-- **What is Progressive Web App?**

In a layman’s language, a progressive web app is nothing but an application that can act like a mobile web page as well as a native app at the same time.

PWA are web applications that aim to provide an app-like experience to the users and have all the modern web capabilities all in the one place.

**Progressive Web Apps - Facts and Figure**

No of mobile app used are 4X less than the websites used by an individual.

But

However, a person spend 80% more time on an application than on a website.

**Why PWA?**

It is a perfect blend of Website and Application.

It acts like a native app with the functions of a website.

**Key feature of PWA -**

Reliability

Speed

**I**ntegrated user experience

Works offline

Easily Accessible

Progressive

**Technical Components**

1. Service Worker

A **Service worker** is just a component of JavaScript code which works as a proxy between the browser and the network. A Service worker manages the push notifications and helps to build the *offline first* web application using the browser’s cache API.

1. The manifest file

The manifest file is a config JSON file which contains the information of your application, like the icon to be displayed on the home screen when installed, the short name of the application, background color, or theme.

1. HTTPS

Service workers have the ability to intercept the network requests and can modify the responses. Service workers perform all the actions on the client side. Hence, PWA requires secure protocol HTTPS.

#### **Tools and libraries**

1. [**Lighthouse**](https://developers.google.com/web/tools/lighthouse/)is an audit tool which can run against any web page, public or personal, and generates one report with the checklist required for PWA. This can be used during the development of your PWA to crosscheck and get recommendations to further improve the experience.
2. [**Workbox**](https://developers.google.com/web/tools/workbox/)is a collection of libraries, open sourced by Google and can be used to generate the service worker file. Workbox also comes along with various caching strategies of images and other resources.

**Success Stories**

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**Browsers Supporting PWA**

Chrome FireFox Microsoft Edge Opera Samsung