EXPERIMENT NO: - 10

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AIM: - To study and implement deployment of Ecommerce PWA to GitHub Pages.

Theory: -

GitHub Pages: Static Website Hosting Made Simple

GitHub Pages is a free hosting service that allows users to publish **public webpages directly** from a GitHub repository. It is particularly useful for static websites, project documentation, and blogs.

Key Features

- Jekyll Integration: Built-in support for Jekyll enables easy blogging.
- Custom Domains: Allows users to configure their own URLs.
- Automatic Page Deployment: Simply push your changes to the repository, and the updates go live.

Why Choose GitHub Pages?

- Completely Free: No hosting charges.
- Seamless GitHub Integration: Works directly with your repositories.
- Quick Setup: Just create a repository, push your files, and your site is live.

Who Uses GitHub Pages?

Companies like **Lyft**, **CircleCI**, **and HubSpot** use GitHub Pages for their documentation and static sites. It is widely adopted, appearing in **775 company stacks and 4,401 developer stacks**.

Pros & Cons

Pros

Familiar interface for GitHub users.

- Simple deployment via the gh-pages branch.
- Supports custom domains with easy DNS configuration.

Cons

- Repositories need to be public unless you have a paid plan.
- Limited HTTPS support for custom domains (expected to improve).
- Jekyll plugins have limited support.

Firebase: A Full-Featured Real-Time Backend

Firebase is a cloud-based **real-time application platform** developed by Google. It enables developers to build **dynamic, collaborative applications** with ease.

Key Features

- Real-Time Database: Automatically syncs data across all connected clients.
- Cloud-Based Storage: JSON-based storage accessible via REST APIs.
- Scalable Infrastructure: Works well with existing services and scales automatically.
- Authentication & Cloud Messaging: Secure login and push notifications.

Why Choose Firebase?

- Instant Backend Setup: No need to build a separate backend.
- Fast & Responsive: Real-time data synchronization.
- Built-in HTTPS: Free SSL certificates for custom domains.

Who Uses Firebase?

Companies like **Instacart**, **9GAG**, **and Twitch** rely on Firebase for their backend needs. Firebase is widely adopted, appearing in **1,215 company stacks and 4,651 developer stacks**.

Pros & Cons

Pros

- Hosted by Google, ensuring reliability and security.
- Comes with authentication, messaging, and real-time database services.
- Free HTTPS support for all custom domains.

Cons

- Limited Free Plan: 10 GB of data transfer per month (can be mitigated with a CDN).
- Command-Line Deployment: No GUI for hosting.
- No Built-in Static Site Generator Support: Unlike GitHub Pages, Firebase doesn't natively support static site generators like Jekyll.

Link to our GitHub repository:

https://skailaje.github.io/MPL_PWA/

Github Screenshot:











