

PWA automation with Puppeteer



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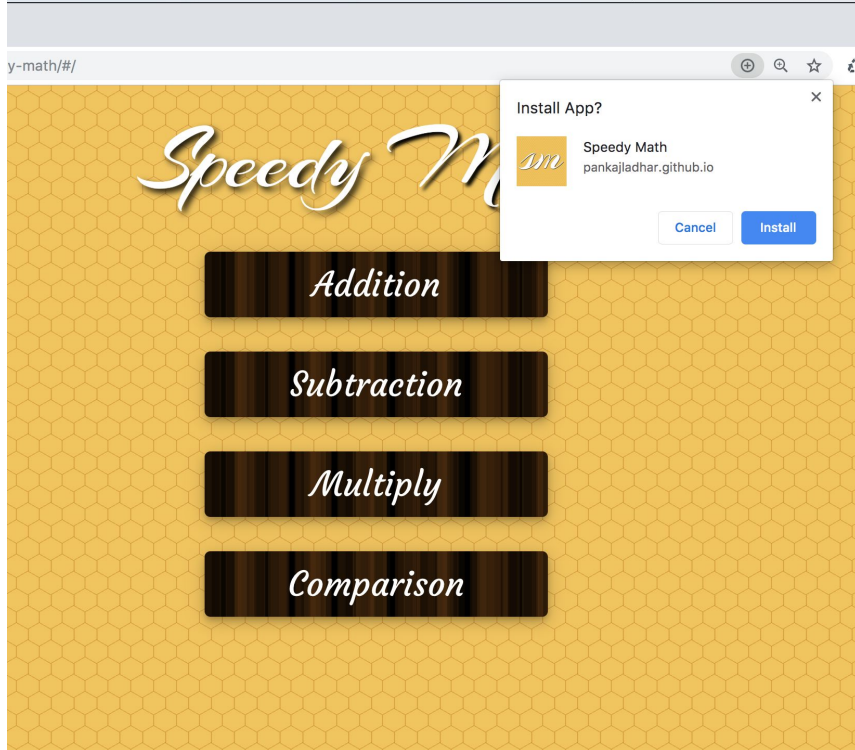
Pankaj Ladhar

Agenda

- What is PWA ?
- What is Puppeteer ?
- Getting started with Puppeteer
- More in Puppeteer ?
- Demo
- Resources

What is PWA
(Progressive Web Apps) ?

What is PWA ?

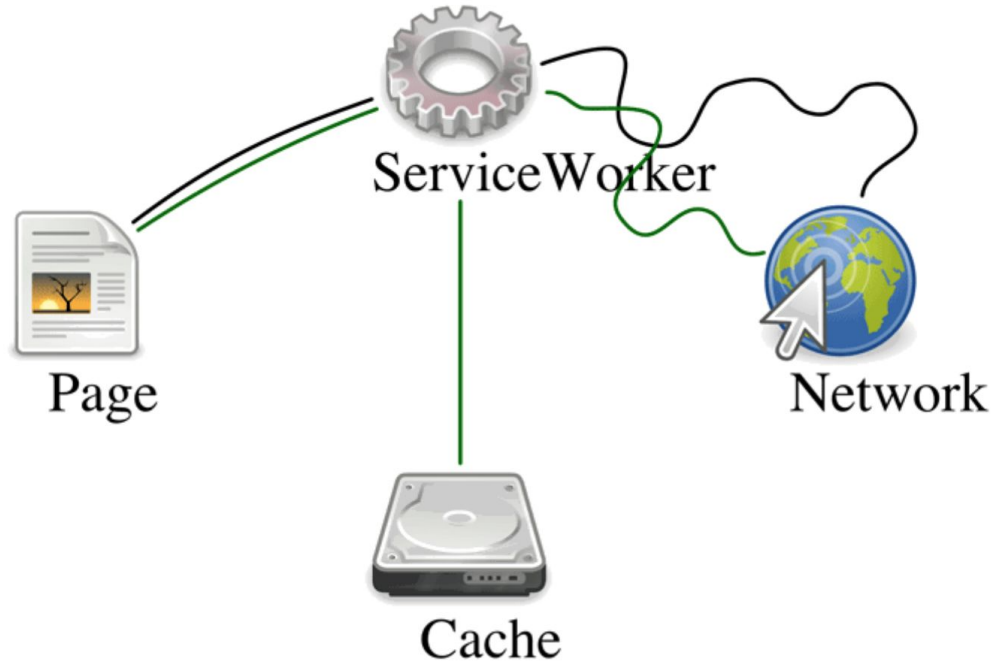


What is PWA ?

A PWA is not an API or a technology, but it is a web development approach that uses a combination of tools and technologies already available to create targeted, ideal user experiences.



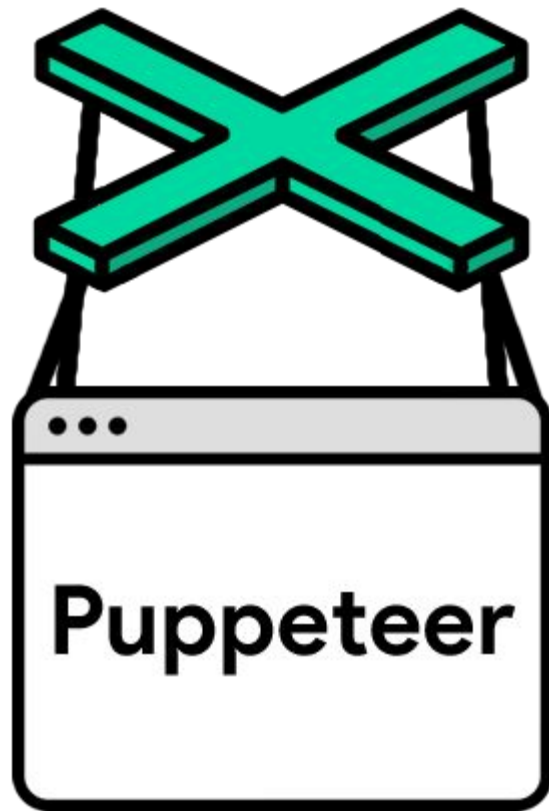
What is Service Worker ?



What is Puppeteer ?

- Modern Node library for headless Chrome/Chromium
- Supports **ES6** features
- Zero config **Bundles** latest Chromium

npm install puppeteer



```
const puppeteer = require("puppeteer");

(async () => {
    const browser = await puppeteer.launch();
    const page = await browser.newPage();
    await page.goto
        ("https://pankajladhar.github.io/speedy-math/#/");
    await browser.close();
})();
```



```
const viewport = { width: 400, height: 600 };  
await puppeteer.launch({  
  headless: false,  
  devtools: true  
  defaultViewport: null,  
  args: [ `--window-size=${viewport.width},  
          ${viewport.height}` ],  
  executablePath: "path/local/installed/chrome"  
})
```

```
(async () => {  
  ...  
  await page.evaluate("navigator.serviceWorker.ready");  
  console.log("Going offline");  
  await page.setOfflineMode(true);  
  await page.reload({ waitUntil: "networkidle0" });  
  const text = await page.$eval(".Offline-Banner",  
    el => el.innerText);  
  // You are offline.You might see different experience :)!  
}) ();
```

```
(async () => {  
  ...  
  // Returns true if response served from memory or disk cache  
  page.on('response', r=> r.fromCache());  
  // Returns true if response served from serviceworker  
  page.on('response', r=> r.fromServiceWorker());  
  ...  
}) ();
```

Demo

What else you can achieve using puppeteer ?

- Generate screenshots and PDFs of pages.
- Crawl a SPA (Single-Page Application) and generate pre-rendered content (i.e. "SSR" (Server-Side Rendering)).
- Automate form submission, UI testing, keyboard input, etc.
- Create an up-to-date, automated testing environment. Run your tests directly in the latest version of Chrome using the latest JavaScript and browser features.
- Capture a timeline trace of your site to help diagnose performance issues.
- Test Chrome Extensions.

Resources

- <https://developers.google.com/web/tools/puppeteer>
- <https://pptr.dev/>
- <https://developers.google.com/web/progressive-web-apps>
- <https://medium.com/dev-channel/testing-service-workers-318d7b016b19>

- [Demo source code](#)

Thanks