

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. Type on your terminal: `cat ~/.ssh/id_ed25519.pub`
2. Copy the output to your clipboard. Then, go to GitHub Profile / Settings / SSH and GPG Keys. Enter the SSH Key that was just generated locally.

Public profile
Account
Appearance
Accessibility
Notifications

Access

Billing and licensing
Emails
Password and authentication
Sessions
SSH and GPG keys
Organizations
Enterprises
Moderation

Add new SSH Key

Title

Key type
Authentication Key

Key

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'

Add SSH key

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

