GitHub and Initial Set Up

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Create GitHub

- Git is a *version control system (VSM)*, GitHub is a *website* that hosts git repositories. (so on your resume, say that you know git, not GitHub).
- *How to open an account in github?*

    - Step 1: Go to github.com, and then select Sign up.
    - Step 2: Enter your *email* address.
    - Step 3: Create a *password* for your new GitHub account and then click *continue*.
    - Step 5: Verify your account by solving a *puzzle*. Then select the *Create account* button.
    - Step 6: GitHub sends a *launch code* to your email address. Type that launch code in the Enter code dialog, and then press *Enter*.
    - Step 7: GitHub asks you some questions. Then choose the *Free account*, select the *Skip personalization button*.

Initial Setup

- Make sure you have

    i. git installed and
    ii. you can connect to GitHub.

- To verify that you have git installed, open up the terminal and type

- `git --version`

Question: How to open terminal?
1. You may directly open BASH or terminal from your laptop 2. On R-studio click "Tools", then select "Terminal" and "New Terminal" 3. Windows `Alt + Shift + R`

Type

```
git --version
```

If git is installed, you will see something like

git version 2.43.0.windows.1

- To see if you can connect to GitHub:

    1. Enter the following in the terminal/ BASH:

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

- Type "yes" if prompted to continue connecting.

- You are successful if you see something like

Hi Semiyari! You've successfully authenticated, but GitHub does not provide shell access.

- If you have issues with either of these step, make sure you have completed Setting up Git and gitHub.

- You may get a warning such as

```
@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
@    WARNING: REMOTE HOST IDENTIFICATION HAS CHANGED!    @
@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
IT IS POSSIBLE THAT SOMEONE IS DOING SOMETHING NASTY!
Someone could be eavesdropping on you right now (man-in-the-middle attack)!
It is also possible that a host key has just been changed.
The fingerprint for the RSA key sent by the remote host is
SHA256:uNiVztksCsDhcc0u9e8BujQXVUpKZIDTMczCvj3tD2s.
Please contact your system administrator.
Add correct host key in C:\\Users\\semiyari/.ssh/known_hosts to get rid of this message.
Offending RSA key in C:\\Users\\semiyari/.ssh/known_hosts:1
RSA host key for github.com has changed and you have requested strict checking.
Host key verification failed.
```

```
C:\Users\semiyari>cd
C:\Users\semiyari

C:\Users\semiyari>touch .bash_profile
'touch' is not recognized as an internal or external command,
operable program or batch file.

C:\Users\semiyari>git --version
git version 2.39.0.windows.2

C:\Users\semiyari>ssh -T git$github.com
ssh: Could not resolve hostname git$github.com: No such host is known.

C:\Users\semiyari>ssh -T git@github.com
@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
@    WARNING: REMOTE HOST IDENTIFICATION HAS CHANGED!     @
@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
IT IS POSSIBLE THAT SOMEONE IS DOING SOMETHING NASTY!
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Offending RSA key in C:\\Users\\semiyari/.ssh/known_hosts:1
RSA host key for github.com has changed and you have requested strict checking.
Host key verification failed.
```
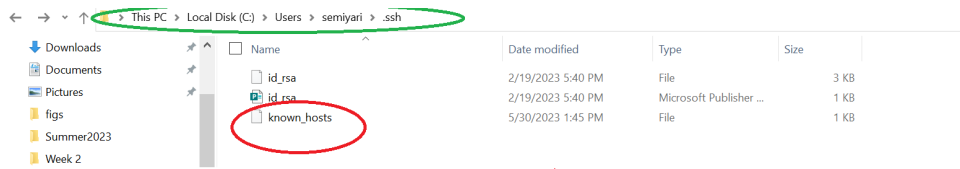
- One possible solution is to go to your "user folder" in your local machine

- `C:\Users\` OR

- `C:\Users\[YOUR USERNAME]`

- There will also be a `.ssh` folder.

- The file we want in this folder is `known_hosts`. You can open this with Notepad (or your favorite text editor). Inside will be a list of keys. Here, you can delete the key that's causing the problem, then resave the file.

2. Type "yes" if prompted to continue connecting.
3. You are successful if you see something like

Hi Semiyari! You've successfully authenticated, but GitHub does not provide shell access.

- If you get error

```
git@github.com: Permission denied (publickey).
```

GitHub's Permission denied (publickey) error is usually caused by one of the following three issues:

1. You have used an incorrect email address in the GitHub SSH URL

2. You have not configured your public SSH key in your GitHub account

3. You must create GitHub SSH keys to be used by the secure shell. My email was okay. So to fix this I need to *Generate SSH Key and add it to GitHub's SSH Keys.*

- **How to do it?**

You need to create a public Key! See the lecture "6a_authentication_github_ssh."