

Git Tutorial

Building Modern Web Applications - VSP2025



Git Tutorial

1. Install Git / Create accounts on GitHub
2. Setup SSH Keys for Git
3. Clone repository, Commit changes, Push/Pull from repository
4. Branching

Step 1 - Git Setup

- Download and Install Git

<https://git-scm.com/downloads>



- Use “Git bash” command line window to write git commands
- Create accounts on GitHub (if not already done)



Step 2 - How to setup SSH Keys for Git - Part A

<https://docs.github.com/en/authentication/connecting-to-github-with-ssh/generating-a-new-ssh-key-and-adding-it-to-the-ssh-agent>

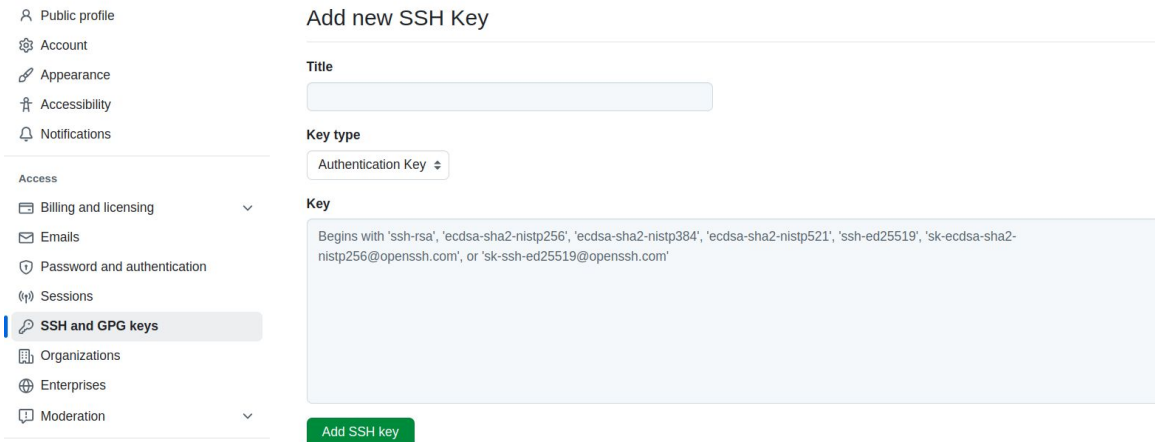
1. Open Terminal
2. `ssh-keygen -t ed25519 -C "your_email@example.com"`
3. Setup passphrase
4. `eval "$(ssh-agent -s)"`
5. `ssh-add ~/.ssh/id_ed25519`

Disclaimer: Instructions may differ slightly depending on your OS!!!

Step 2 - How to setup SSH Keys for Git - Part B

<https://docs.github.com/en/authentication/connecting-to-github-with-ssh/adding-a-new-ssh-key-to-your-github-account>

1. Go to GitHub Profile / Settings / SSH and GPG Keys
2. Enter SSH Key that was just generated locally on your machine



The screenshot shows the GitHub 'Add new SSH Key' page. On the left is a sidebar with navigation links: Public profile, Account, Appearance, Accessibility, Notifications, Access (Billing and licensing, Emails, Password and authentication, Sessions), SSH and GPG keys (highlighted), Organizations, Enterprises, and Moderation. The main content area is titled 'Add new SSH Key' and contains three sections: 'Title' with a text input field, 'Key type' with a dropdown menu set to 'Authentication Key', and 'Key' with a large text area containing a placeholder text starting with 'Begins with 'ssh-rsa', 'ecdsa-sha2-nistp256', 'ecdsa-sha2-nistp384', 'ecdsa-sha2-nistp521', 'ssh-ed25519', 'sk-ecdsa-sha2-nistp256@openssh.com', or 'sk-ssh-ed25519@openssh.com''. At the bottom right is a green 'Add SSH key' button.

Step 3 - Useful Git Commands: Clone, Pull, Push

`git clone`

`git pull origin master`

`git push origin master`

Step 4 - Creating Branches

git branch assignment-X

git checkout assignment-X

git push -u origin assignment-X

git checkout master

git branch

git branch -r

