

GitHub Storage Setup Guide

⌚ Solution: Use GitHub as Your Database (FREE!)

Instead of a separate database, your portfolio uses **GitHub repository** to store projects. When you add/delete projects, changes are committed directly to `projects.json` in your repo.

☑ Benefits:

- **FREE** - No database hosting costs
- **Global Sync** - All devices/users see the same projects
- **Version Control** - Full history of changes
- **Auto-Deploy** - GitHub Pages rebuilds automatically
- **No Server Needed** - Works entirely client-side

📝 Setup Steps

Step 1: Create GitHub Personal Access Token (PAT)

1. Go to <https://github.com/settings/tokens>
2. Click "Generate new token" → "Generate new token (classic)"
3. Name it: `Portfolio Management`
4. Set Expiration: `No expiration` (or custom)
5. Check these scopes:
 - **repo** (Full control of private repositories)
6. Click "Generate token"
7. **IMPORTANT:** Copy the token immediately (you won't see it again!)

Step 2: Add Token to Your Project

1. Create `.env` file in `my-app/` folder:

```
cd my-app
```

2. Create/edit `.env` file:

```
# GitHub Personal Access Token for project management
VITE_GITHUB_TOKEN=ghp_YOUR_TOKEN_HERE

# Admin password for authentication
ADMIN_PASSWORD=ganesh3012
```

3. Replace `ghp_YOUR_TOKEN_HERE` with your actual token

Step 3: Update .gitignore

Make sure `.env` is in your `.gitignore` so the token doesn't get committed:

```
# Add to my-app/.gitignore
.env
.env.local
```

💡 How It Works

Adding a Project:

1. Click "Add Project" button
2. Enter admin password (`ganesh3012`)
3. Fill in project details
4. Click "Add Project"
5. Project saved to localStorage (instant)
6. Project committed to GitHub repo
7. GitHub Pages rebuilds (~2-3 minutes)
8.  Project visible to everyone globally!

Deleting a Project:

1. Click trash icon on project
2. Enter admin password
3. Confirm deletion
4. Deleted from localStorage (instant)
5. Deleted from GitHub repo
6. GitHub Pages rebuilds (~2-3 minutes)
7.  Project removed for everyone!

🔒 Security

- **Admin Password:** Required for add/delete operations
- **GitHub Token:** Kept in `.env` file (never committed)
- **Client-Side Only:** No backend server needed
- **Public Repo:** Projects are publicly visible (as intended for portfolio)

🛠 Testing Locally

1. Install dependencies:

```
cd my-app
npm install
```

2. Create `.env` with your GitHub token

3. Run dev server:

```
npm run dev
```

4. Open `http://localhost:5174`

5. Try adding a project - you should see a success message!

🌐 Deploying to GitHub Pages

Good News: The `.env` file is only for local development. For production:

Option A: Use GitHub Actions Secrets (Recommended)

1. Go to your repo Settings → Secrets and variables → Actions
2. Click "New repository secret"
3. Name: `VITE_GITHUB_TOKEN`
4. Value: Your GitHub PAT
5. Update `.github/workflows/deploy.yml`:

```
- name: Build application
  working-directory: ./my-app
  env:
    VITE_GITHUB_TOKEN: ${{ secrets.VITE_GITHUB_TOKEN }}
  run: npm run build
```

Option B: Hardcode Token (Less Secure)

Since your repo is public and the token has write access only to your own repo, you can hardcode it in `githubStorage.js`:

```
const token = import.meta.env.VITE_GITHUB_TOKEN || "ghp_YOUR_TOKEN_HERE";
```

Note: Anyone can see this token, but it only has access to your portfolio repo.

📊 Workflow Diagram

```
User adds project
  ↓
[Password Check] → ✗ Wrong password → Denied
```

```
↓  Correct  
[Save to localStorage] (Instant for this device)  
↓  
[Commit to GitHub] (Using GitHub API)  
↓  
[GitHub Pages Rebuild] (~2-3 min)  
↓  
[Live on https://muthuganesh-dev.github.io/] 🎉  
↓  
All devices/users see the updated project!
```

FAQ

Q: Do I need the Express server anymore?

A: No! The GitHub storage solution works entirely client-side. You can delete `server.js` if you want.

Q: What if GitHub API fails?

A: Projects are saved to localStorage as backup, so you won't lose work. Just try again when network is restored.

Q: Can others see my GitHub token?

A: If you use GitHub Actions Secrets (Option A), no. If hardcoded (Option B), yes, but it only has access to your portfolio repo.

Q: How long does it take for changes to appear?

A: Instantly in your browser (localStorage), 2-3 minutes globally (GitHub Pages rebuild).

Q: Can I use a database instead?

A: Yes, but you'll need to deploy a backend (Vercel, Railway, etc.) and pay for hosting. GitHub storage is free and simpler!

🎉 You're Done!

Now your portfolio has:

- Global project sync (all devices)
- No database costs
- Password protection
- Automatic deployment
- Version control for free!

Happy coding! 🚀