

A) Create a ssh public keypair for passwordless logins to a git repo

The preferred method for accessing a shared git repository is via ssh and passwordless login. You'll need a ssh public keypair for this to work. Some UNIX/Linux/BSD distributions automatically create a keypair when a user is created. If you use a Mac or UNIX/Linux/BSD check to see if you have a `.ssh` folder inside your home directory. If the `.ssh` folder exists and you have a two files with the same name except one has a `".pub"` at the end, then you already have a keypair. Otherwise, perform the following procedure to create a new keypair:

1. Open a terminal (CMD or Powershell on MS-Windows)
2. Type `ssh-keygen -C youremailaddress@una.edu` and press ENTER
3. Accept the defaults for all the prompts except the passphrase prompt
4. At the passphrase prompt type a password or phrase (don't use an existing password!)
5. If you are on a University machine, ZIP the `.ssh` folder and save it somewhere safe. You will need whole folder and the contents to use git.

▷ You may skip the password on your private key. This means that anyone who obtains your private key can use it to impersonate you. The password protects your private key from misuse if it is lost or stolen.

Once you have a ssh public keypair, perform the following:

6. Send your public key ("`id_*.pub`") file from your `.ssh` folder as an **email attachment**
7. Wait for a reply that your key has been added then clone the repo

Do NOT generate new keys after you email your public key!!!

After you receive the reply stating your public key has been added, perform the steps shown in (B) below. You **must** have git installed and you **must** be on the machine with your ssh keys.

If you are on a University machine in CPTMTH or Keller classrooms then git is already installed, otherwise use your operating system's package manager/installer to install git. Note that your ssh keys **must** be in a folder named `.ssh` inside your home directory on the machine you are using git from otherwise it won't work. Git depends on ssh which looks in the `.ssh` folder for your keys, so if they can't be found your login will fail.

B) Clone and modify the shared git repository

8. Be sure you have created a `.gitconfig` on the machine you are using
The `.gitconfig` file must have your name and email
9. Clone the repo with the command
`git clone ssh://git@cs.csis.work/home/git/cs455.git cs455.repo`
10. Change into your new `cs455.repo` directory with the command `cd cs455.repo`

11. Add your name and public key to the *members.md* file
 12. Type *git add members.md* to stage the modified file in your local repo
 13. Perform a (local) commit with the command *git commit*
 14. Push the changed file to the shared repo with the command *git push*
- ▷ If you cannot push due to a conflict, follow the directions in the diagnostic message from git -OR- drop by during office hours for assistance.
- C) Make a second change to the shared git repository
15. Change into the *src* folder of the cs455 repository
 16. Complete the items listed in the README.md file of the src folder