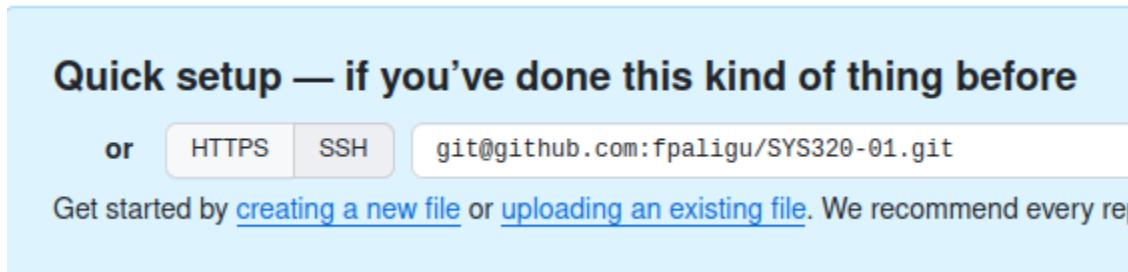


This is going through the process with Ubuntu. However, Ubuntu and Kali are both Debian Linux. It should work fine with Kali as well.

1. Take a not of your SSH access text from your repository:



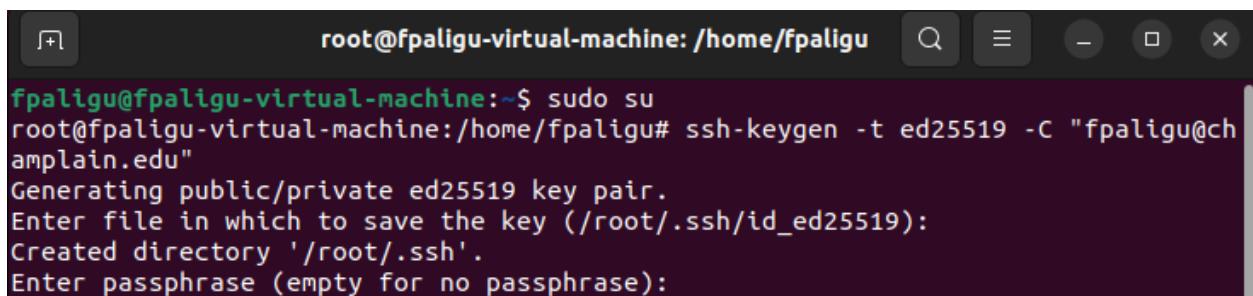
The screenshot shows a GitHub interface with a light blue header bar. The header bar contains the text "Quick setup — if you've done this kind of thing before" in bold. Below the header, there are two buttons: "HTTPS" (which is highlighted in a light blue box) and "SSH". To the right of these buttons is the URL "git@github.com:fpaligu/SYS320-01.git". Below the buttons, the text "Get started by [creating a new file](#) or [uploading an existing file](#). We recommend every re" is visible, with the first part cut off by the image's edge.

2. Get super user and create SSH keys

sudo su -> Gets super user

3. **ssh-keygen -t ed25519 -C "fpaligu@champlain.edu"** -> Creates SSH keys with ed25519 algorithm for fpaligu@champlain.edu

Replace fpaligu@champlain.edu with your email address (associated with your GitHub account).



The screenshot shows a terminal window with a dark background and light-colored text. The title bar of the terminal window reads "root@fpaligu-virtual-machine: /home/fpaligu". The terminal content shows the command "ssh-keygen -t ed25519 -C "fpaligu@champlain.edu"" being run. The output of the command is displayed, including the generation of a key pair, the creation of a directory at "/root/.ssh", and the prompt for a passphrase.

```
root@fpaligu-virtual-machine:~$ sudo su
root@fpaligu-virtual-machine:/home/fpaligu# ssh-keygen -t ed25519 -C "fpaligu@champlain.edu"
Generating public/private ed25519 key pair.
Enter file in which to save the key (/root/.ssh/id_ed25519):
Created directory '/root/.ssh'.
Enter passphrase (empty for no passphrase):
```

ed25519 is an encryption algorithm. You can also use rsa. E.g.

ssh-keygen -t rsa -b 4096 -C "your_email@example.com"

4. When you're prompted "Enter a file in which to save the key", you can press Enter to accept the default file location. In my case, the default location is /root/.ssh/id_ed25519. This will create the "/root/.ssh" directory and save your keys to the file "id_ed25519"

5. Enter a passphrase of your choosing and don't forget. Please note that GitHub will not accept an empty passphrase.

```
Enter passphrase (empty for no passphrase):  
Enter same passphrase again:  
Your identification has been saved in /root/.ssh/id_ed25519  
Your public key has been saved in /root/.ssh/id_ed25519.pub  
The key fingerprint is:  
SHA256:N1Hclk7gmmK1tWQpijy3VB1MF+ogCFxYmVP0t2AHAQ fpaligu@champlain.edu  
The key's randomart image is:  
+--[ ED25519 256 ]--  
| E*B=o.=+o+oo |  
| . +=oooXo.=. |  
| ooo+B.+.o |  
| . . o+... . . |  
| o oooS o |  
| ... . . . |  
| |  
+--- [ SHA256 ] ---+
```

6. Ensure SSH agent is running:

`eval "$(ssh-agent -s)"` -> checks if SSH agent is running

```
root@fpaligu-virtual-machine:/home/fpaligu# eval "$(ssh-agent -s)"  
Agent pid 3059  
root@fpaligu-virtual-machine:/home/fpaligu#
```

7. Add your SSH private key to the ssh-agent. If you created your key with a different name, or if you are adding an existing key that has a different name, replace `id_ed25519` in the command with the name of your private key file.

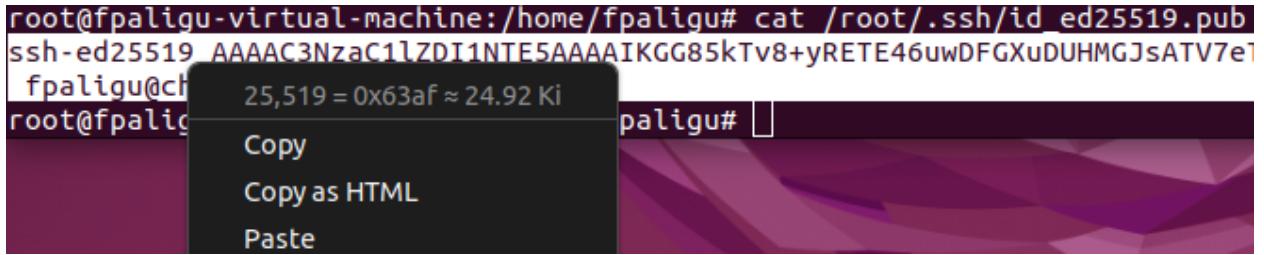
```
root@fpaligu-virtual-machine:/home/fpaligu# ssh-add /root/.ssh/id_ed25519  
Enter passphrase for /root/.ssh/id_ed25519:  
Identity added: /root/.ssh/id_ed25519 (fpaligu@champlain.edu)  
root@fpaligu-virtual-machine:/home/fpaligu#
```

8. To print your key on the screen:

`cat /root/.ssh/id_ed25519.pub`

```
root@fpaligu-virtual-machine:/home/fpaligu# cat /root/.ssh/id_ed25519.pub  
ssh-ed25519 AAAAC3NzaC1lZDI1NTE5AAAIKGG85kTv8+yRETE46uwDFGXuDUHMGJsATV7eTv  
fpaligu@champlain.edu  
root@fpaligu-virtual-machine:/home/fpaligu#
```

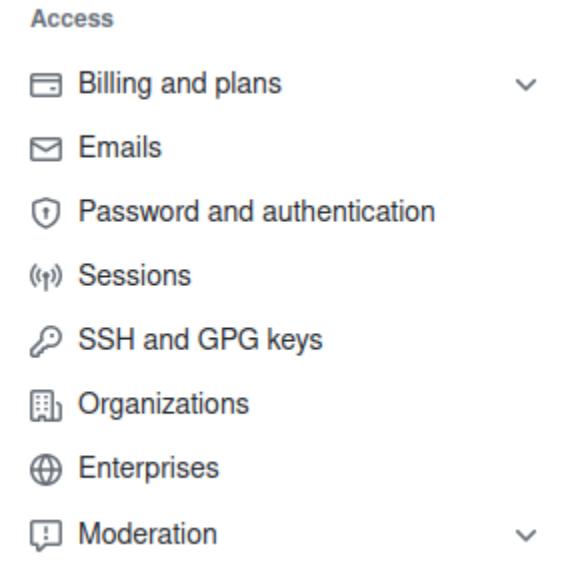
9. Copy the output to your clipboard (including the email address)



```
root@fpaligu-virtual-machine:/home/fpaligu# cat /root/.ssh/id_ed25519.pub
ssh-ed25519 AAAAC3NzaC1lZDI1NTE5AAAIKGG85kTv8+yRETE46uwDFGXuDUHMGJsATV7e1
fpaligu@ch
root@fpaligu# 25,519 = 0x63af ≈ 24.92 Ki
paligu#
```

A screenshot of a terminal window on a Linux system. The command `cat /root/.ssh/id_ed25519.pub` has been run, displaying a long string of characters representing an SSH key. A context menu is open over the terminal output, with the "Copy" option highlighted. The menu also includes "Copy as HTML" and "Paste" options.

10. In your web browser, navigate to GitHub. Go to settings from the right top corner. Go to SSH and GPG keys in the left menu:



11. Click on new SSH key. Choose your title. Choose the "Authentication key" option.

12. Click add

Add new SSH Key

Title

UbuntuAuthKey

Key type

Authentication Key

Key

```
ssh-ed25519 AAAAC3NzaC1lZDI1NTE5AAAAIKGG85kTv8+yRETE46uwDFGXuDUHMC
```

13. Test your SSH connection to GitHub:

```
ssh -T git@github.com
```

```
root@fpaligu-virtual-machine:/home/fpaligu# ssh -T git@github.com
The authenticity of host 'github.com (140.82.114.4)' can't be established.
ED25519 key fingerprint is SHA256:+DiY3wvvV6TuJJhbpZisF/zLDA0zPMSvHdkr4Uv
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 fpaligu! You've successfully authenticated, but GitHub does not provide
access.
root@fpaligu-virtual-machine:/home/fpaligu#
```

14. Install Git on your local system

```
apt-get install git (might need apt-get update first)
```

```
root@fpaligu-virtual-machine:/home/fpaligu# apt-get install git
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  git-man liberror-perl
Suggested packages:
  git-daemon-run | git-daemon-sysvinit git-doc git-email git-gui gitk gitweb
  git-cvs git-mediawiki git-svn
The following NEW packages will be installed:
  git git-man liberror-perl
0 upgraded, 3 newly installed, 0 to remove and 44 not upgraded.
Need to get 4,147 kB of archives.
After this operation, 21.0 MB of additional disk space will be used.
Do you want to continue? [Y/n] █
```

15. Try to clone your repository:

git clone <Your Repository's SSH Link>

```
root@fpaligu-virtual-machine:/home/fpaligu# git clone git@github.com:fpaligu/SYS
320-01.git
Cloning into 'SYS320-01'...
warning: You appear to have cloned an empty repository.
root@fpaligu-virtual-machine:/home/fpaligu#
```

16. Your GitHub repository should have a folder now:

list directory with the command **ls**

```
root@fpaligu-virtual-machine:/home/fpaligu# ls
Desktop  Downloads  Pictures  snap      Templates
Documents  Music      Public    SYS320-01  Videos
root@fpaligu-virtual-machine:/home/fpaligu# █
```

17. Create a file to transfer in the Git directory:

cd SYS320-01 -> to change working directory to the new directory

echo "Hello" > firstfile.txt -> to create a file called firstfile.txt with the text "Hello"

18. First commit (it will ask for you to identify yourself first)

git commit -m "Upload test file" -> to attempt a commit with the note "Upload test file"

```
root@fpaligu-virtual-machine:/home/fpaligu/SYS320-01# git commit -m "Upload test file"
Author identity unknown

*** Please tell me who you are.

Run

  git config --global user.email "you@example.com"
  git config --global user.name "Your Name"

to set your account's default identity.
Omit --global to set the identity only in this repository.

fatal: unable to auto-detect email address (got 'root@fpaligu-virtual-machine.(none)')
root@fpaligu-virtual-machine:/home/fpaligu/SYS320-01#
```

19. Identify yourself the way Git tells you to

```
root@fpaligu-virtual-machine:/home/fpaligu/SYS320-01# git config --global user.email "fpaligu@champlain.edu"
root@fpaligu-virtual-machine:/home/fpaligu/SYS320-01# git config --global user.name "Furkan"
root@fpaligu-virtual-machine:/home/fpaligu/SYS320-01#
```

20. Add the file you created to the commit

git add . -> to add every new file and changed file to commit

21. Attempt a commit again

```
root@fpaligu-virtual-machine:/home/fpaligu/SYS320-01# git add .
root@fpaligu-virtual-machine:/home/fpaligu/SYS320-01# git commit -m "Upload test file"
[main (root-commit) 652b8c2] Upload test file
 1 file changed, 1 insertion(+)
  create mode 100644 firstfile.txt
root@fpaligu-virtual-machine:/home/fpaligu/SYS320-01#
```

22. Push the changes

git push

```
root@fpaligu-virtual-machine:/home/fpaligu/SYS320-01# git push
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Writing objects: 100% (3/3), 223 bytes | 44.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To github.com:fpaligu/SYS320-01.git
 * [new branch]  main -> main
root@fpaligu-virtual-machine:/home/fpaligu/SYS320-01#
```