In the name of allah

Executing Programs Remotely Learning

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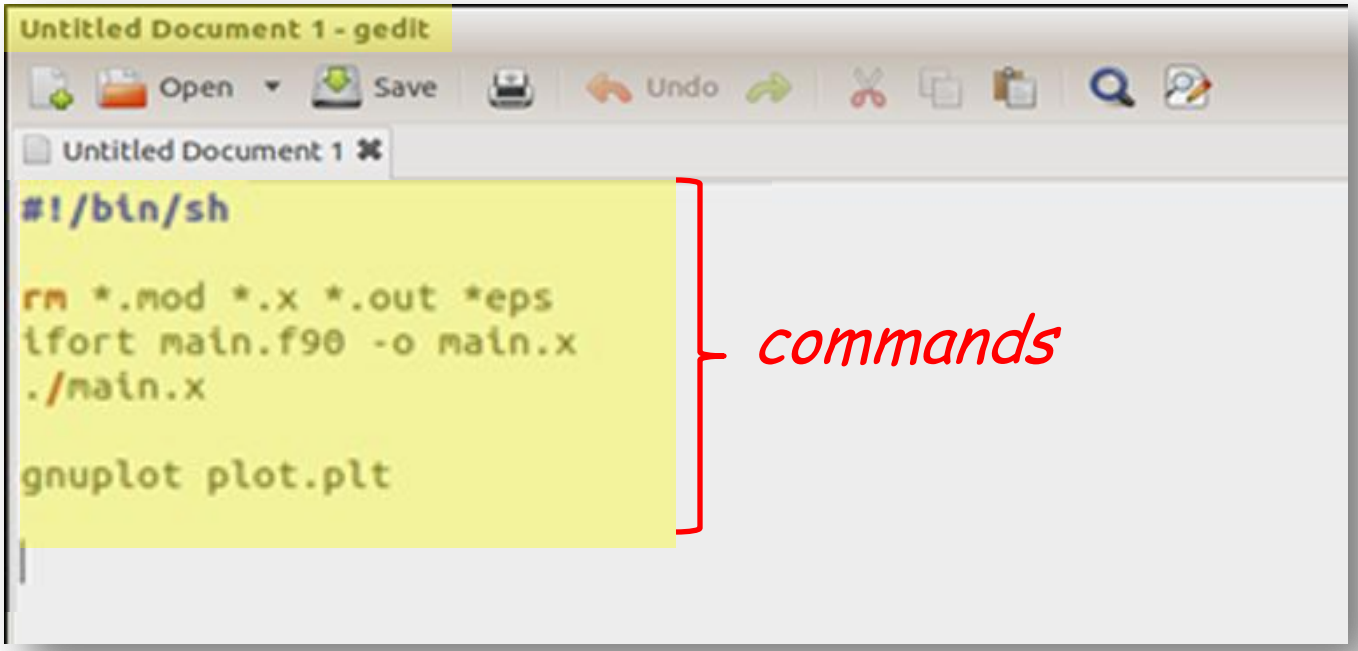
For Linux User

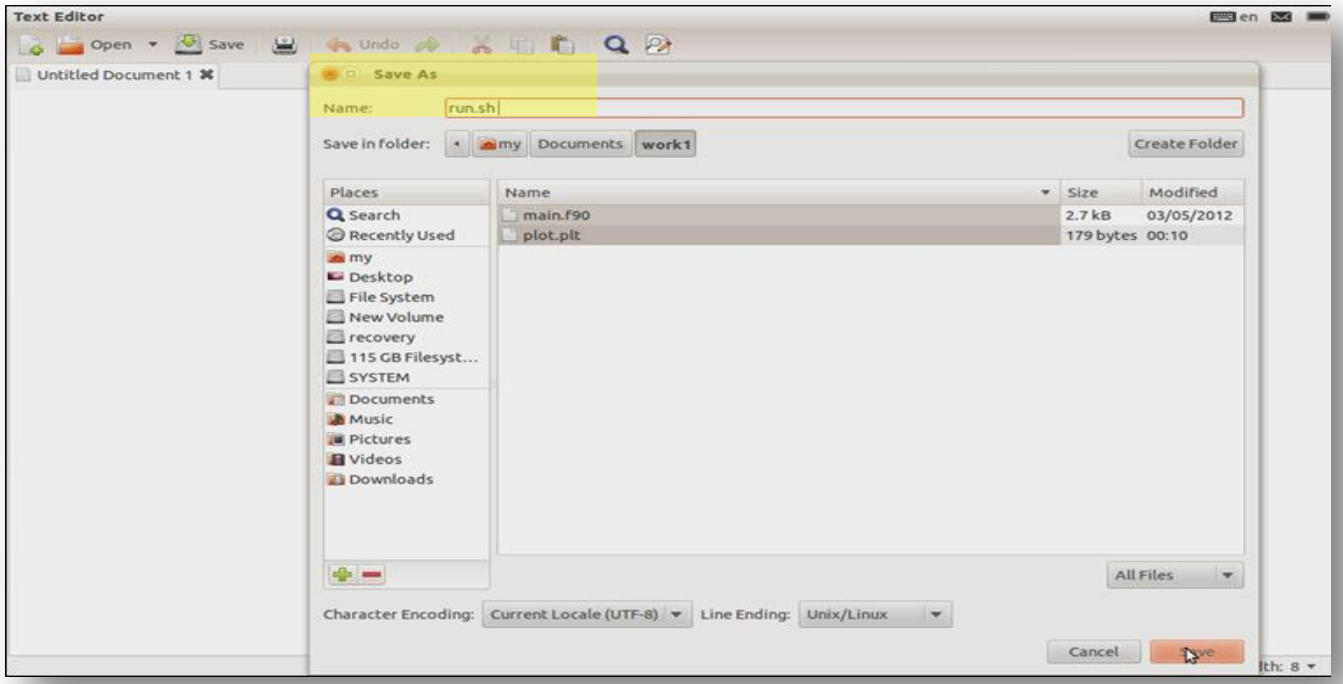
- **Open a Text Editor.**



- **Enter your commands to the file.**

- Save it as **run.sh** [*change name to run.sh*]

[arbitrary name]



- **Close the file.**

- Press Ctrl+L: [**show location of directory**].
- Press Ctrl+C: [**copy address location**].
- Open the ***terminal*** where the saved run.sh file.
- In terminal: **change directory by *cd* command**.

example: ***cd*** /home/my/Documents/work1

press ctrl+shift+v [paste address location]

In terminal:

✓Type: **ls**

run.sh

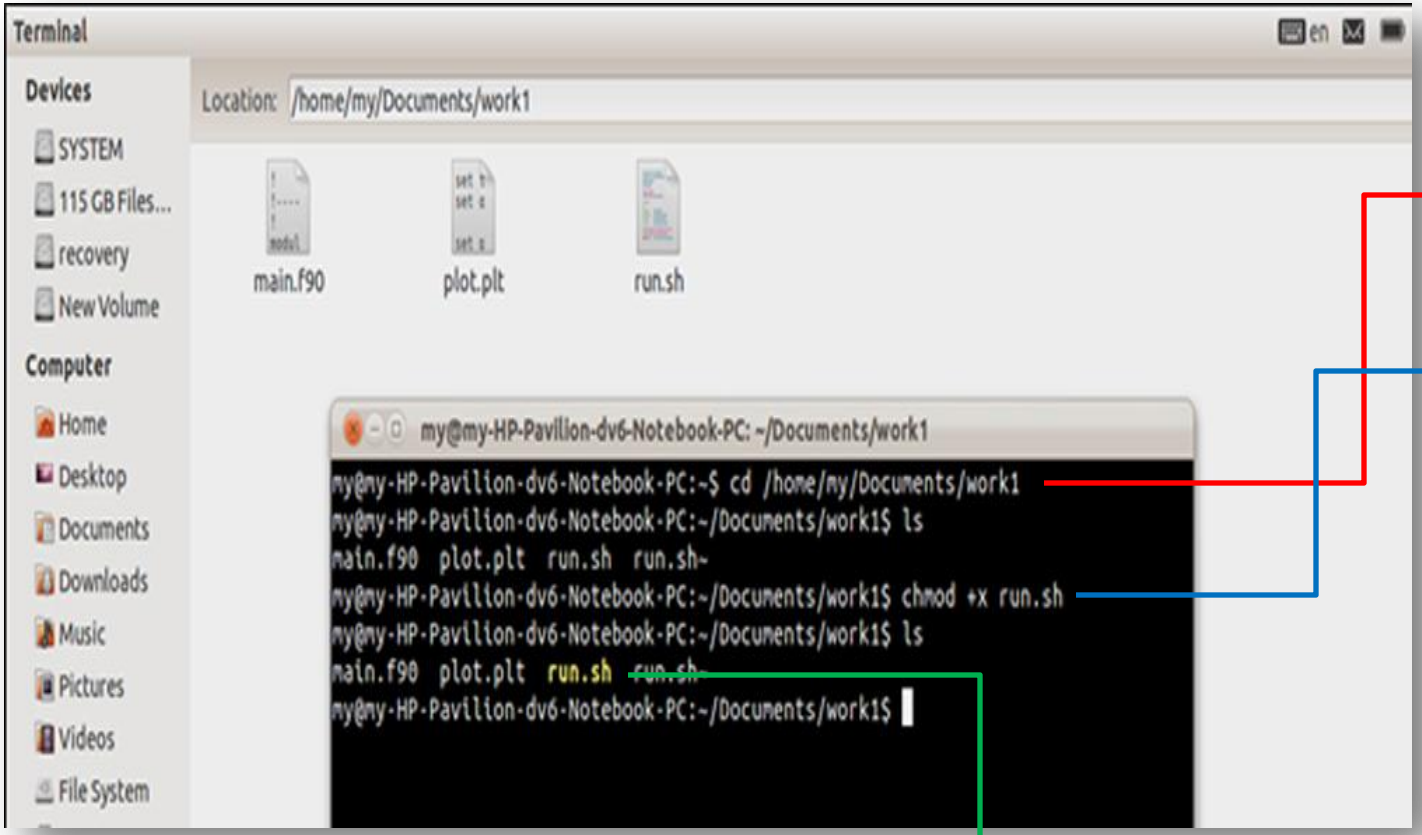
✓Type: **chmod +x run.sh**

[*access permissions change by chmod command*]

✓ Type: **ls**

run.sh

Now, you will have a run.sh file



cd

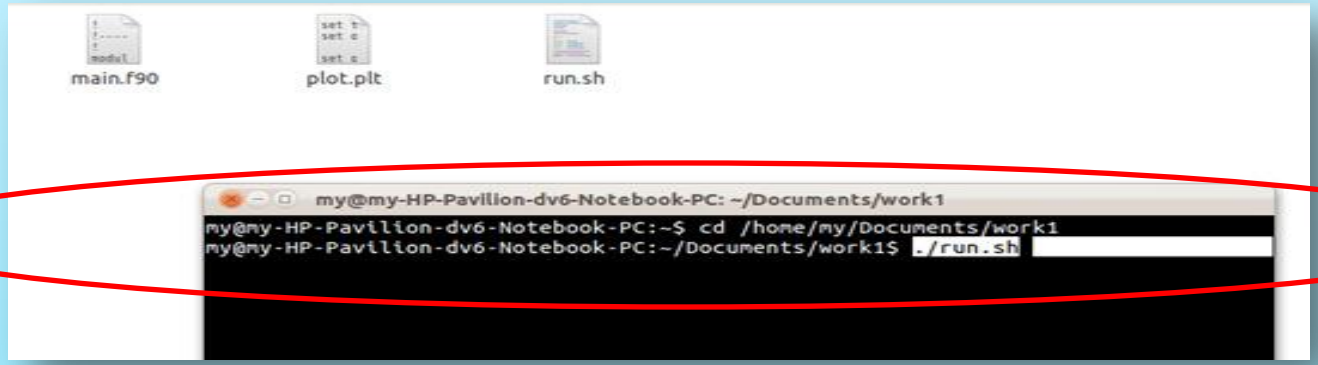
chmod +x

make run.sh
"Executable file"

You can run "run.sh" by 2 method:

1: Click on run.sh, appear a window, click on "**run in terminal**".

2: **In terminal change directory and then type: ./run.sh**



- Assume, remote Ubuntu machine

IP address: *.*.*.*

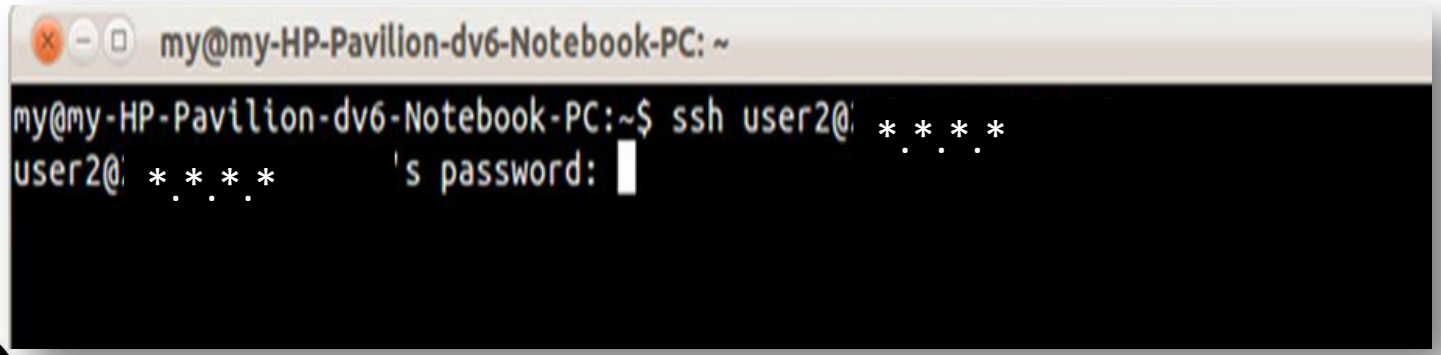
How do you SSH into a remote Ubuntu machine?

1: By Terminal

✓ Type in terminal: ***ssh*** username@*.*.*.*

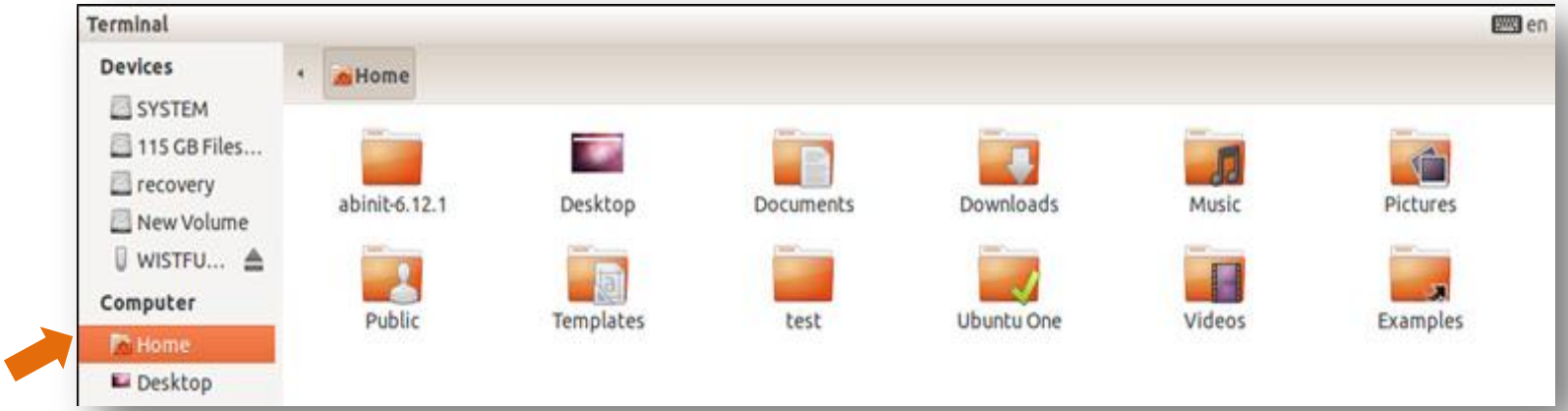
✓ system asks your password, enter your password.

Now, you connect to remote machine



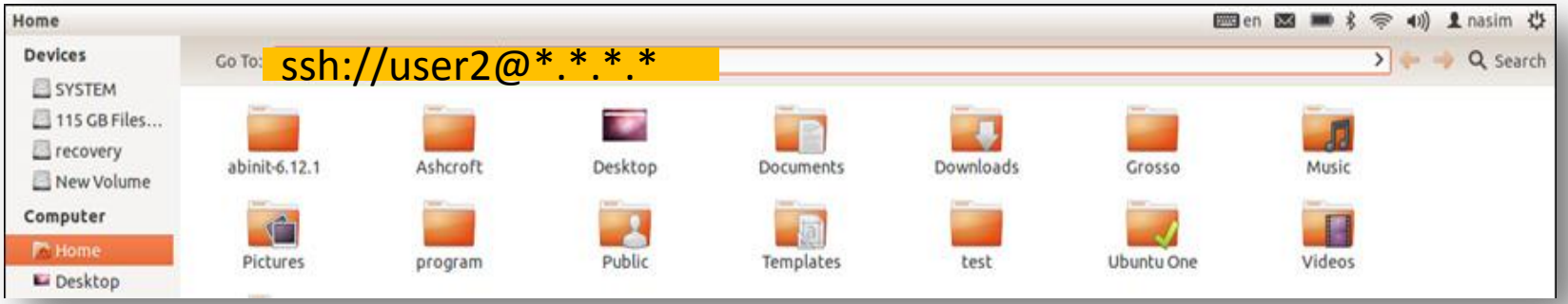
2: By folder

- Open a folder:

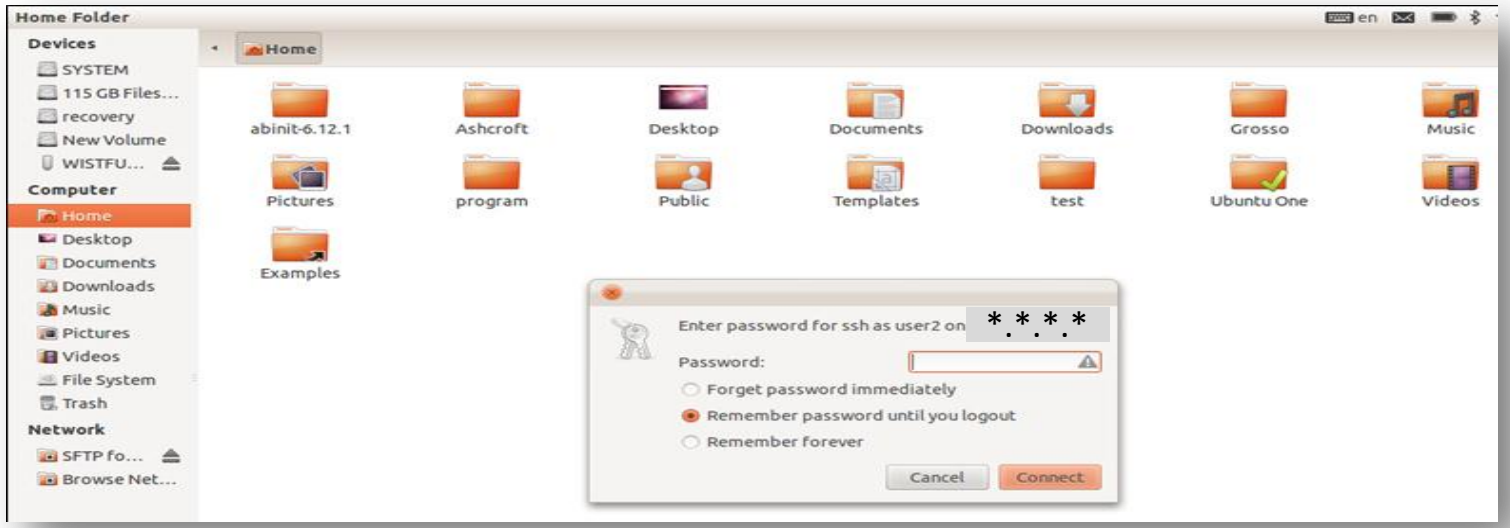


- Press Ctrl+L and in location type:

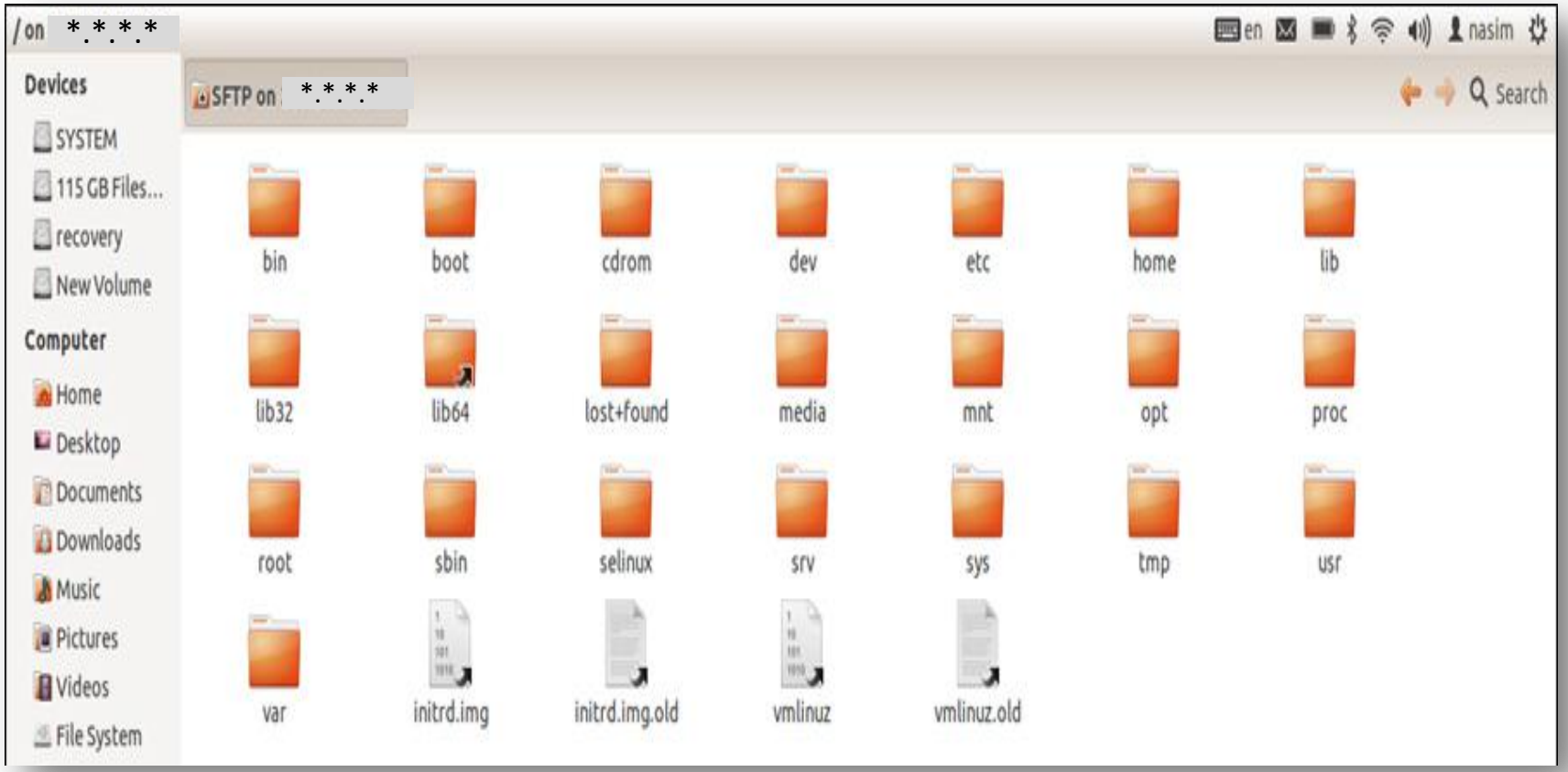
ssh://username@IP



- Then, **enter your password**:



Now, you connect to remote machine



How do you copy files/folders from a local machine into a remote Ubuntu machine ?

1: By Terminal

Assume:

Local files/folders location: /home/my

Remote Ubuntu save location: /home/username

- **Type in terminal:**

scp /home/my username@IP:/home/username

2: By folder

I. Open the folder.

II. Press ***Ctrl+L***

III. Type in *location*: ***ssh://username@IP***

IV. Enter your password

V. By right-click on files, you can copy files from a local into a remote machine, easily .

How do you copy files/folders from a remote machine into a local Ubuntu machine ?

1: By Terminal

Assume:

Local files/folders location: /home/my

Remote Ubuntu save location: /home/username

Type in terminal:

```
scp username@IP:/home/username /home/my
```

2: By folder

I. Open the folder.

II. Press ***Ctrl+L***

III. Type in *location*: ***ssh://username@IP***

IV. Enter your password

V. By right-click on files, you can copy files from a remote into a local machine, easily.

For run your script (run.sh) in Ubuntu machine, perform below steps:

1) **Open the terminal**

2) **ssh** user2@*.*.*.*

user2@*.*.*.*'s password: your password

3) user2@fermi1:~$ **ls**

examples.desktop lib work1 workfile

4) user2@fermi1:~$ **cd wok1**

5) user2@fermi1:~/work1$ **ls**

main.f90 plot.plt run.sh

6) user2@fermi1:~/work1$ **chmod +x run.sh**

7) user2@fermi1:~/work1$ **ls**

main.f90 plot.plt run.sh

8) user2@fermi1:~/work1$ **nohup ./run.sh**

nohup: ignoring input and appending output to `nohup.out‘

✓ Note: After finishing your program running, appear below line:

user2@fermi1:~/work1$

9) user2@fermi1:~/work1$ **ls**

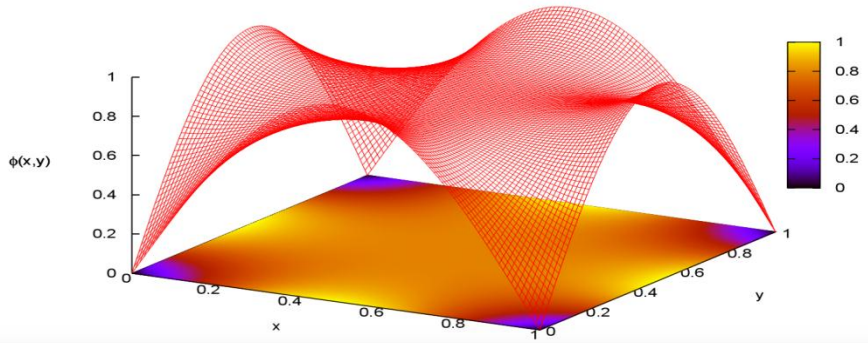
3D.eps main.f90 param_mod.mod plot.plt const_mod.mod

main.x phe.out run.sh

10) user2@fermi1:~/work1$

Now you can download "3D.eps" by folder ssh method.

- Your output file is a plot: 3D.eps




```
my@my-HP-Pavilion-dv6-Notebook-PC: ~
my@my-HP-Pavilion-dv6-Notebook-PC:~$ ssh user2@ *.*.*.*
user2@ *.*.*.*          's password:

user2@fermi2:~$ ls
examples.desktop  lib  work2  work4  workfile
user2@fermi2:~$ cd work4
user2@fermi2:~/work4$ ls
main.f90  plot.plt  run.sh  src
user2@fermi2:~/work4$ nohup ./run.sh
nohup: ignoring input and appending output to `nohup.out'
user2@fermi2:~/work4$ ls
3D.eps          liblaplace.a  main.x      param_mod.mod  plot.plt  src
const_mod.mod   main.f90      nohup.out   phe.out        run.sh
user2@fermi2:~/work4$
```

For Windows User

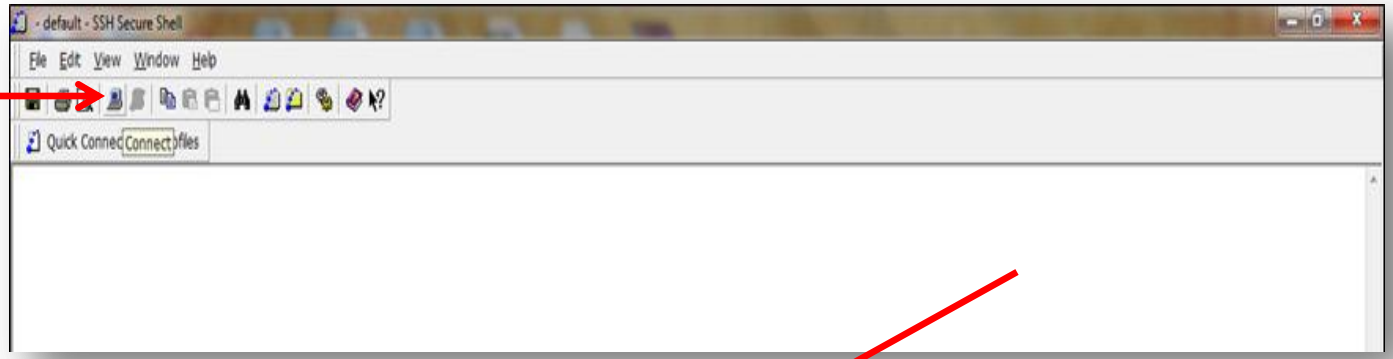
- Assume, remote Ubuntu machine

IP address: *.*.*.*

How do you SSH into a remote Ubuntu machine?

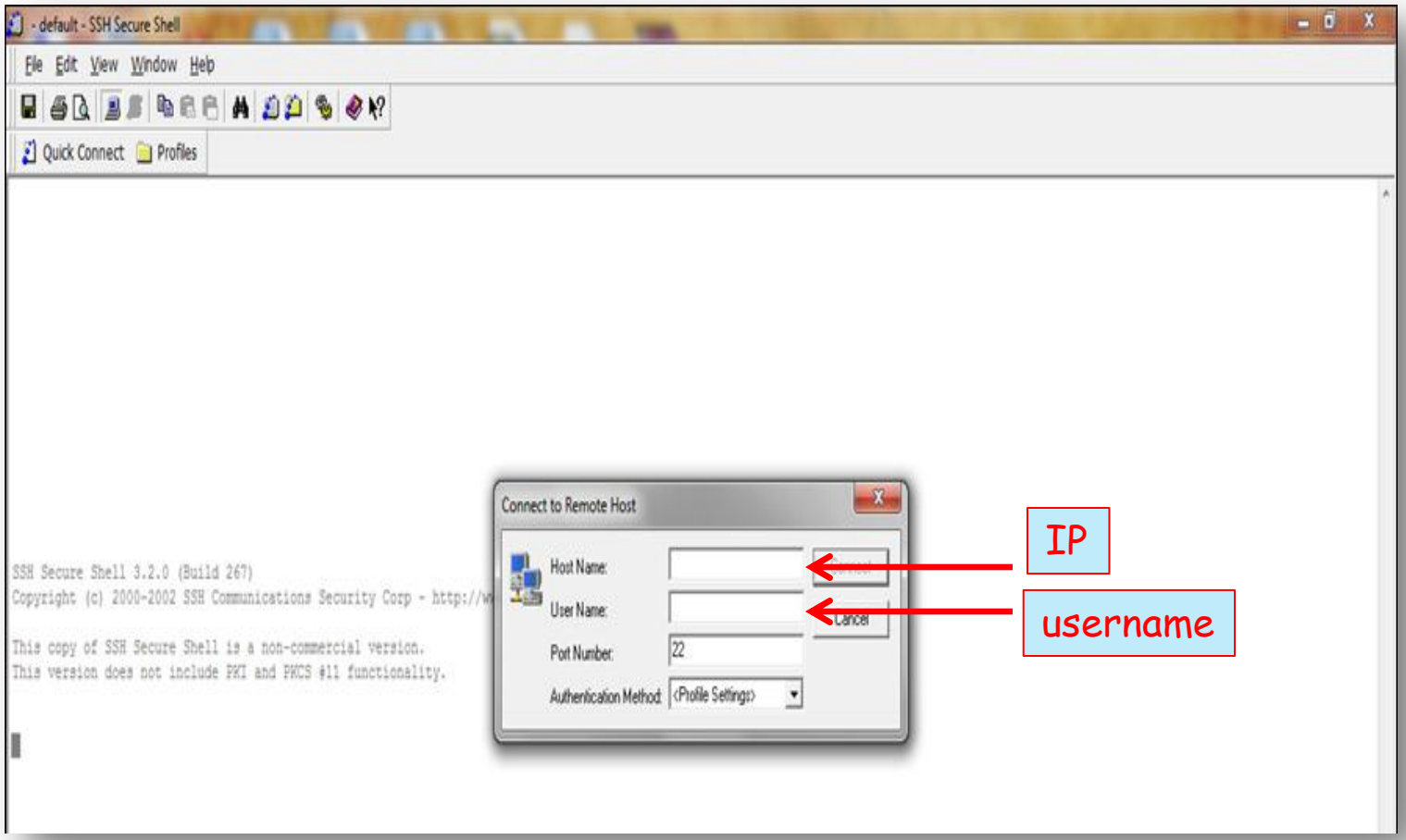
I. in ssh window click on "connect" in menu.

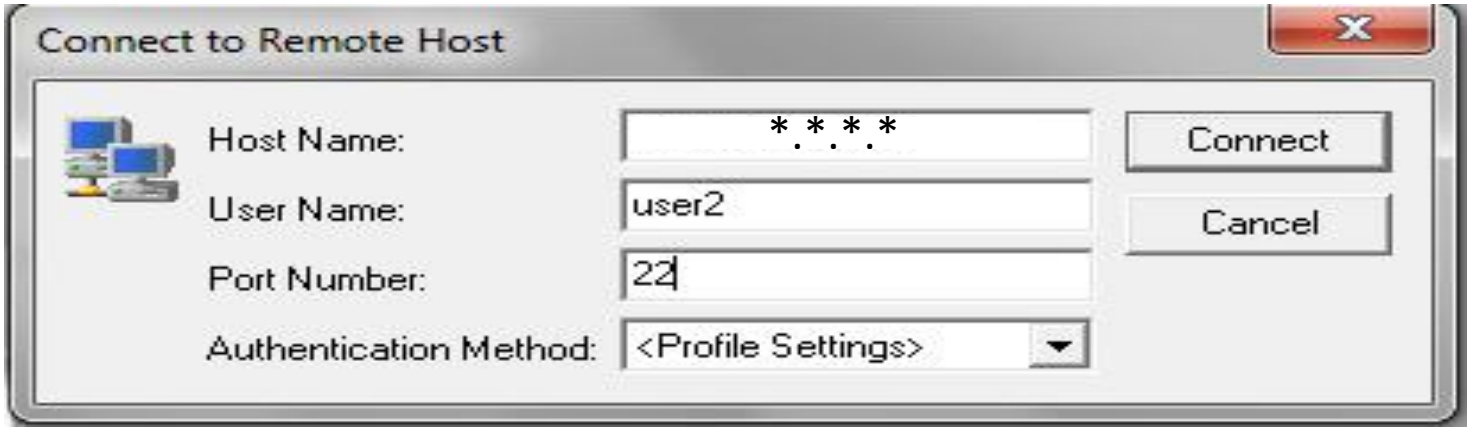
connect



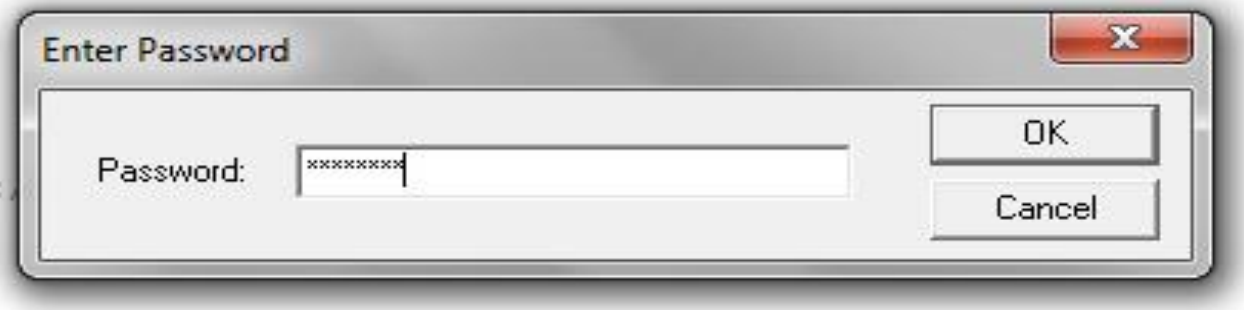
terminal

II. Enter IP and username for remote machine:

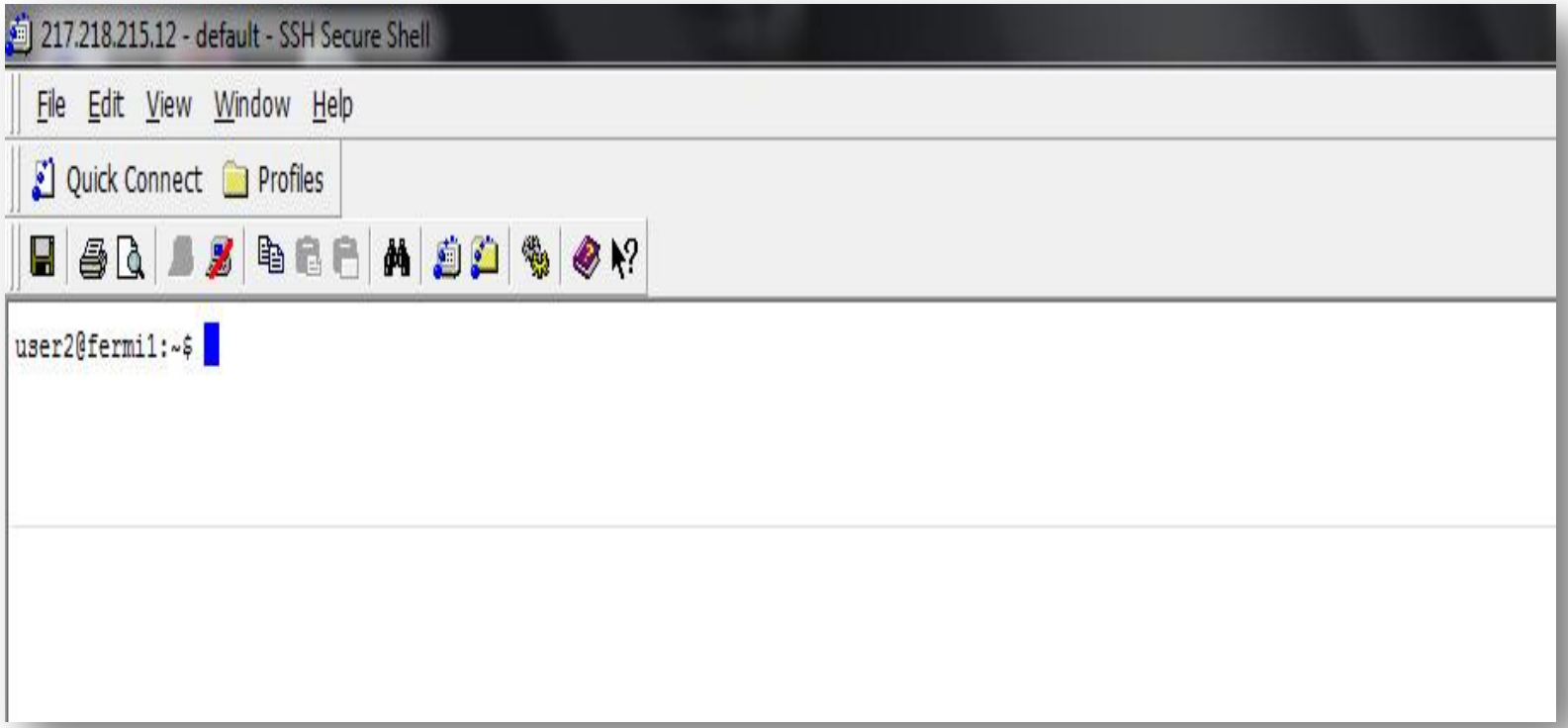




III. enter your password:



Now, you connect to remote machine



How do you copy files/folders from a local machine into a remote Ubuntu machine ?

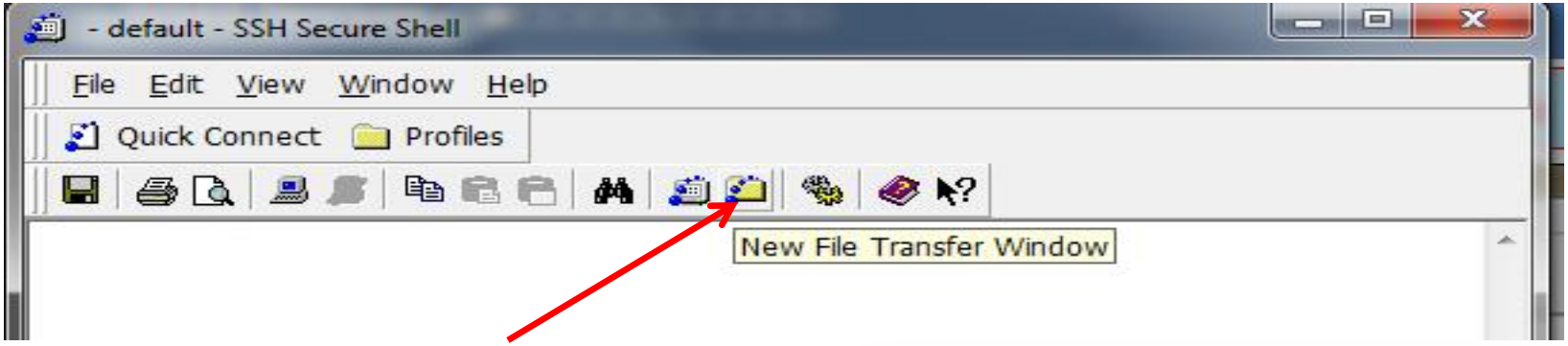
i. By right-click on files, you can copy files from a local machine.

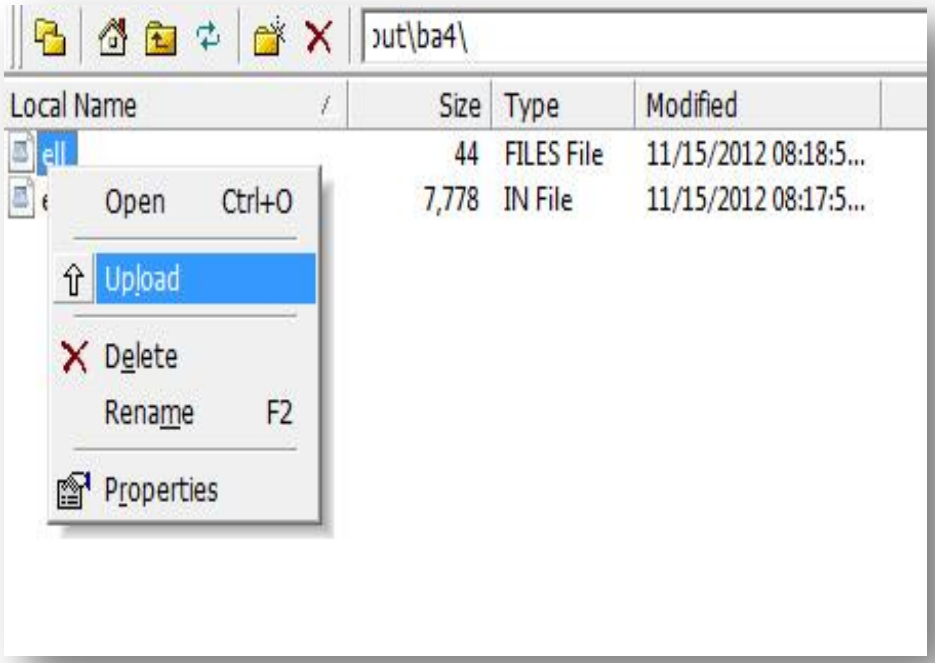
ii. In ssh window click on "New file transfer window" in menu.

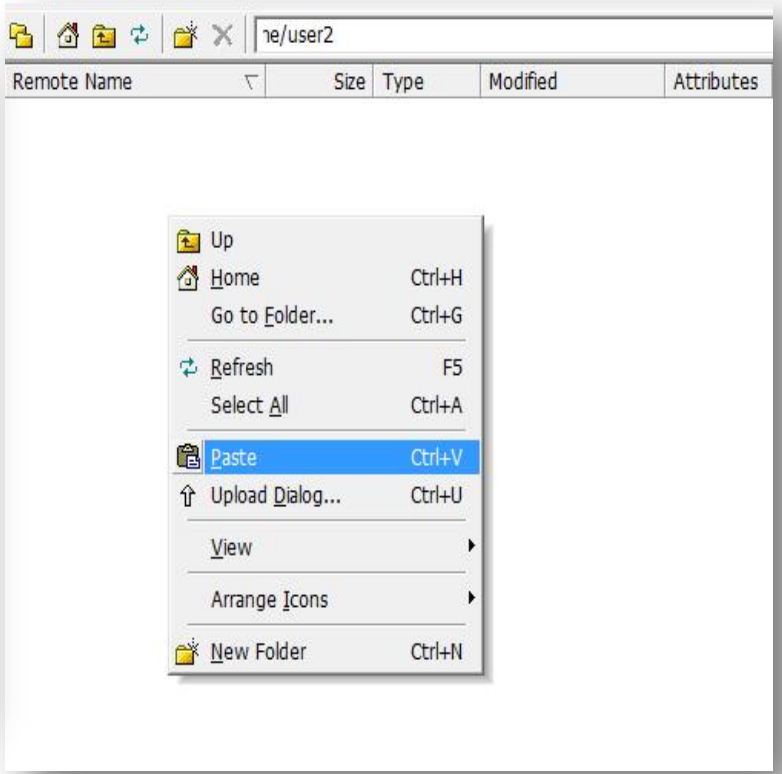
iii. Paste files in remote name window.

Or :

By right-click on files, select "upload" in local name window, and upload your files.

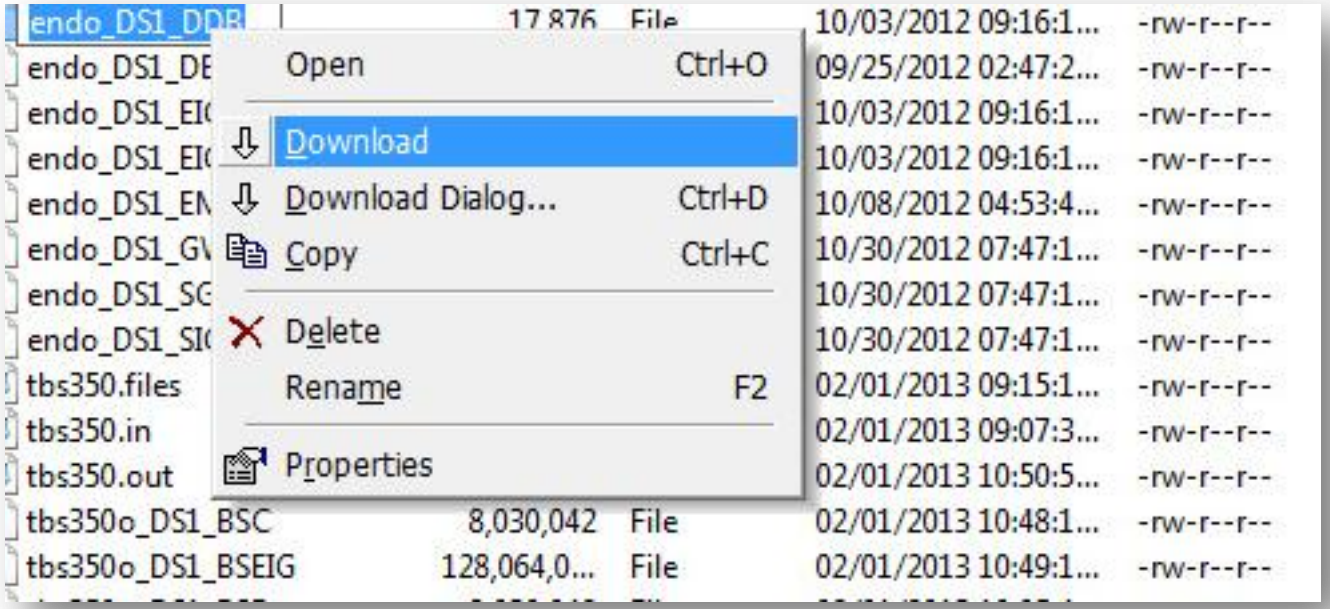

- default - SSH Secure Shell
File Edit View Window Help
Quick Connect Profiles
New File Transfer Window


Local Name
Size
Type
Modified
44 FILES File 11/15/2012 08:18:5...
7,778 IN File 11/15/2012 08:17:5...
Open Ctrl+O
Upload
Delete
Rename F2
Properties


Remote Name
Size
Type
Modified
Attributes
Up
Home Ctrl+H
Go to Folder... Ctrl+G
Refresh F5
Select All Ctrl+A
Paste Ctrl+V
Upload Dialog... Ctrl+U
View
Arrange Icons
New Folder Ctrl+N

How do you copy files/folders from a remote machine into a local Ubuntu machine ?

By right-click on files in remote name window you can download or copy files into local machine.



For run your script (run.sh) in Ubuntu machine, perform below steps:

1) **Open the ssh window.**

2) ssh into remote Ubuntu machine.

user2@*.*.*.*'s password: your password

3) user2@fermi1:~$ **ls**

examples.desktop lib work1 workfile

4) user2@fermi1:~$ **cd wok1**

5) user2@fermi1:~/work1$ **ls**

main.f90 plot.plt run.sh

6) user2@fermi1:~/work1$ **chmod +x run.sh**

7) user2@fermi1:~/work1$ **ls**

main.f90 plot.plt run.sh

8) user2@fermi1:~/work1$ **nohup ./run.sh**

nohup: ignoring input and appending output to `nohup.out‘

✓ Note: After finishing your program running, appear below line:

user2@fermi1:~/work1$

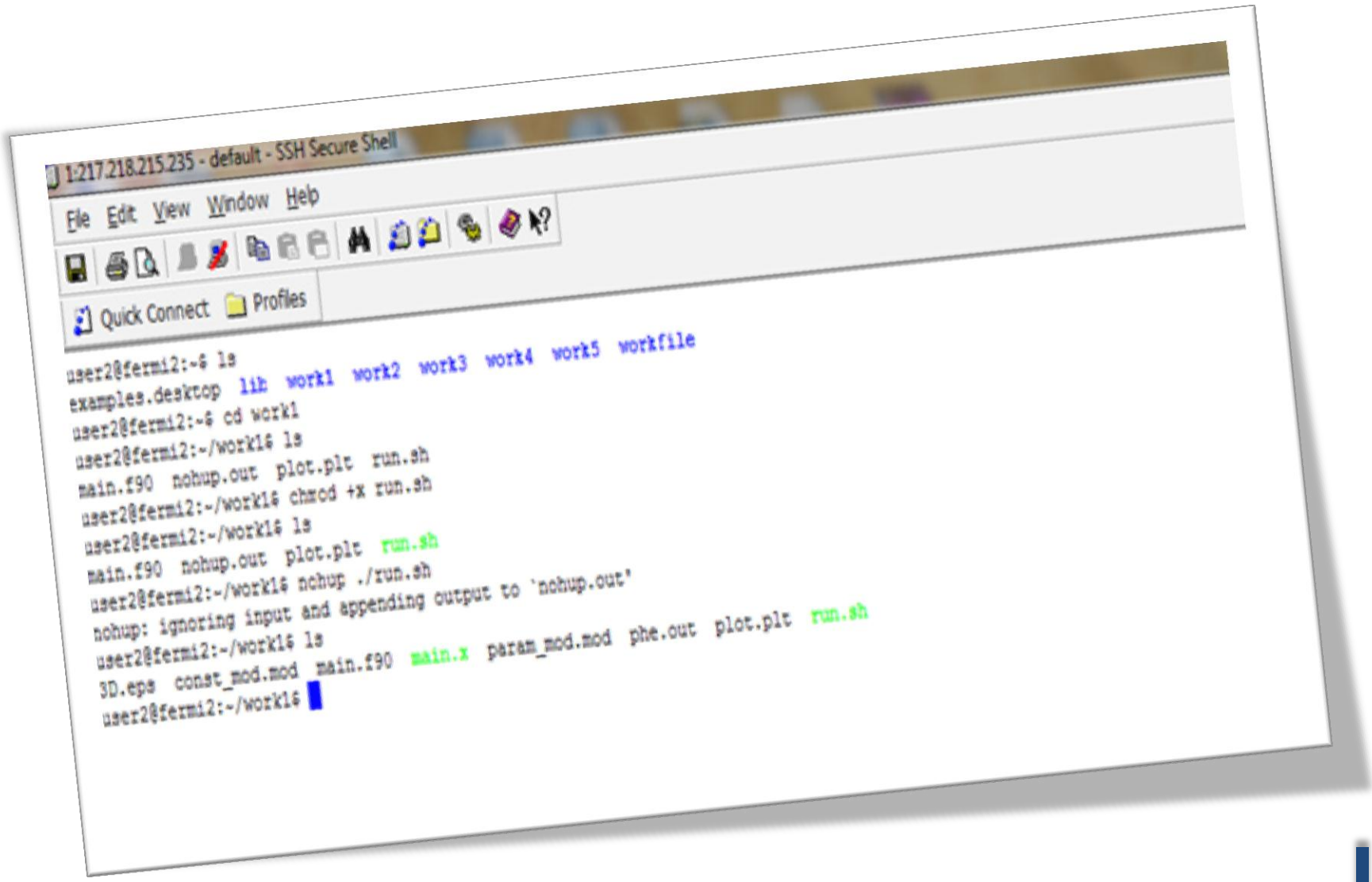
9) user2@fermi1:~/work1$ **ls**

3D.eps main.f90 param_mod.mod plot.plt const_mod.mod

main.x phe.out run.sh

10) user2@fermi1:~/work1$

Now you can download "3D.eps" by folder ssh method.


1:217.218.215.235 - default - SSH Secure Shell
File Edit View Window Help
Quick Connect Profiles
user2@fermi2:~$ ls
examples.desktop lib work1 work2 work3 work4 work5 workfile
user2@fermi2:~$ cd work1
user2@fermi2:~/work1$ ls
main.f90 nohup.out plot.plt run.sh
user2@fermi2:~/work1$ chmod +x run.sh
user2@fermi2:~/work1$ ls
main.f90 nohup.out plot.plt run.sh
user2@fermi2:~/work1$ nohup ./run.sh
nohup: ignoring input and appending output to 'nohup.out'
user2@fermi2:~/work1$ ls
3D.eps const_mod.mod main.f90 main.x param_mod.mod phe.out plot.plt run.sh
user2@fermi2:~/work1$

Useful Commands for Both Users

- You can **zip your files**, easily:

1. Open the ***terminal***

2. Change directory and then type :

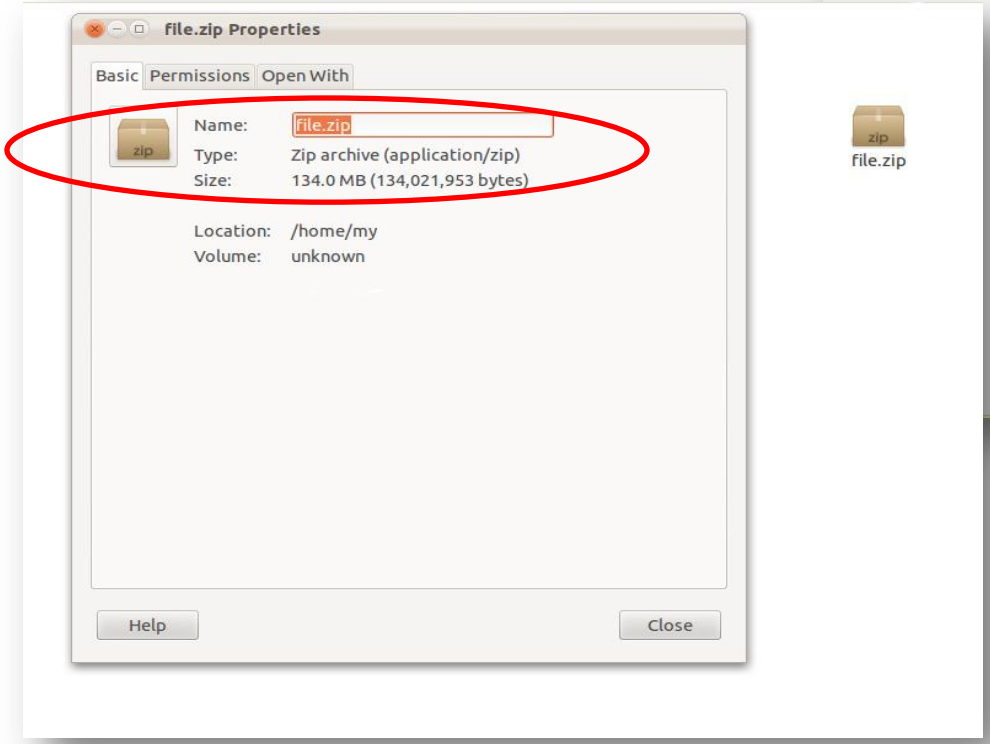
zip –r file your files

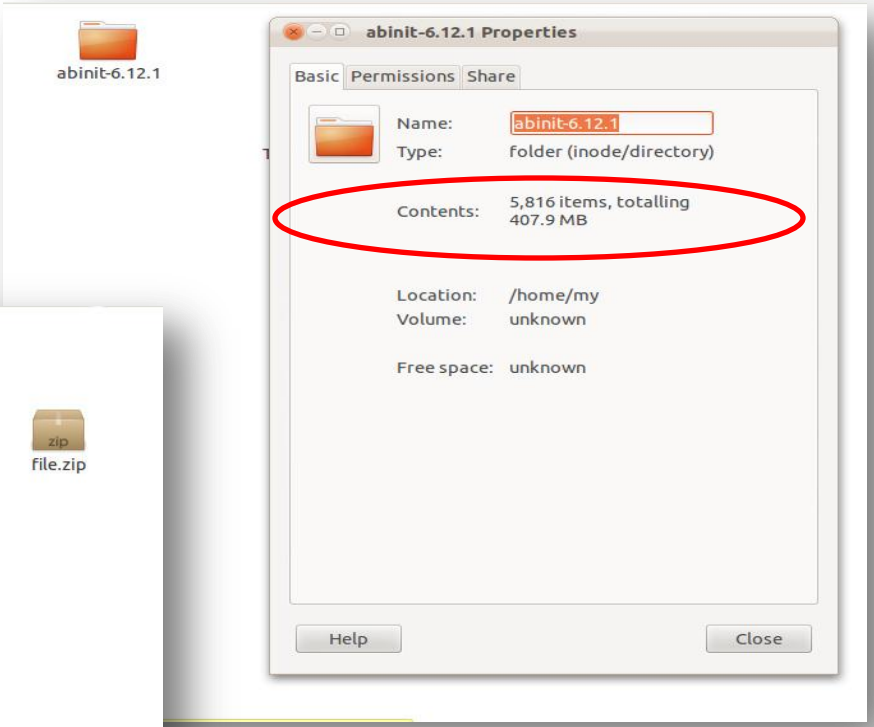
[arbitrary name for zip name] [files that you want to be zip]

```
my@my-HP-Pavilion-dv6-Notebook-PC: ~
my@my-HP-Pavilion-dv6-Notebook-PC:~$ cd /home/my
my@my-HP-Pavilion-dv6-Notebook-PC:~$ zip -r file abinit-6.12.1
```

After zip

Notice to size file





So, it is better to zip your files

- pwd
  - ➢ *Print Working Directory*
- cd
  - ➢ *Change Directory*
- Info
  - ➢ *Information about the command*

  Example: info cd
- cp
  - ➢ *Copy files to another location*

for more commands: http://ss64.com/bash

- echo

➢ *Display message on screen*

- mkdir

➢ *Creat new folder*

Example: mkdir test

- scp

➢ *Remote file copy*

- chmod

➢ *access permissions change by chmod command*

It is recommended to delete files, use the following commands.

- trash file

➢ *Delete the file*

- list-trash

➢ *Show list of deleted files*

- restore-trash

➢ *restore deleted files*

- **To use the above commands, You need to install the trash-cli package on ubuntu.**

```
my@my-HP-Pavilion-dv6-Notebook-PC:~$ trash ell2.in
my@my-HP-Pavilion-dv6-Notebook-PC:~$ trash cntt.out
my@my-HP-Pavilion-dv6-Notebook-PC:~$ list-trash
2013-02-08 11:59:13 /home/my/cntt.out
2013-02-08 11:58:40 /home/my/ell2.in
my@my-HP-Pavilion-dv6-Notebook-PC:~$ restore-trash
  0 2013-02-08 11:59:13 /home/my/cntt.out
  1 2013-02-08 11:58:40 /home/my/ell2.in
What file to restore [0..1]: 1
my@my-HP-Pavilion-dv6-Notebook-PC:~$ list-trash
2013-02-08 11:59:13 /home/my/cntt.out
my@my-HP-Pavilion-dv6-Notebook-PC:~$
```

✓ for restore files by “restore-trash”, system asks number of file that you want to restore it. you must enter an integer number for your file.

- With Thanks to, Dr. Mozaffari
- Contact Me:

nasim.morady7@gmail.com

- Good Luck