Complete GitHub Pages Blog Setup - Step by Step Guide

Prerequisites

- A GitHub account (free)
- Git installed on your computer (optional but recommended)
- A text editor (VS Code, Notepad++, or even Notepad)

Step 1: Create Your GitHub Repository

A. Go to GitHub

1. Open your browser and go to github.com
2. Sign in to your account

B. Create New Repository

1. Click the green **"New"** button or go to github.com/new
2. **Repository name:** Enter exactly `yourusername.github.io` (replace `yourusername` with your actual GitHub username)
   - Example: If your username is `0xb0rn3`, name it `0xb0rn3.github.io`
3. **Description:** "Security writeups and research blog"
4. **Public/Private:** Select **Public** (required for GitHub Pages)
5. **DO NOT** check any initialization options (no README, .gitignore, or license)
6. Click **"Create repository"**

Step 2: Set Up Your Local Environment

Option A: Using Git (Recommended)

```bash
bash

# Open terminal/command prompt and run:
git clone https://github.com/yourusername/yourusername.github.io.git
cd yourusername.github.io
```

Option B: Without Git

1. Download the repository as ZIP from GitHub
2. Extract to a folder on your computer
3. Open the folder

Step 3: Create Your Blog Structure

A. Create Folders

Create this exact folder structure:

```
yourusername.github.io/
├──── assets/
│     └──── writeups/
│          └──── (your writeup folders will go here)
└──── (index.html will go here)
```

B. Save the index.html

1. Copy the complete index.html code I provided

2. Save it as `index.html` in the root of your repository (not inside any folder)

C. Create writeups.json

1. Create a new file: `assets/writeups/writeups.json`

2. Add this starter content:

```json
{
 "writeups": [
   {
     "id": "example-writeup",
     "title": "My First Writeup - Getting Started",
     "description": "This is an example writeup to test the blog functionality.",
     "category": "tutorial",
     "tags": ["example", "test", "blog"],
     "difficulty": "easy",
     "date": "2024-08-25",
     "readTime": "5 min",
     "folder": "example-writeup"
   }
 ]
}
```

Step 4: Create Your First Writeup

A. Create Writeup Folder

1. Inside `assets/writeups/`, create a folder named `example-writeup`
2. Inside `example-writeup/`, create a file named `README.md`

B. Add Content to README.md

Copy one of the templates I provided (CTF or Tool template) and customize it, or use this simple example:

```markdown
# My First Writeup - Getting Started

## Overview
This is my first writeup on my new security blog!

## What I'm Learning
- Setting up GitHub Pages
- Writing in Markdown
- Organizing security research

## Code Example
Here's a simple Python script:
```python
print("Hello, Security World!")
```

Next Steps

- Add more writeups
- Document my security journey
- Share knowledge with the community

Author: Your Name

Option B: Using GitHub Web Interface

1. Go to your repository on GitHub

2. Click "Upload files"

3. Drag and drop all your files

4. Write commit message: "Initial blog setup"

5. Click "Commit changes"

Step 6: Enable GitHub Pages

1. Go to your repository on GitHub

2. Click **Settings** (in the repository menu)

3. Scroll down to **Pages** section (left sidebar)

4. Under **Source**, select:

   - **Deploy from a branch**

   - Branch: **main** (or master)

   - Folder: **/ (root)**

5. Click **Save**

6. Wait 2-5 minutes for deployment

Your blog is now live at: `https://yourusername.github.io`

Step 7: Verify Your Blog

1. Open your browser
2. Go to `https://yourusername.github.io`
3. You should see your blog with the example writeup
4. Click on the writeup card to test if it opens

Adding New Writeups (The Easy Process)

1. Create Writeup Folder

```
assets/writeups/your-writeup-name/
```

2. Add Your Content

Create `README.md` in that folder with your writeup

3. Update writeups.json

Add a new entry:

```json
{
  "id": "your-writeup-name",
  "title": "Your Writeup Title",
  "description": "Brief description here",
  "category": "ctf",
  "tags": ["tag1", "tag2"],
  "difficulty": "medium",
  "date": "2024-08-25",
  "readTime": "10 min",
  "folder": "your-writeup-name"
}
```

4. Push Changes

```bash
git add .
git commit -m "Add new writeup: Your Title"
git push
```

Troubleshooting Common Issues

Blog Not Loading?

- **Check repository name:** Must be exactly `yourusername.github.io`
- **Wait time:** First deployment can take up to 10 minutes
- **Check GitHub Pages status:** Go to Settings > Pages to see deployment status

Writeups Not Showing?

- **Check writeups.json:** Ensure valid JSON syntax (use jsonlint.com to validate)
- **Check console:** Press F12 in browser, check Console tab for errors
- **File paths:** Ensure folder names in JSON match actual folder names exactly

Images Not Loading?

- **Use relative paths:** `images/screenshot.png` not `/images/screenshot.png`
- **Check file extensions:** `.png` vs `.PNG` (case-sensitive)
- **Commit images:** Ensure images are added to git

404 Error?

- **Check GitHub Pages is enabled** in repository settings
- **Verify branch:** Should be `main` or `master`
- **Clear cache:** Try Ctrl+F5 or incognito mode

Customization Guide

Change Blog Title and Info

In `index.html`, find and modify:

```html
<h1>0xb0rn3</h1>
<p>Security Research & Penetration Testing Writeups</p>
```

Update Social Links

Find the social links section and update URLs:

```html
<a href="https://github.com/yourusername" class="social-link" target="_blank">
<a href="https://x.com/yourhandle" class="social-link" target="_blank">
```

Change Color Theme

In `index.html`, find the `:root` section and modify colors:

```css
--accent-color: #00d4aa;    /* Main accent color */
--accent-secondary: #ff6b6b; /* Secondary color */
--primary-bg: #0a0e16;      /* Background color */
```

Writing Tips

Markdown Basics

```markdown
# Main Title
## Section
### Subsection

**Bold text**
*Italic text*
`inline code`

```language
code block
```

[Link text](...)

![Show Image](...)

> Important note

- Bullet point

1. Numbered list

Writeup Categories
- `ctf` - CTF challenges
- `tutorial` - How-to guides
- `vulnerability` - CVE analysis
- `tools` - Tool guides
- `web` - Web security
- `network` - Network security
- `mobile` - Mobile security

Difficulty Levels
- `easy` - Green badge
- `medium` - Orange badge
- `hard` - Red badge

Advanced Features

Adding Images to Writeups
1. Create `images/` folder in your writeup folder
2. Add images there
3. Reference in markdown: `![Description](images/screenshot.png)`

Code Syntax Highlighting
Use triple backticks with language:
````markdown
```python
print("Hello")
````

```bash
ls -la
```

Tables in Writeups
```markdown
| Tool | Purpose |
|------|---------|
| Nmap | Scanning |
| Burp | Web testing |
```

Maintenance

Update Existing Writeup
1. Edit the `README.md` file
2. Commit and push changes
3. Blog updates automatically

Delete a Writeup
1. Remove the folder from `assets/writeups/`
2. Remove entry from `writeups.json`
3. Commit and push

Backup Your Blog
Your entire blog is version-controlled in Git - every change is saved!

Quick Commands Reference

Git Commands
```bash
# Clone repository
git clone https://github.com/username/username.github.io.git

# Add changes
git add .

# Commit
git commit -m "Your message"

# Push to GitHub
git push

# Pull latest changes
git pull
```

File Structure

```
username.github.io/
├── index.html
├── assets/
│   └── writeups/
│       ├── writeups.json
│       └── [writeup-folders]/
│           ├── README.md
│           └── images/
```

Final Checklist

- [ ] Repository named `username.github.io`
- [ ] index.html in root directory
- [ ] assets/writeups/ folder created
- [ ] writeups.json with at least one entry
- [ ] At least one writeup folder with README.md
- [ ] GitHub Pages enabled in Settings
- [ ] Blog accessible at https://username.github.io

Support

If you encounter issues:
1. Check browser console (F12) for errors
2. Validate JSON at jsonlint.com
3. Check GitHub Pages build status in repository Settings
4. Ensure all file paths match exactly (case-sensitive)

Your blog is now ready! Start writing and sharing your security knowledge with the world.