SSH Setup for Git (Complete Step-by-Step Guide)

System

Linux / macOS / WSL (Windows Subsystem for Linux). If you're on Windows Git Bash, ask for a tailored version.

Where to Run

You can run these commands from any directory. The home directory is fine.

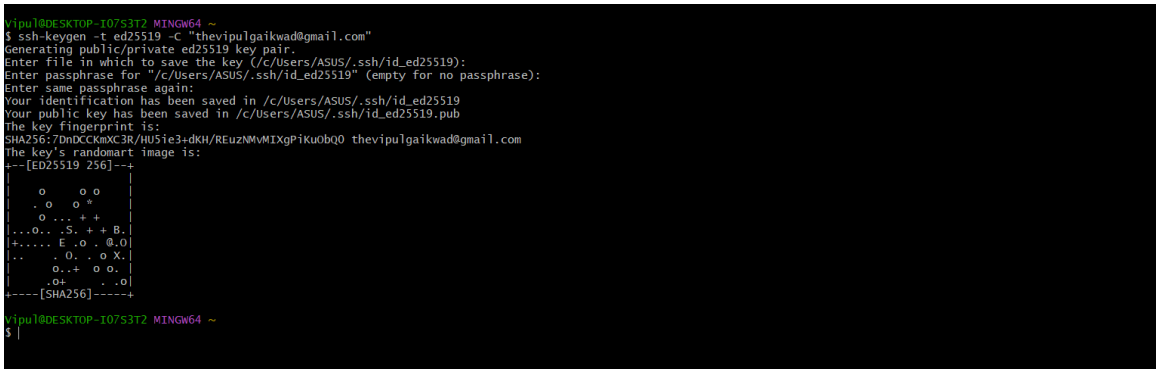
Step 1: Open Terminal

Just open your terminal. No need to change directories.

Step 2: Generate SSH Key

Run:

ssh-keygen -t ed25519 -C your_email@example.com



Press Enter to accept the default location.

When prompted for a passphrase, press Enter twice to skip.

Step 3: Start the SSH Agent

Run:

eval "$(ssh-agent -s)"

You'll see something like: Agent pid 1234

Step 4: Add Your Private Key to the SSH Agent

Run:

ssh-add ~/.ssh/id_ed25519

```
Vipul@DESKTOP-IO7S3T2 MINGW64 ~
$ ssh-add ~/.ssh/id_ed25519
Identity added: /c/Users/ASUS/.ssh/id_ed25519 (thevipulgaikwad@gmail.com)
```

If you get an error, re-run eval "$(ssh-agent -s)" and try again.

Step 5: Copy Your Public Key

Run:

cat ~/.ssh/id_ed25519.pub

Copy the output that starts with ssh-ed25519.

Step 6: Add SSH Key to GitHub / GitLab / Bitbucket

GitHub:

1. Visit https://github.com/settings/keys

2. Click 'New SSH Key'

3. Paste your key and save.

GitLab:

Visit https://gitlab.com/-/profile/keys

Bitbucket:

Visit https://bitbucket.org/account/settings/ssh-keys/

Step 7: Test Your SSH Connection

GitHub:

ssh -T git@github.com

```
Vipul@DESKTOP-IO7S3T2 MINGW64 ~/.ssh
$ ssh -T git@github.com
The authenticity of host 'github.com (20.207.73.82)' can't be established.
ED25519 key fingerprint is SHA256:+DiY3wvvV6TuJJhbpZisF/zLDA0zPMSvHdkr4UvCOqU.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'github.com' (ED25519) to the list of known hosts.
Hi vipulvrx! You've successfully authenticated, but GitHub does not provide shell access.
```

GitLab:

ssh -T git@gitlab.com

Expected message: 'Hi your-username! You've successfully authenticated.'

Step 8: Clone a Repo Using SSH

Use:

git clone git@github.com:your-username/your-repo.git