**GITHUB**

GitHub is a web-based platform designed for version control using Git. It allows developers to collaborate on projects, track changes to their codebase, and manage various versions of their code efficiently. GitHub provides a variety of features including:

1. \*\*Repository Hosting\*\*: Users can host their Git repositories on GitHub, making it easy to share code with others and collaborate on projects.

2. \*\*Version Control\*\*: GitHub uses Git, a distributed version control system, which enables developers to keep track of changes to their codebase. This includes features like branching, merging, and pull requests.

3. \*\*Collaboration Tools\*\*: GitHub provides tools for code review, project management, and team collaboration. This includes issues, pull requests, and project boards.

4. \*\*Community and Social Networking\*\*: GitHub has a large community of developers who contribute to open source projects. Users can follow projects, star repositories, and contribute to discussions.

5. \*\*Integration\*\*: GitHub integrates with various third-party services and development tools, making it easier to automate workflows and integrate with other software development processes.

Overall, GitHub has become a central hub for software development, especially for open source projects, enabling developers worldwide to work together effectively on codebases of all sizes.

**UPLOADING THE PROJECT ON GITHUB**

Uploading a project to GitHub involves a series of steps. Here’s a general outline of the process:

### Step-by-Step Guide to Upload a Project to GitHub:

1. \*\*Create a GitHub Account:\*\*

- If you don't already have a GitHub account, go to [GitHub](https://github.com/) and sign up.

2. \*\*Create a New Repository:\*\*

- Once logged in, click on the "+" sign in the top-right corner and select "New repository".

- Enter a name for your repository. Optionally, you can add a description, choose public or private visibility, initialize with a README file (optional), add a .gitignore file (to specify which files to ignore in commits), and choose a license (optional).

- Click on "Create repository".

3. \*\*Set Up Git on Your Computer:\*\*

- If you haven’t already, install Git on your computer. You can download it from [git-scm.com](https://git-scm.com/).

- Configure Git with your username and email address using the following commands in your terminal or Git Bash (replace `Your Name` and `your.email@example.com` with your actual name and email):

```

git config --global user.name "Your Name"

git config --global user.email "your.email@example.com"

```

4. \*\*Initialize a Git Repository:\*\*

- Navigate to the root directory of your project using the command line.

- Initialize a Git repository if your project isn't already under version control:

```

git init

```

5. \*\*Add and Commit Your Files:\*\*

- Add the files you want to upload to the repository. Use `git add .` to add all files or specify individual files:

```

git add .

```

- Commit the files with a descriptive commit message:

```

git commit -m "Initial commit"

```

6. \*\*Link Your Local Repository to GitHub:\*\*

- Copy the HTTPS or SSH URL of your GitHub repository from the repository’s page.

- Link your local repository to the remote repository on GitHub using:

```

git remote add origin <paste-your-remote-repository-URL>

```

7. \*\*Push Your Commits to GitHub:\*\*

- Push your committed changes to GitHub:

```

git push -u origin main

```

- Replace `main` with `master` if you're using the `master` branch as the default branch.

8. \*\*Verify on GitHub:\*\*

- Refresh your GitHub repository page. You should see your files and directories from your project uploaded.

### Additional Tips:

- If you are working on an existing project and want to upload it to GitHub, you can skip steps like initializing a new repository (`git init`) and instead directly link your existing repository to GitHub using the `git remote add` and `git push` commands.

- Make sure you have appropriate permissions (read/write access) to the repository on GitHub if you're collaborating with others or pushing to a repository owned by someone else.

By following these steps, you'll successfully upload your project to GitHub, enabling you to collaborate with others and manage your project's version control effectively.

**GITHUB FREE PLAN**

Yes, GitHub offers free plans for individuals and small teams, which includes hosting public repositories. Here are the key points about GitHub's pricing and free offerings:

1. \*\*Free Accounts:\*\*

- GitHub offers free accounts for individual developers and small teams.

- You can create an unlimited number of public repositories for open source projects.

2. \*\*Private Repositories:\*\*

- For private repositories (where the code is not publicly accessible), GitHub offers a limited number for free:

- As of the latest update, GitHub Free allows for unlimited collaborators on up to 6,000 minutes of GitHub Actions per month.

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**GITHUB PAID VERSION**

As of my last update, GitHub offers several paid plans that cater to different needs and sizes of organizations. Here are the main paid plans available:

1. \*\*GitHub Pro:\*\*

- Cost: $4 per user/month (billed annually).

- Features:

- Unlimited public and private repositories.

- Collaborators can work together on unlimited private repositories.

- Advanced code review tools and pull request metrics.

2. \*\*GitHub Team:\*\*

- Cost: $4 per user/month (starting price, billed annually).

- Features:

- Everything in GitHub Pro.

- Team and user permissions.

- 3,000 Actions minutes per month for private repositories (shared across the organization).

3. \*\*GitHub Enterprise:\*\*

- Cost: Contact GitHub for pricing.

- Features:

- Includes all features of GitHub Team.

- Additional security, compliance, and administrative features tailored for enterprise use.

- Self-hosted or cloud deployment options.

4. \*\*GitHub One:\*\*

- Cost: Contact GitHub for pricing.

- Features:

- Includes all features of GitHub Team.

- Advanced security, compliance, and collaboration features.

- Premium support and consolidated billing.

Pricing may vary based on the number of users and specific needs of the organization. GitHub offers a free trial for GitHub Team and GitHub Enterprise plans to evaluate the features before committing to a subscription.

For the most current pricing and detailed feature comparisons, it's recommended to visit GitHub's official pricing page or contact GitHub directly.

**HOW WE CAN GET ENTERPIRSE EDITION OF GITHUB?**

To get GitHub Enterprise Edition, you typically need to contact GitHub directly, as the Enterprise plan is tailored for larger organizations with specific needs around security, compliance, and administrative controls. Here’s how you can proceed:

1. \*\*Visit GitHub’s Enterprise Page:\*\*

- Go to GitHub’s Enterprise page on their official website.

2. \*\*Request a Quote or Contact Sales:\*\*

- On the Enterprise page, there should be an option to "Contact Sales" or "Get a Quote".

- Click on this option to initiate the process of obtaining GitHub Enterprise Edition.

3. \*\*Fill Out the Contact Form:\*\*

- You may be required to fill out a form with details such as your name, organization, email, and specific requirements.

4. \*\*Consultation and Pricing Discussion:\*\*

- After submitting the form, GitHub's sales team will typically reach out to you to discuss your organization’s needs, provide detailed information about the Enterprise plan features, and discuss pricing.

5. \*\*Trial and Evaluation (Optional):\*\*

- GitHub may offer a trial or demonstration of GitHub Enterprise Edition so that you can evaluate its features and suitability for your organization before making a commitment.

6. \*\*Purchase and Setup:\*\*

- Once you’ve decided to proceed, GitHub will guide you through the purchase process and assist with the setup of GitHub Enterprise Edition. This may involve setting up a self-hosted instance or opting for GitHub’s cloud-hosted Enterprise service.

7. \*\*Support and Resources:\*\*

- GitHub typically provides premium support and resources to help organizations with the deployment, integration, and adoption of GitHub Enterprise.

By following these steps and engaging with GitHub’s sales team, you can obtain GitHub Enterprise Edition tailored to meet the specific needs of your organization, whether it’s for enhanced security, compliance, scalability, or advanced administrative controls.

HARDWARE AND SOFTWARE REQUIREMENT FOR GITHUB

GitHub, being primarily a web-based platform, does not have stringent hardware or software requirements for individual users. However, there are some general recommendations and considerations depending on how you intend to use GitHub:

### Hardware Requirements:

- \*\*Computer\*\*: Any modern computer capable of running a web browser is sufficient. This includes desktops, laptops, and even tablets in some cases.

- \*\*Internet Connection\*\*: A stable internet connection is necessary for accessing GitHub’s web interface, pushing and pulling changes to repositories, and interacting with collaborators.

### Software Requirements:

- \*\*Web Browser\*\*: GitHub is accessed through a web browser. It is compatible with all major browsers such as Google Chrome, Mozilla Firefox, Microsoft Edge, Safari, etc.

- \*\*Git\*\*: While not strictly necessary for basic usage (as GitHub provides some basic Git functionalities through its web interface), having Git installed on your local machine allows you to clone repositories, make commits, and push changes directly from your computer.

- Git can be downloaded and installed from [git-scm.com](https://git-scm.com/).

- \*\*Git Clients (Optional)\*\*: You may choose to use Git client applications for a more user-friendly interface and additional features. Examples include GitHub Desktop, GitKraken, SourceTree, etc.

### Additional Considerations:

- \*\*Operating System Compatibility\*\*: GitHub is platform-independent, meaning it works on Windows, macOS, Linux, and other operating systems.

- \*\*Development Tools\*\*: If you are developing software and integrating GitHub into your workflow, ensure your development environment and tools are compatible with Git and GitHub.

### GitHub Enterprise:

- If you are considering GitHub Enterprise for organizational use, the hardware and software requirements will depend on whether you opt for a self-hosted or cloud-hosted instance. GitHub provides detailed guidance and recommendations for setting up GitHub Enterprise, including server requirements, databases, network configuration, and more. This information can be found in GitHub’s official documentation or obtained through consultation with GitHub’s sales and support teams.

In summary, for individual and basic collaborative usage of GitHub, minimal hardware and software requirements are needed. For enterprise-level deployments or specific organizational needs, GitHub Enterprise Edition may require more robust hardware infrastructure and adherence to specific software configurations as per GitHub’s guidelines.

[**Pricing for paid usage**](https://docs.github.com/en/enterprise-cloud@latest/billing/managing-billing-for-github-codespaces/about-billing-for-github-codespaces#pricing-for-paid-usage)

A GitHub Codespaces instance (a "codespace") incurs charges for compute time, while it is active, and for the amount of disk space the codespace occupies, while it exists. The compute cost is proportional to the number of processor cores in the machine type you choose for your codespace, as shown in the following table. For example, the compute cost of using a codespace for an hour on a 16-core machine is eight times greater than a 2-core machine.

| **Component** | **Machine type** | **Unit of measure** | **Included usage multiplier** | **Price** |
| --- | --- | --- | --- | --- |
| Codespaces compute | 2 core | 1 hour | 2 | $0.18 |
| Codespaces compute | 4 core | 1 hour | 4 | $0.36 |
| Codespaces compute | 8 core | 1 hour | 8 | $0.72 |
| Codespaces compute | 16 core | 1 hour | 16 | $1.44 |
| Codespaces compute | 32 core | 1 hour | 32 | $2.88 |
| Codespaces storage | Storage | 1 GB-month | Not applicable | $0.07 |