

EXPERIMENT NO. 7

Aim: To write meta data of your Ecommerce PWA in a Web app manifest file to enable “add to homescreen” feature

Theory:

A Progressive Web App (PWA) is a type of application software delivered through the web, built using common web technologies including HTML, CSS, and JavaScript. PWAs are intended to work on any platform that uses a standards-compliant browser, including both desktop and mobile devices. They are designed to be reliable, fast, and engaging, providing a user experience that feels like a native app. PWAs can also work offline or with limited connectivity, thanks to the use of service workers that cache important resources.

Features of PWA:

Progressive Enhancement: PWAs are built with progressive enhancement as a core tenet. This means they should work for all users, regardless of the browser or device they are using. They are designed to provide a basic level of functionality and usability for all users, with enhanced features available to those using more modern browsers or devices.

Responsive: PWAs are built to be responsive, meaning they can adapt to different screen sizes and orientations. This ensures that the app looks and works well on a variety of devices, from smartphones to tablets to desktop computers.

App-Like Experience: PWAs are designed to provide a user experience that is similar to that of a native app. They can be launched from the user's home screen, have a full-screen mode, and can even send push notifications.

Connectivity Independent: One of the key features of PWAs is that they can work offline or with limited connectivity. This is achieved using service workers, which are scripts that run in the background and can intercept network requests, allowing the app to cache important resources and serve them to the user even when they are offline.

Secure: PWAs are served over HTTPS to ensure that the connection between the app and the server is secure. This helps protect the integrity and privacy of the app and its users.

Discoverable: PWAs are discoverable by search engines, just like any other website. This means that users can find and access the app through search results, increasing its visibility and reach.

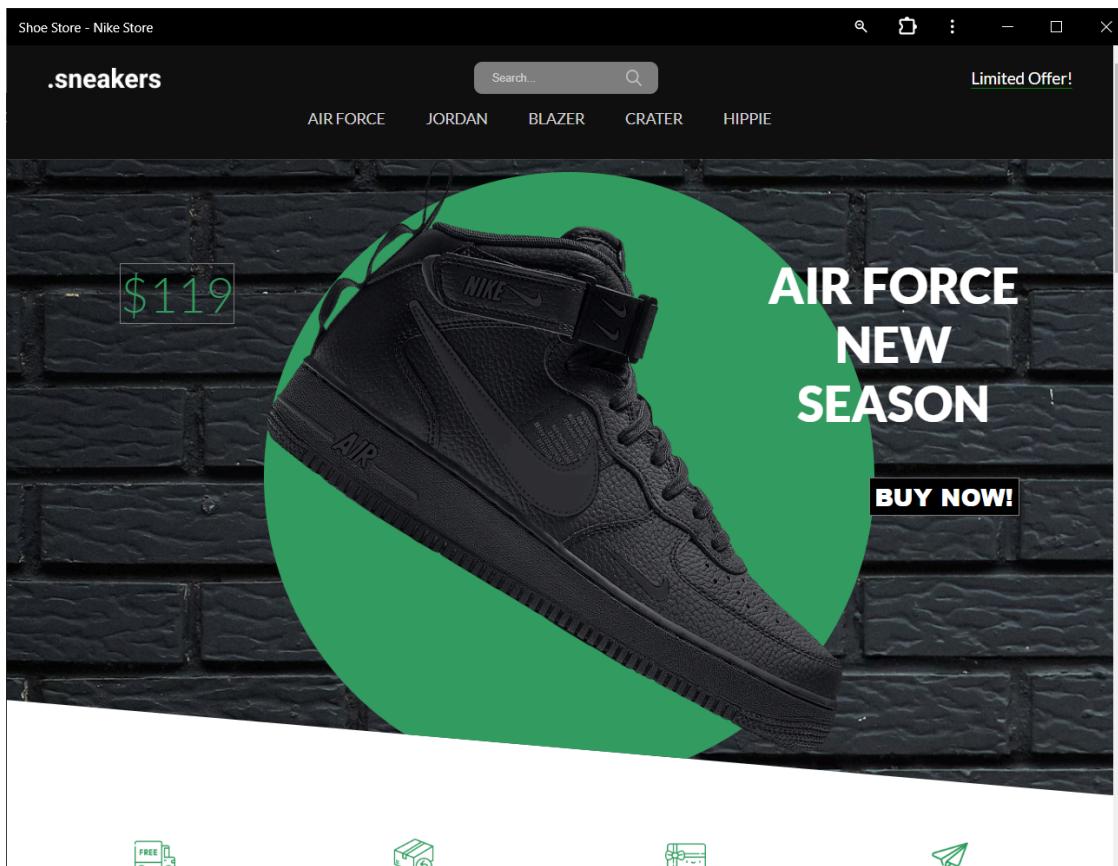
Installable: PWAs can be installed by users onto their devices, just like native apps. This allows users to access the app quickly and easily from their home screen, without having to go through a browser.

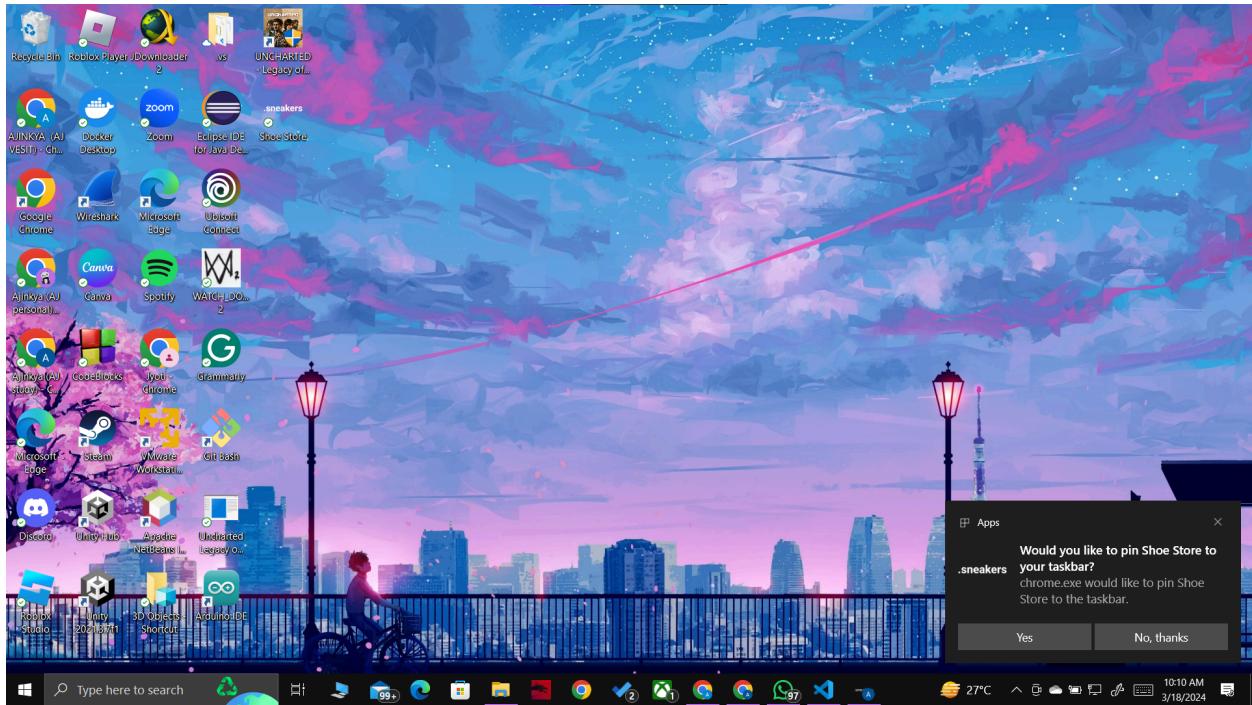
manifest.json:

```
{
  "name": "Shoe Store",
  "short_name": "Nike",
  "start_url": "/",
  "display": "standalone",
  "background_color": "#ffffff",
  "theme_color": "#000000",
  "icons": [
    {
      "src": "./img/sneakers1.png",
      "sizes": "144x144",
      "type": "image/png"
    },
    {
      "src": "./img/sneakers.png",
      "sizes": "140x26",
      "type": "image/png"
    }
  ],
  "scope": "/",
  "lang": "en",
  "description": "The best place to find trendy sneakers!",
  "orientation": "portrait-primary",
  "prefer_related_applications": false,
  "related_applications": [],
  "dir": "ltr"
}
```

Output:

The screenshot shows the Application tab in the developer tools of a browser. The main content area displays a sneaker advertisement for 'AIR FORCE NEW SEASON' priced at \$119 with a 'BUY NOW!' button. The sidebar shows various storage and service worker details.





The website has been installed on the desktop by adding the manifest.json file

Conclusion:

In conclusion, this experiment provided an insightful introduction to Progressive Web Apps (PWAs) and their potential benefits for E-commerce applications. By leveraging the capabilities of PWAs, such as offline access, responsive design, and app-like experiences, businesses can significantly enhance user engagement, retention, and conversion rates.

Through the process of writing metadata in the web app manifest file, we explored how to enable key features like the "Add to Home Screen" functionality, which improves the app's discoverability and user experience. This feature allows users to easily access the E-commerce app from their device's home screen, enhancing the app's visibility and encouraging frequent usage.

Furthermore, this experiment highlighted the importance of considering PWA development as a strategic investment for E-commerce businesses. PWAs offer a cost-effective way to deliver a high-quality, app-like experience to users across different devices and platforms, without the need to develop and maintain separate native apps.

In conclusion, by embracing PWA technologies and implementing best practices, E-commerce businesses can stay competitive in the digital landscape, attract and retain more customers, and ultimately drive growth and success in the online marketplace.