GitHub

What is GitHub?

GitHub is a website where you store code (and other files) online. It's like **Google Drive for code**—but smarter:

- It remembers every version of your files (**version control**).

- It lets people **collaborate** without overwriting each other's work.

- It can even **host simple websites** for free (via **GitHub Pages**).

⚠️ Possible Confusion Alert:
Git vs GitHub
Git = the tool that tracks versions on your computer.
GitHub = the website that hosts Git repositories and adds collaboration features.
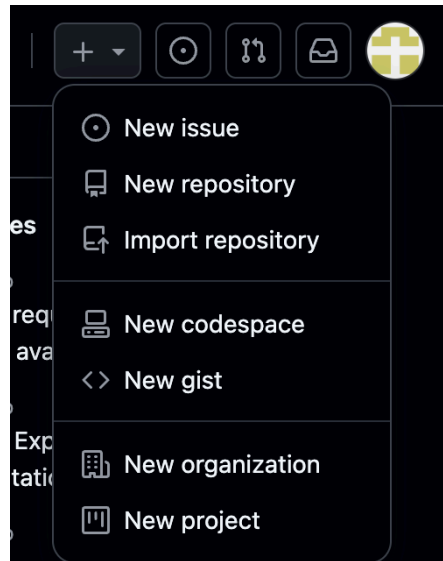

What is GitHub used for?

- Keeping a safe backup of your projects.

- Working with teammates (pull requests, code reviews, issues).

- Showing your portfolio to the world.

- Hosting simple websites (HTML/CSS/JS) with **GitHub Pages**.

Step-by-Step: Create a Repository

1. **Create an account**
   Go to **github.com** and sign up / sign in.

2. **Make a new repository**

   - Click the **"+"** (top-right) → **New repository**.

   - **Repository name:** e.g., `my-first-website`

   - **Public** (easiest for Pages).

   - (*Optional*) Check **"Add a README file."**

   - Click **Create repository**.

3. **Add your web files (via browser)**

   - On your new repo page, click **Add file** → **Upload files** (or **Create new file**).

   - If starting from scratch, create a file named **`index.html`** (this is your homepage).

   - **Click Commit changes at the bottom to save.**

Step-by-Step: Uploading a Simple Web Page & Publish with GitHub Pages

A. Add your page files

1. In your repo, click **Add file → Create new file**.

2. Name it **index.html** and paste this starter code:

For Example Below (you can add your own)

```html
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="utf-8" />
  <meta name="viewport" content="width=device-width, initial-scale=1" />
  <title>My First GitHub Page</title>
  <style>
    body { font-family: system-ui, Arial, sans-serif; margin: 0; min-height: 100vh; display: grid; place-items: center; background:#f5f7fb; }
    .card { background:#fff; padding:24px; border-radius:12px; box-shadow:0 6px 24px rgba(0,0,0,.08); text-align:center; }
    h1 { margin:0 0 12px; }
    p { margin:0; }
  </style>
</head>
<body>
  <div class="card">
    <h1>Hello, GitHub Pages!</h1>
    <p>If you can read this, your site is live 🎉</p>
  </div>
</body>
</html>
```

3. Scroll down and click **Commit changes**.

    You can also upload additional files (e.g., `styles.css`, images) using **Add file →
    Upload files**.

B. Turn on GitHub Pages (publishing)

1. Go to your repo's **Settings** tab.

2. In the left sidebar, click **Pages**.

3. Under **Build and deployment → Source**, choose **Deploy from a branch**.

4. Select **Branch: `main`** and **Folder: `/ (root)`**. Click **Save**.

5. Wait a minute. A green message appears with your site URL, usually:

    `https://USERNAME.github.io/REPO-NAME/`

1. Open that link—your web page should be live!

    ✅ **Important:** GitHub Pages looks for `index.html` in the selected folder. Keep it
    at the **root** of the repo for a quick start.

Updating Your Site

- Change a file → **Commit changes** → wait ~30–60 seconds → refresh your site URL.

- Filenames are **case-sensitive** on the web (`About.png` ≠ `about.png`).

Quick Troubleshooting

- **404 on your site?** Make sure there's an `index.html` at the repo root and Pages is set to **main / root**.

- **Styles/images not loading?** Check your paths (e.g., `href="styles.css"` if the file is in the same folder).

- **No "Pages" tab?** You're probably not in **Settings** of the **repository** (not the profile settings).