes.
- It is also used to setup and configure local development environment for Magento 2 platform.



Peregrine

Peregrine is a set of React components created to handle Magento-specific functionalities like routing, root-components, layout handler, product lists, price display, etc.

Venia theme

Venia-concept is a demo theme created by Magento using the Magento PWA studio. It showcases all currently available functionality, workflow and pages

PWA Studio Libraries

Webpack

It is a module bundler and optimizer for JavaScript applications.

React

It is a JavaScript library for building user interfaces.

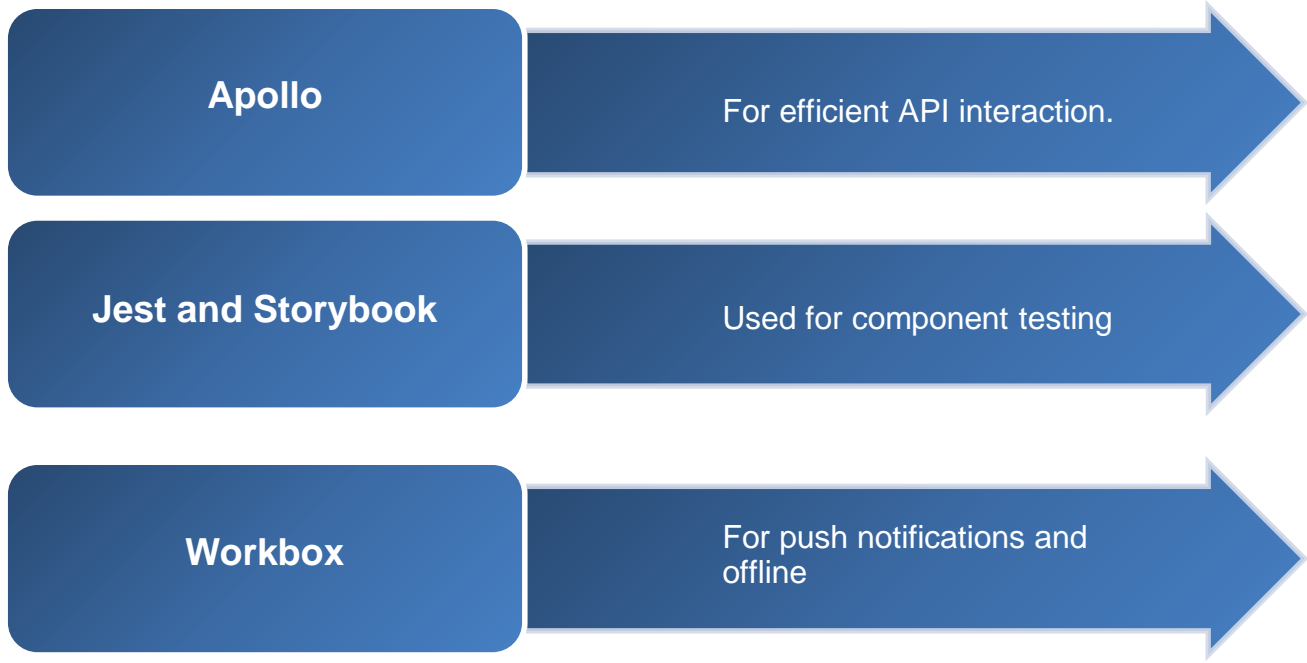
Redux

React is a JavaScript library used for managing state in a web application.

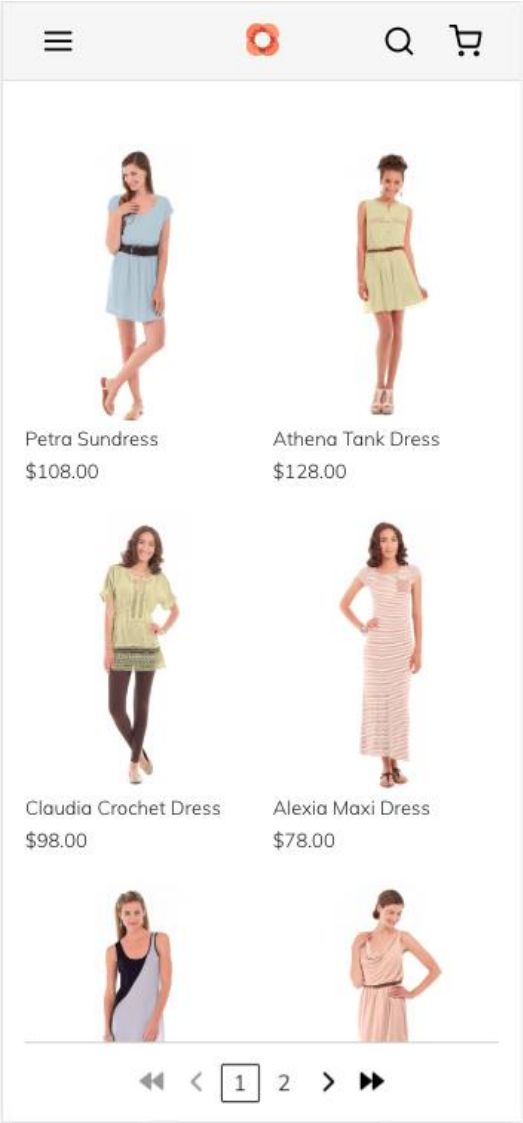
GraphQL

GraphQL is a query language for APIs. It is one of the modern technique to build and query API.

PWA Studio Libraries



A Quick Glance Of PWA Magento Storefront



Bottoms

Tops

Dresses

Accessories

Shop The Look

Sign In



Pomona Skirt

Fashion Color : Rain

Fashion Size : M



1 × \$98.00



Emilia Cropped Lace Top

Fashion Size : S

Fashion Color : Lilac



2 × \$78.00



Emilia Cropped Lace Top

Fashion Size : M

Fashion Color : Lilac



4 × \$78.00



Isadora Skirt

Fashion Color : Rain

Fashion Size : 8



2 × \$118.00

Subtotal (9 Items) **\$802.00**

 Checkout

SHOPPING CART



Pomona Skirt

Fashion Color : Rain

Fashion Size : M



× \$98.00



Emilia Cropped Lace Top

Fashion Size : S

Fashion Color : Lilac



× \$78.00



Emilia Cropped Lace Top

Fashion Size : M

Fashion Color : Lilac



× \$78.00

Ship To

[Add Shipping Information](#)

Pay With

[Add Billing Information](#)

Get It By

[Add Shipping Information](#)

TOTAL

\$802.00

9 Items

Place Order

Case Studies

PWA CASE STUDY - MAKEMYTRIP.COM



Case Studies





Thank
You!