

## **MAD and PWA Lab**

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### **Experiment - 10**

**Aim: To study and implement deployment of Ecommerce PWA to GitHub Pages.**

### **Theory:**

#### **GitHub Page**

Public web pages are freely hosted and easily published. Public webpages hosted directly from your GitHub repository. Just edit, push, and your changes are live.

GitHub Pages provides the following key features:

1. Blogging with Jekyll
2. Custom URL
3. Automatic Page Generator

Reasons for favoring this over Firebase:

1. Free to use
2. Right out of github

### 3. Quick to set up

GitHub Pages is used by Lyft, CircleCI, and HubSpot.

GitHub Pages is listed in 775 company stacks and 4401 developer stacks.

#### Pros

1. Very familiar interface if you are already using GitHub for your projects.
2. Easy to set up. Just push your static website to the gh-pages branch and your website is ready.
3. Supports Jekyll out of the box.
4. Supports custom domains. Just add a file called CNAME to the root of your site, add an A record in the site's DNS configuration, and you are done.

#### Cons

1. The code of your website will be public, unless you pay for a private repository.
2. Currently, there is no support for HTTPS for custom domains. It's probably coming soon though.
3. Although Jekyll is supported, plug-in support is rather spotty.

## Firebase

The Realtime App Platform. Firebase is a cloud service designed to power real-time, collaborative applications. Simply add the Firebase library to your application to gain access to a shared data structure; any changes you make to that data are automatically synchronized with the Firebase cloud and with other clients within milliseconds.

Some of the features offered by Firebase are:

1. Add the Firebase library to your app and get access to a shared data structure. Any changes made to that data are automatically synchronized with the Firebase cloud and with other clients within milliseconds.

2. Firebase apps can be written entirely with client-side code, update in real-time out-of-the-box, interoperate well with existing services, scale automatically, and provide strong data security.
3. Data Accessibility- Data is stored as JSON in Firebase. Every piece of data has its own URL which can be used in Firebase's client libraries and as a REST endpoint. These URLs can also be entered into a browser to view the data and watch it update in real-time.

Reasons for favoring over GitHub Pages:

1. Realtime backend made easy
2. Fast and responsive

Instacart, 9GAG, and Twitch are some of the popular companies that use Firebase

Firebase has a broader approval, being mentioned in 1215 company stacks & 4651 developers stacks

Pros

1. Hosted by Google. Enough said.
2. Authentication, Cloud Messaging, and a whole lot of other handy services will be available to you.
3. A real-time database will be available to you, which can store 1 GB of data.
4. You'll also have access to a blob store, which can store another 1 GB of data.
5. Support for HTTPS. A free certificate will be provisioned for your custom domain within 24 hours.

Cons

1. Only 10 GB of data transfer is allowed per month. But this is not really a big problem, if you use a CDN or AMP.
2. Command-line interface only.

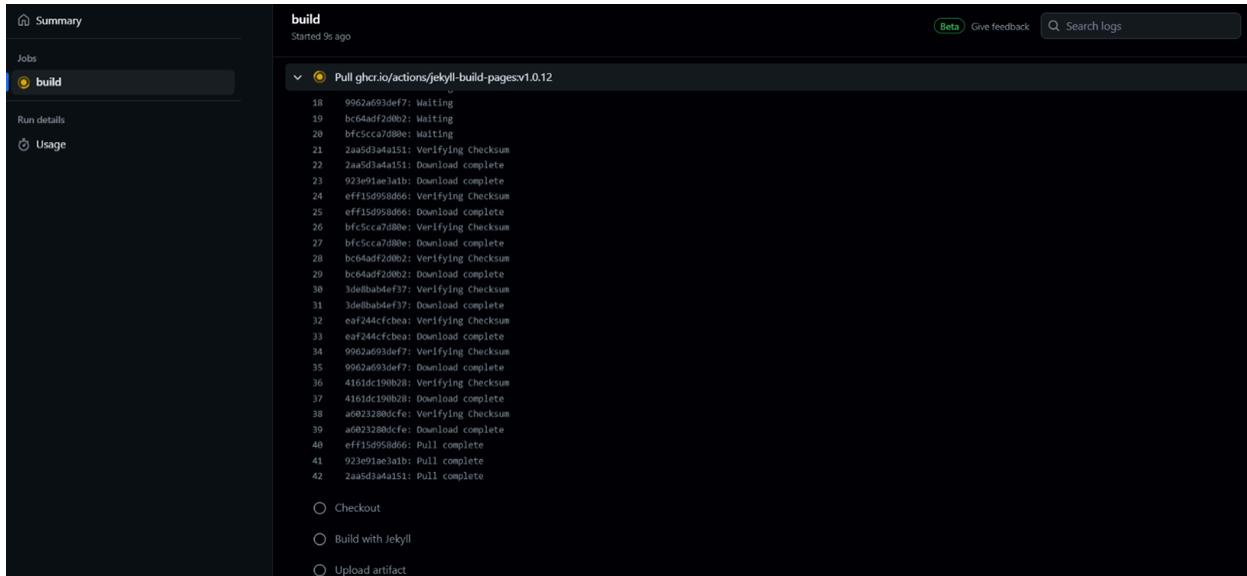
**Implementation:**

The screenshot shows a GitHub repository named 'paramKeswani / ecommerce\_pwa'. The 'Code' tab is selected, displaying the file structure of the 'master' branch. The 'Jewellery-master' folder contains subfolders 'css', 'fonts', 'img', and 'js', along with files 'README.md', 'cart.html', 'checkout.html', 'contact.html', 'customer-login.html', 'designservice.html', 'index.html', 'manifest.json', and 'product-details.html'. To the right, a list of commits from 'paramKeswani' is shown, all labeled 'first commit' and made 4 hours ago. The commits are listed in descending order of date.

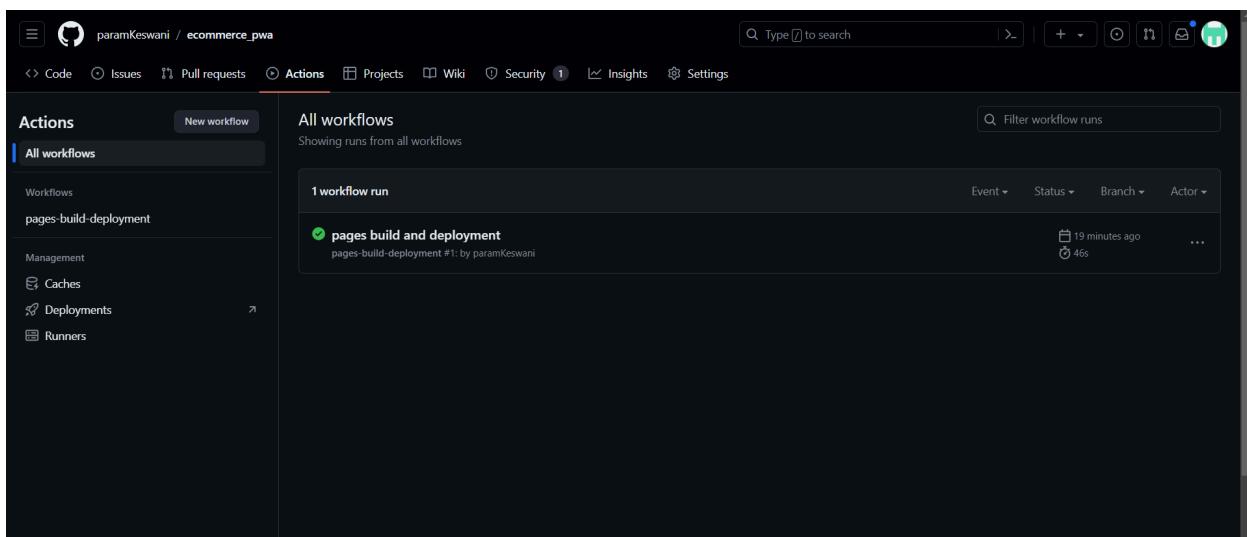
Name	Last commit message	Last commit date
..		4 hours ago
css	first commit	4 hours ago
fonts	first commit	4 hours ago
img	first commit	4 hours ago
js	first commit	4 hours ago
README.md	first commit	4 hours ago
cart.html	first commit	4 hours ago
checkout.html	first commit	4 hours ago
contact.html	first commit	4 hours ago
customer-login.html	first commit	4 hours ago
designservice.html		
index.html		
manifest.json		
product-details.html		

The screenshot shows the 'GitHub Pages' settings page for the 'ecommerce\_pwa' repository. The left sidebar includes sections for General, Access, Collaborators, Moderation options, Code and automation (with 'Pages' selected), Security, Code security and analysis, and Deploy keys. The main content area is titled 'GitHub Pages' and states: 'GitHub Pages is designed to host your personal, organization, or project pages from a GitHub repository.' Below this, the 'Build and deployment' section is titled 'Source' and shows a dropdown menu set to 'Deploy from a branch'. A note indicates that GitHub Pages is currently disabled and provides a link to learn more about configuring the publishing source. At the bottom, there are 'None' and 'Save' buttons. The 'Visibility' section notes that with GitHub Enterprise, access can be restricted by publishing privately. It also offers a 30-day trial of GitHub Enterprise and a link to learn more about visibility.

With a GitHub Enterprise account, you can restrict access to your GitHub Pages site by publishing it privately. A privately published site can only be accessed by people with read access to the repository the site is published from. You can use privately published sites to share your internal documentation or knowledge base with members of your enterprise.



A screenshot of a GitHub Actions build log. The build is titled "build" and started 95 ago. It shows a series of steps from step 18 to 42, each involving pulling or verifying checksums for files like "9962aef593def7", "bc64adff2d00b2", and "bf5c5ca088be". Step 42 is labeled "Pull complete". Below the log, there are three circular options: "Checkout", "Build with Jekyll", and "Upload artifact".



A screenshot of the GitHub Actions interface showing workflow runs. The left sidebar is titled "Actions" and lists "All workflows", "Workflows", "pages-build-deployment", "Management", "Caches", "Deployments", and "Runners". The main area is titled "All workflows" and shows "1 workflow run". The run is for "pages build and deployment" and was triggered by paramKeswani. It was completed 19 minutes ago with a status of "Success" and 46s duration. A "Filter workflow runs" search bar is at the top right.

**Link to our GitHub repository:**

[https://github.com/paramKeswani/ecommerce\\_pwa](https://github.com/paramKeswani/ecommerce_pwa)

**Hosted Link:**

[https://paramkeswani.github.io/ecommerce\\_pwa/Jewellery-master/index.html](https://paramkeswani.github.io/ecommerce_pwa/Jewellery-master/index.html)

**Github Screenshot:**

**Conclusion:**

**In this experiment, we have registered a service worker, and completed the install and activation process for a new service worker for the E-commerce PWA.**

**Link to our GitHub repository:**

<https://github.com/Sarvadnyaawaghad150503/dormhost>

**Hosted Link:** <https://sarvadnyaawaghad150503.github.io/dormhost/>

**Github Screenshot:**

## **Conclusion:**

In this experiment, we have registered a service worker, and completed the install and activation process for a new service worker for the E-commerce PWA.