

GIT

Version Controlling

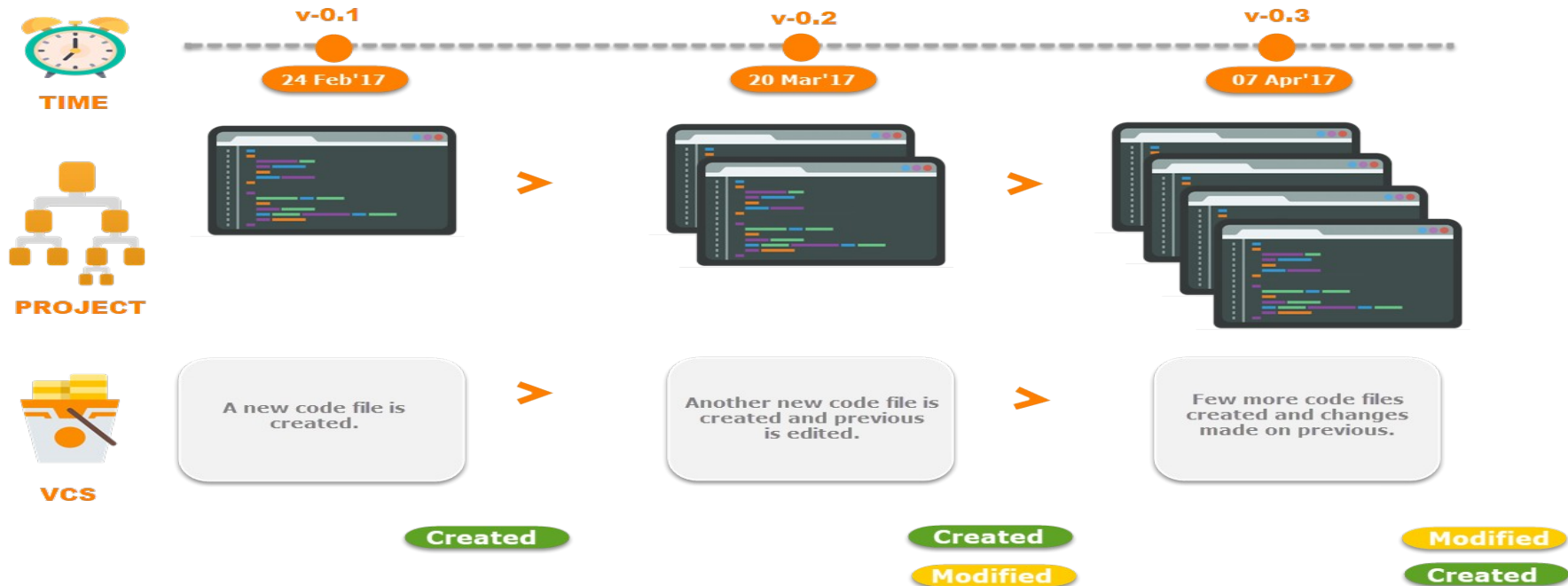
Content - Detail

GIT & Github Basics

- Git Local Repository.
- Git Remote Repository using Github.com Service.
- GIT using VS Code
- Course Source Code Repository on <https://github.com/>

What is Version Controlling System (VCS) ?

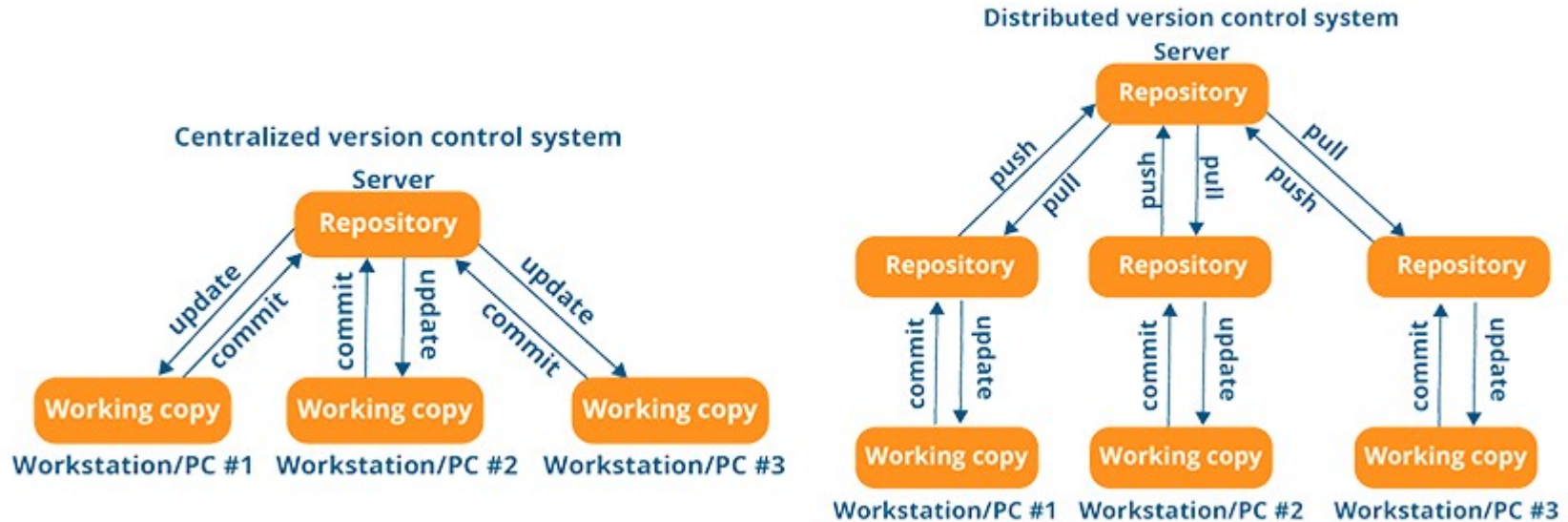
It is a software that maintain different versions of a file on computer system.



GIT

- Distributed(D) Version Controlling System (VCS).
- Developed by Linus Torvalds, who is well known for Linux Kernel.
- Most used VCS:
 - https://insights.stackoverflow.com/survey/2018#work_-_version-control
- GIT is Open Source, have a look at it's code here: <https://github.com/git/git>
- Good Read:
 - <https://guides.github.com/introduction/git-handbook/>
 - <https://speakerdeck.com/schacon/introduction-to-git>
 - <https://www.atlassian.com/git/tutorials/what-is-version-control>

Centralized(C) vs Distributed(D) Version Controlling System (VCS)



Practice

Git – Setup User

1. Setup Git User Name:

`git config --global user.name "your name"`

2. Setup Git User Email:

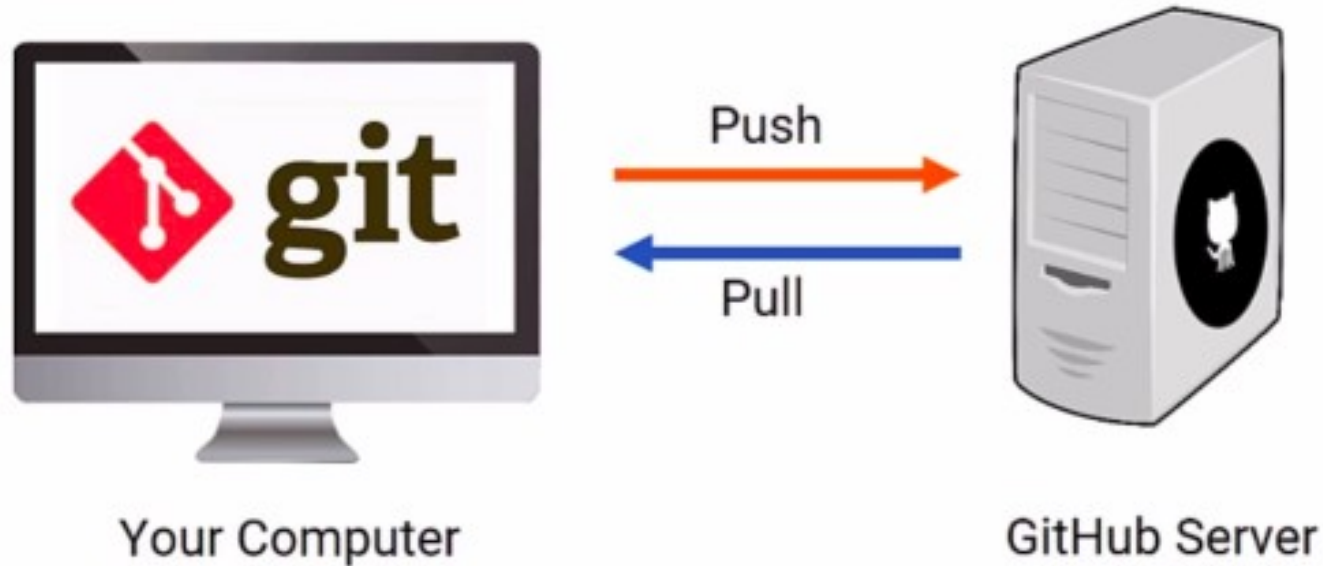
`git config --global user.email "your email"`

Practice

Git – Work with Local Repository

1. Create folder and then create your File(s) or Project(s) in that folder to manage versions.
2. Initialize Git on to the newly created folder. Note, this is one time activity. ==> git init
3. Stage changes ==> git add *
4. See git files status ==> git status
5. Commit changes locally ==> git commit -m "commit message"
6. See git files status again ==> git status
7. See git logs ==> git log
8. Do some more changes to your file(s) or project(s).
9. Repeat steps 3 to 8 few more times.

What is Github.com



What is <https://github.com/>

- Manage Remote/Online Repository using GIT version controlling system.
- Free service to host individual developer source code.
- Free service for Open Source Software.
- Managing largest number of open source software including dotnet core, react, angular, vuejs, npm, vscode, typescript and many more famous softwares.
- Now owned by Microsoft.
- Similar GIT based hosting Services are:
 - <https://about.gitlab.com/>
 - <https://bitbucket.org/> From Atlassian Company

Practice

Git – *Move Local Repository to Remote on Github.com Service*

1. Create new remote repository on Github.com. Note, One time activity.
2. Link Local and Remote repository. Note, One time activity ==> *git remote add origin < remote repo. Url >*
3. Check repository remote status ==> *git remote -v*
4. Push local repository files/projects to remote/online on github server ==> *git push -u origin master*
5. Enter git username and password to finally push local changes to remote.
6. Go to github.com and see your files/projects.

Practice

Git – Create Remote Repo and **Clone It (For Existing Projects)**

1. Create new remote repository on Github.com. Note, One time activity.
2. Clone remote repository on local system. Note, One time activity
==> *git clone < remote repo. Url >*

Practice

GIT *using VS Code*

1. Use default VS Code GIT extension and Terminal to handle git management.
2. Manage Local GIT Repository.
3. Move Local Repository to Remote on Github.com Service.
4. Clone Remote Repository.

Practice

GIT – Create our Learn Javascript Repository

1. Entire javascript course code will be managed on one single repository which will be remotely hosted on Github.com.
2. It's a public repository so clone it for your reference.

(Extra)

GIT – What is Working Directory, Staging area & Repository ?

