Pragmatic Product Leader Course

Become a Product Manager with Superpowers

Lesson 14N
Git & Github

Git & GitHub - Version

Understanding Git

- Git is a VCS - version control system
- Git helps to manage project files
- Git keeps track of the entire history of things you are working on
- This is extremely helpful for developers who start by building the basic version and build on those versions
- While building on the basic version, you try out new features, and this can prove to be extremely error prone
- In such situations, Git helps you to revert to previous versions of code
- Git also allows for great collaboration
- Through Git multiple developers can work on the same project simultaneously

Understanding Github

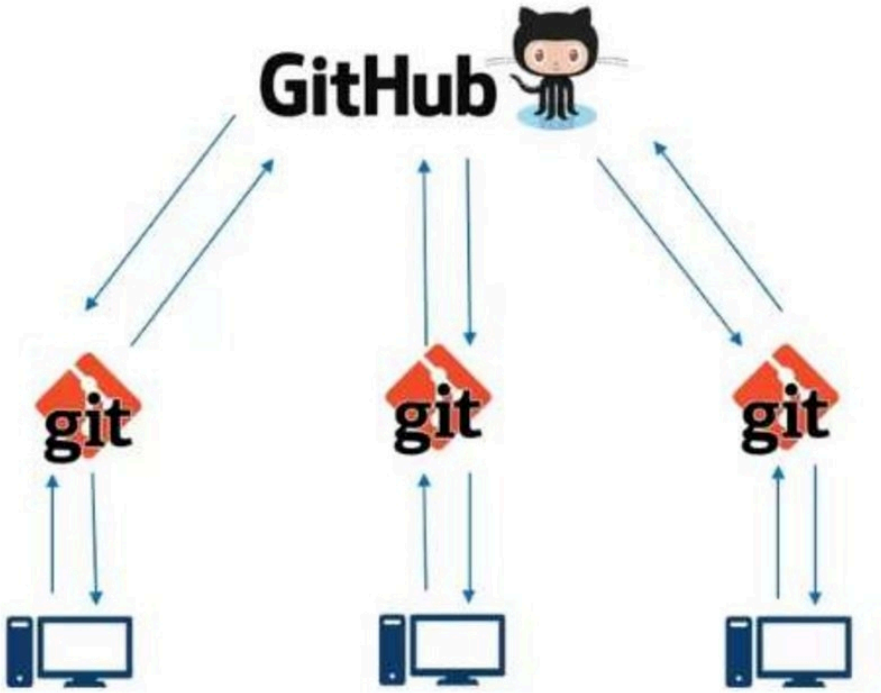
- Github is a web-based service for version control using Git
- It is similar to a social networking site for developers
- You have the ability to view everyone's code, identify issues in their codes and suggest changes
- In simple terms Github is a hosting service for Git repositories

Important Terminology

Repository
Git will track changes to any file in this specified folder called the repository.
Branch
This is an independent line of development. It is similar to a new directory.
Fork
A personal copy of another person's repository that resides in your account.
Clone
A copy of your repository that lives on your computer instead of the server.
Commit
Set of one or more changes to a file. Everytime you save, these changes are assigned an ID. This ID helps to track the changes.
Master
Default development branch

Git & Github

- Github is the central repository
- Git is a tool that helps you create local repositories on your personal system



Connecting to GitHub with SSH

- WIth the help of SSH, you will be able to connect to GitHub without a username and password
- For this, you need to set up a SSH key and add that to your GitHub account
- Steps:
    - Generate SSH key
    - Add SSH key to SSh agent
    - Add SSH key to Github account

Generate SSH key

Step 1: Open Git Bash

Step 2: Use the email associated with the Github account to write the following command:

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

This command creates a new SSH key, using your email as the label

```
Generating public/private rsa key pair.
```

Step 3: At this stage you will be asked to "Enter a file in which to save the key". This sets the default file location

```
Enter a file in which to save the key (/c/Users/you/.ssh/id_rsa):[Press enter]
```

Step 4: Next you will be prompted to enter a secure passphrase

```
Enter passphrase (empty for no passphrase): [Type a passphrase]
Enter same passphrase again: [Type passphrase again]
```

Add SSH key to SSH-agent

Step 1: Ensure SSH-agent is running

Step 2: Replace *id_rsa* in the command with the name of your private key file. (the name provided in step 3 in previous slide)

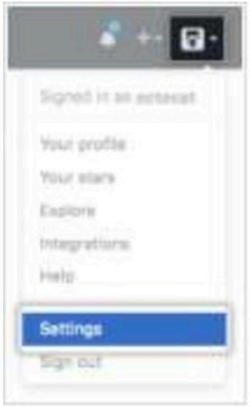
```
$ ssh-add ~/.ssh/id_rsa
```

Add SSH key to Github account

Step 1: Copy the SSH key to your clipboard using the following command

```
$ clip < ~/.ssh/id_rsa.pub
# Copies the contents of the id_rsa.pub file to your clipboard
```

Step 2: In the upper right hand corner click on your profile photo and then click Settings

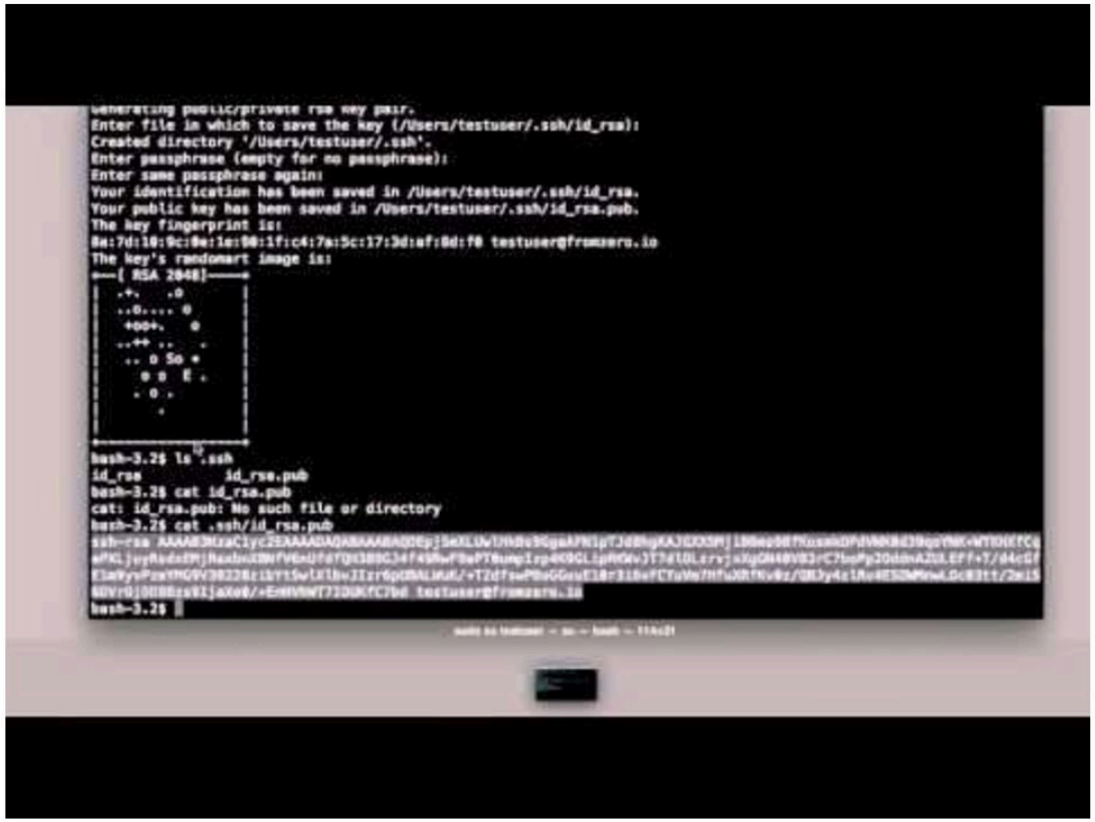


Add SSH key to Github account - continued

Step 3: In the settings sidebar, click on SSH and GPG keys
Step 4: Click Add SSH key
Step 5: In the “Title” field, provide a descriptive label for you key
Step 6: Paste the key you copied to clipboard in the Key field
Step 7: Click “Add SSH key”
Step 8: You maybe prompted to confirm your GitHub password

Let's Give it a Try!

Create your [GitHub Account]



To conclude

Thank you.