

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

GitHub Link: <https://ganesh23105.github.io/EcoGadgetHubPWA/>

Theory

GitHub Pages is a free hosting service provided by GitHub to publish static websites directly from a GitHub repository. It supports HTML, CSS, JavaScript, and other front-end files, making it ideal for hosting PWAs.

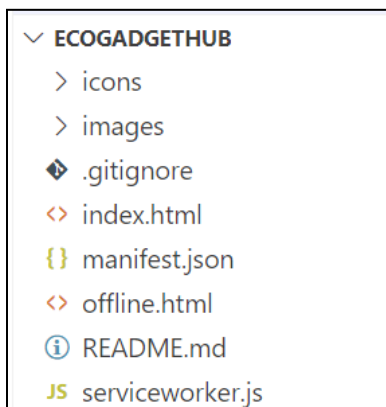
What we implemented in our code

In this experiment, we deployed our E-commerce PWA project, "Eco Friendly Gadgets Collection", to GitHub Pages using these steps:

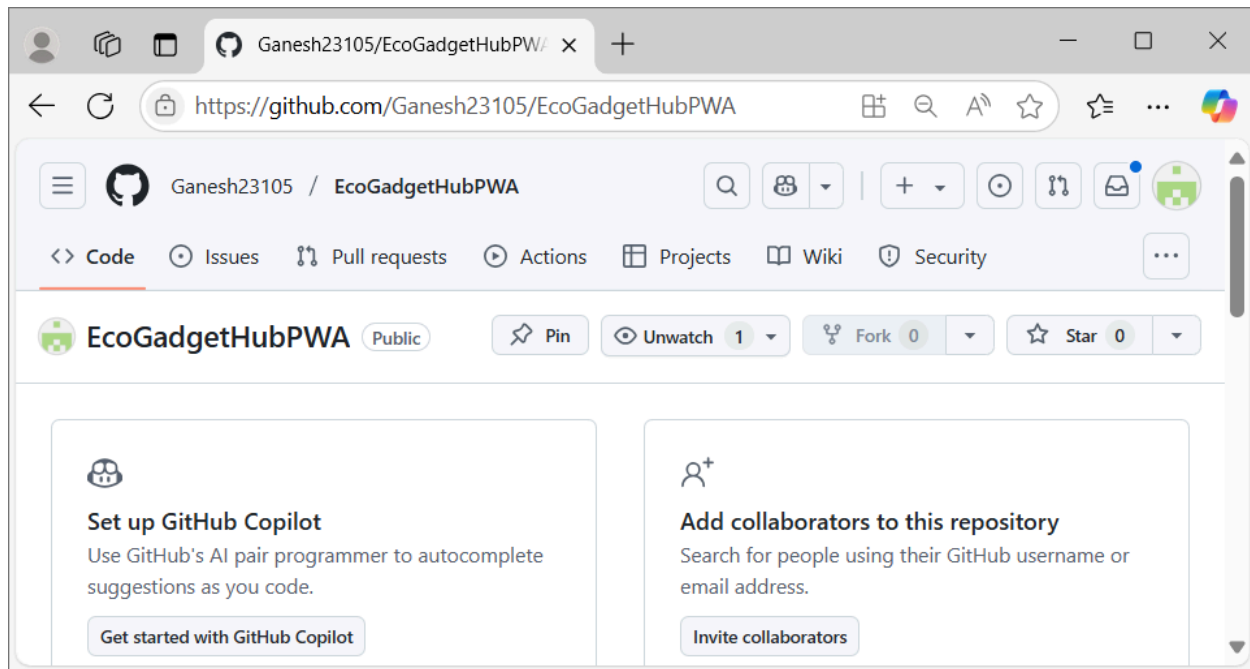
- We ensured all necessary PWA files were in place, such as index.html, manifest.json, serviceworker.js, and offline assets.
- The index.html file used relative paths correctly so resources load properly after deployment.
- We registered the service worker to enable offline access and caching of essential files.
- The manifest.json provided metadata to support "Add to Home Screen" functionality.
- We created a GitHub repository and pushed all project files to it.
- Then, from GitHub Settings → Pages, we selected the main branch and the / (root) folder as the source.
- After saving, GitHub generated a live link through which we accessed the deployed PWA.

This deployment made our PWA fully functional and accessible online with service worker support, offline capabilities, and installability features.

Folder Structure



Create a GitHub Repository



Link Your Local Project to GitHub and Push Changes.

```
PROBLEMS  OUTPUT  TERMINAL  DEBUG CONSOLE

• PS D:\Users\Ganesh\Documents\EcoGadgetHub> git init
  Initialized empty Git repository in D:/Users/Ganesh/Documents/EcoGadgetHub/.git/
• PS D:\Users\Ganesh\Documents\EcoGadgetHub> git add .
• PS D:\Users\Ganesh\Documents\EcoGadgetHub> git commit -m "First Commit"
[main (root-commit) 8c926df] First Commit
 13 files changed, 868 insertions(+)
  create mode 100644 .gitignore
  create mode 100644 README.md
  create mode 100644 icons/icon-192x192.png
  create mode 100644 icons/icon-512x512.png
  create mode 100644 images/Biodegradable-Phone-Case.webp
  create mode 100644 images/Eco-friendly-gadgets-collection.webp
  create mode 100644 images/Recycled-Wireless-Earbuds.webp
  create mode 100644 images/Smart-Eco-Light.webp
  create mode 100644 images/Solar-Phone-Charger.webp
  create mode 100644 index.html
  create mode 100644 manifest.json
  create mode 100644 offline.html
  create mode 100644 serviceworker.js
○ PS D:\Users\Ganesh\Documents\EcoGadgetHub>
```

```
PS D:\Users\Ganesh\Documents\EcoGadgetHub> git remote add origin https://github.com/Gar
PS D:\Users\Ganesh\Documents\EcoGadgetHub> git push -u origin main
info: please complete authentication in your browser...
Enumerating objects: 17, done.
Counting objects: 100% (17/17), done.
Delta compression using up to 4 threads
Compressing objects: 100% (17/17), done.
Writing objects: 100% (17/17), 373.18 KiB | 7.18 MiB/s, done.
Total 17 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/Ganesh23105/EcoGadgetHubPWA.git
 * [new branch]      main -> main
branch 'main' set up to track 'origin/main'.
PS D:\Users\Ganesh\Documents\EcoGadgetHub>
```

The screenshot shows a web browser window with the URL <https://github.com/Ganesh23105/EcoGadgetHubPWA>. The repository is public and has 0 stars, 0 forks, and 1 watcher. The main branch is selected. The file list shows the following files, all committed 2 minutes ago:

File Name	Commit	Time
icons	First Commit	2 minutes ago
images	First Commit	2 minutes ago
.gitignore	First Commit	2 minutes ago
README.md	First Commit	2 minutes ago
index.html	First Commit	2 minutes ago
manifest.json	First Commit	2 minutes ago
offline.html	First Commit	2 minutes ago
serviceworker.js	First Commit	2 minutes ago

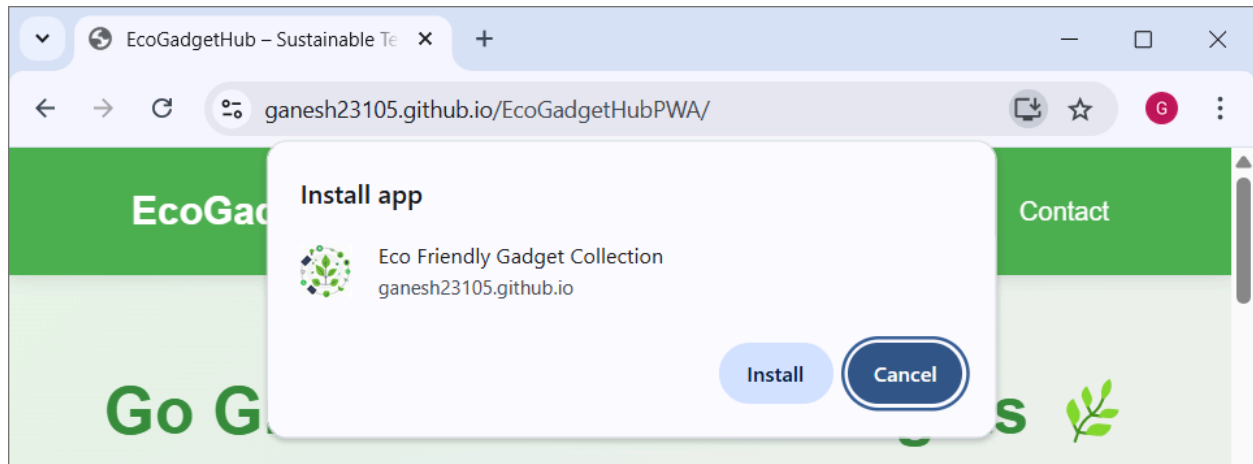
The README section shows the repository name **EcoGadgetHub** and a description: "EcoGadgetHub is a progressive web application (PWA)".

On the right side, the "About" section states: "No description, website, or topics provided." The "Releases" section says: "No releases published. [Create a new release](#)". The "Packages" section says: "No packages published. [Publish your first package](#)". The "Languages" section shows a bar chart with the following data:

Language	Percentage
HTML	86.8%
JavaScript	13.2%

The screenshot shows the GitHub Pages settings for the repository `EcoGadgetHubPWA` under the user `Ganesh23105`. The left sidebar contains navigation links: General, Access, Collaborators, Moderation options, Code and automation, Branches, Tags, Rules, Actions, Webhooks, Environments, Codespaces, and Pages (which is highlighted). The main content area is titled "GitHub Pages" and includes a description: "GitHub Pages is designed to host your personal, organization, or project pages from a GitHub repository." Below this, a status box indicates the site is live at <https://ganesh23105.github.io/EcoGadgetHubPWA/>, last deployed by `Ganesh23105` 1 minute ago, with a "Visit site" button. The "Build and deployment" section shows the source is set to "Deploy from a branch" and the branch is "main". A note states the site is currently being built from the main branch, with a link to learn more about configuring the publishing source. At the bottom, there are dropdowns for the branch (set to "main") and the directory (set to "/ (root)"), along with a "Save" button.

The screenshot displays the EcoGadgetHub website. The header is a green bar with the "EcoGadgetHub" logo on the left and navigation links "Home", "Products", "About", and "Contact" on the right. The main content area has a light green background. It features a large heading "Go Green with Smart Gadgets" followed by a green leaf icon. Below the heading is a paragraph: "Discover the future of eco-friendly technology — solar-powered, biodegradable, and built to last. Make a positive impact with every purchase." At the bottom of this section is an orange button labeled "Explore Products". The footer of the page shows a partial view of an image depicting a modern interior with a yellow sofa, a potted plant, and wooden kitchen utensils.



Conclusion

In this experiment, we successfully deployed the Eco Friendly Gadgets Collection PWA to GitHub Pages by ensuring proper setup of service workers and manifest files. Initially, we faced 404 errors for a CSS-based image and offline caching issues, which we resolved by correcting the image path and ensuring only valid resources were cached.