

Experiment No: - 7

Aim:- To learn about Progressive Web Apps and how they are different from standard websites.

Theory:-

Progressive Web App (PWA) is a type of web application that leverages modern web capabilities to provide a user experience similar to that of native mobile apps. PWAs are designed to work on any platform that uses a standards-compliant browser, including desktop and mobile devices.

Here are some key characteristics and features of Progressive Web Apps:

- 1. Progressive Enhancement:** PWAs are built with progressive enhancement in mind, meaning they should work for all users regardless of the browser or device they are using. They can take advantage of modern web technologies while ensuring basic functionality for older browsers.
- 2. Responsive Design:** PWAs are designed to be responsive and provide a seamless user experience across different screen sizes and devices, including desktops, tablets, and smartphones.
- 3. Connectivity Independence:** PWAs can work offline or with a poor internet connection by utilizing service workers, which are scripts that run in the background of the web browser and cache data to enable offline access.
- 4. App-Like Experience:** PWAs aim to provide an app-like experience to users, including features such as push notifications, home screen icons, and full-screen mode. They can be installed on the user's device and launched from the home screen, similar to native apps.
- 5. Fast and Reliable:** PWAs are designed to be fast and reliable, with quick loading times and smooth interactions. They use techniques such as pre-caching and lazy loading to optimize performance.

6. Secure: PWAs must be served over HTTPS to ensure data security and user privacy. This also enables features such as service workers and push notifications.

7. Discoverable: PWAs are discoverable by search engines and can be indexed like any other website, making them easy to find and share.

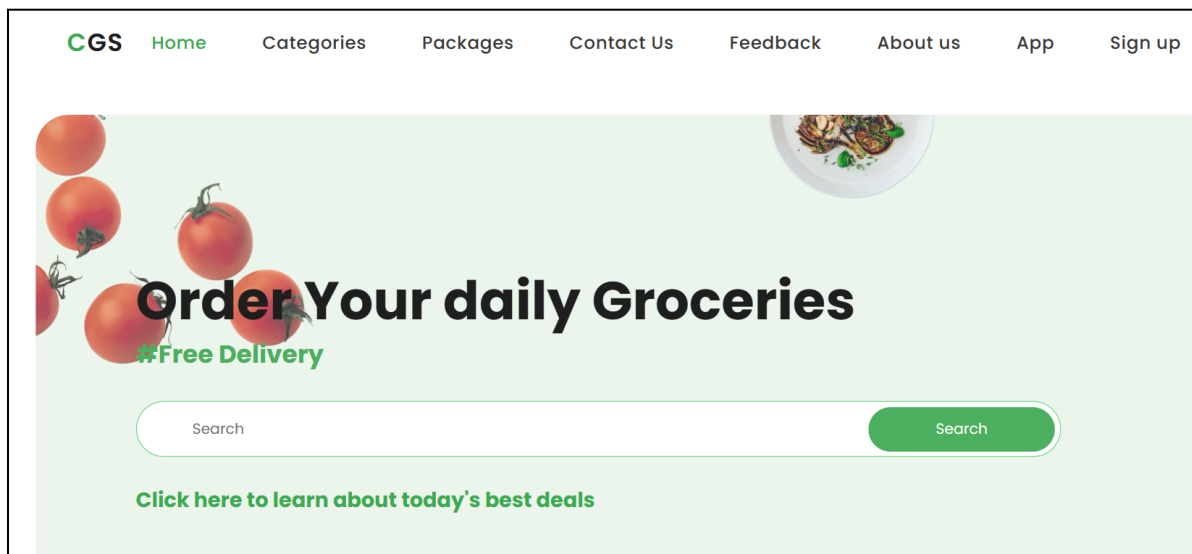
8. Engagement: PWAs can increase user engagement through features such as push notifications, which allow developers to re-engage users even when they are not actively using the app.

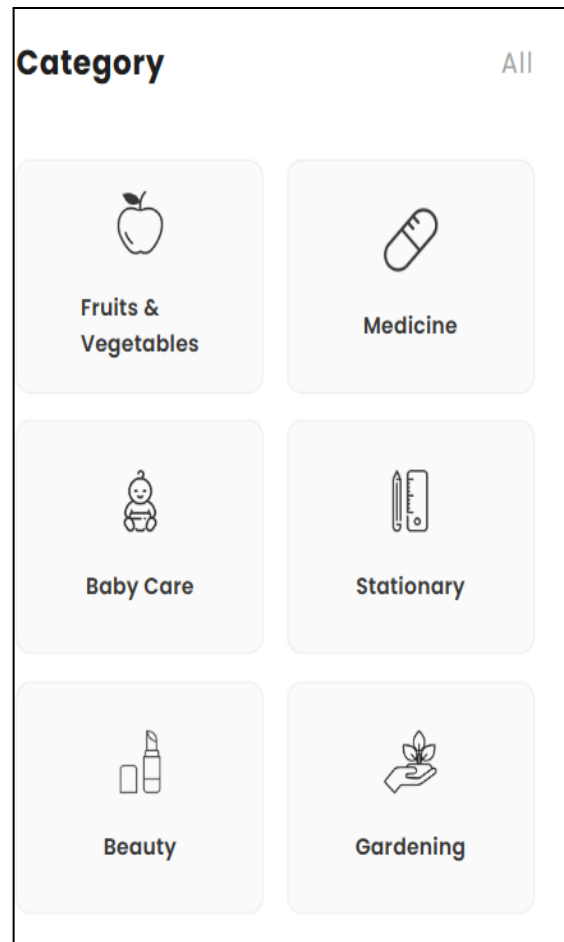
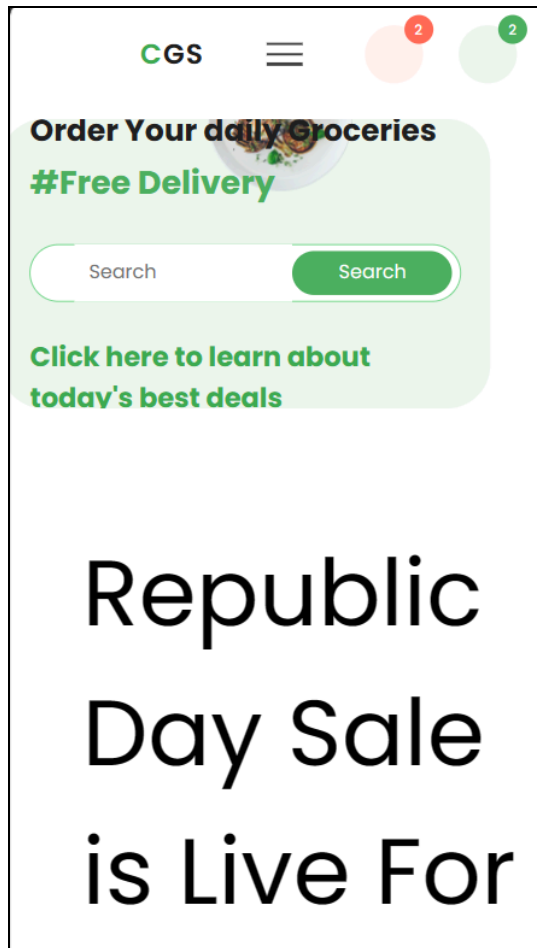
Overall, Progressive Web Apps combine the best features of the web and native apps, providing users with a fast, reliable, and engaging experience while offering developers a cost-effective and scalable solution for building cross-platform applications.

Manifest.json:

```
{  
  
  "name": "Chitkara Grocery Store",  
  
  "short_name": "CGS",  
  
  "description": "Your one-stop destination for all grocery needs.",  
  
  "icons": [  
  
    {  
  
      "src": "path/to/icon-192x192.png",  
  
      "sizes": "192x192",  
  
      "type": "image/png"  
    },  
  
    {
```

```
"src": "path/to/icon-512x512.png",  
"sizes": "512x512",  
"type": "image/png"  
}  
],  
"start_url": "/",  
"display": "standalone",  
"background_color": "#ffffff",  
"theme_color": "#40aa54"
```

Output:

**Conclusion:**

Hence, successfully understood the Progressive Web Apps (PWAs) involves grasping their unique characteristics and how they differentiate from traditional websites. Unlike standard websites, PWAs leverage modern web technologies to offer users a more applike experience.