

# **Git and GitHub Classroom for CS559**

Part B – How GIT / GitHub classroom works

# **GIT Concepts**

GIT is really useful

It is important to have the right mental model of how it works

We will only use the simple parts in class

This is all I will discuss

# Some GIT terms

**GIT** – a distributed source control system  
keeps stuff in repositories

**GitHub** – <sup>①</sup> a server that stores repositories  
and a <sup>②</sup> company that runs those servers

**GitHub Classroom** – a service that makes repositories

# What is a repository?

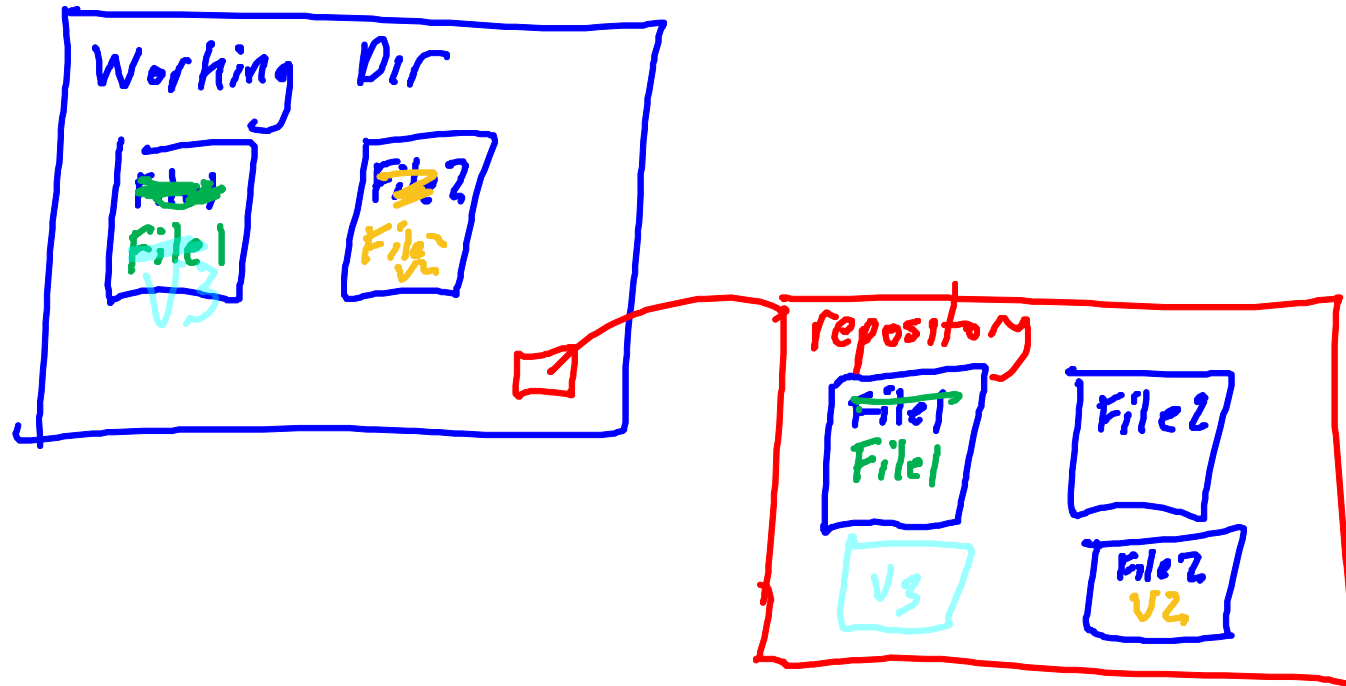
A collection of information about a project [collection of files]

A collection of files

Backup copies [old versions] of those files

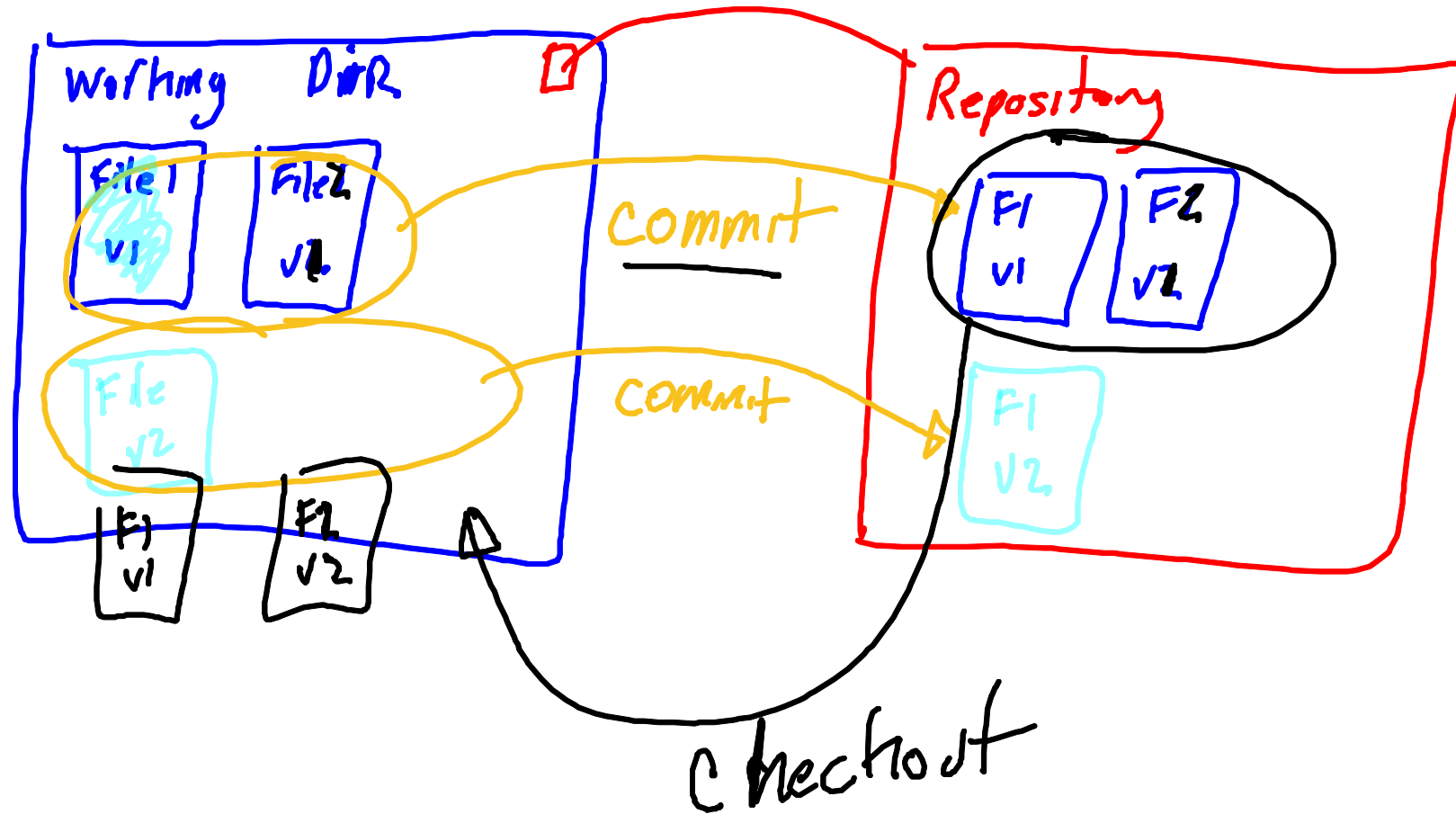
# Working Directory Repository

on my disk



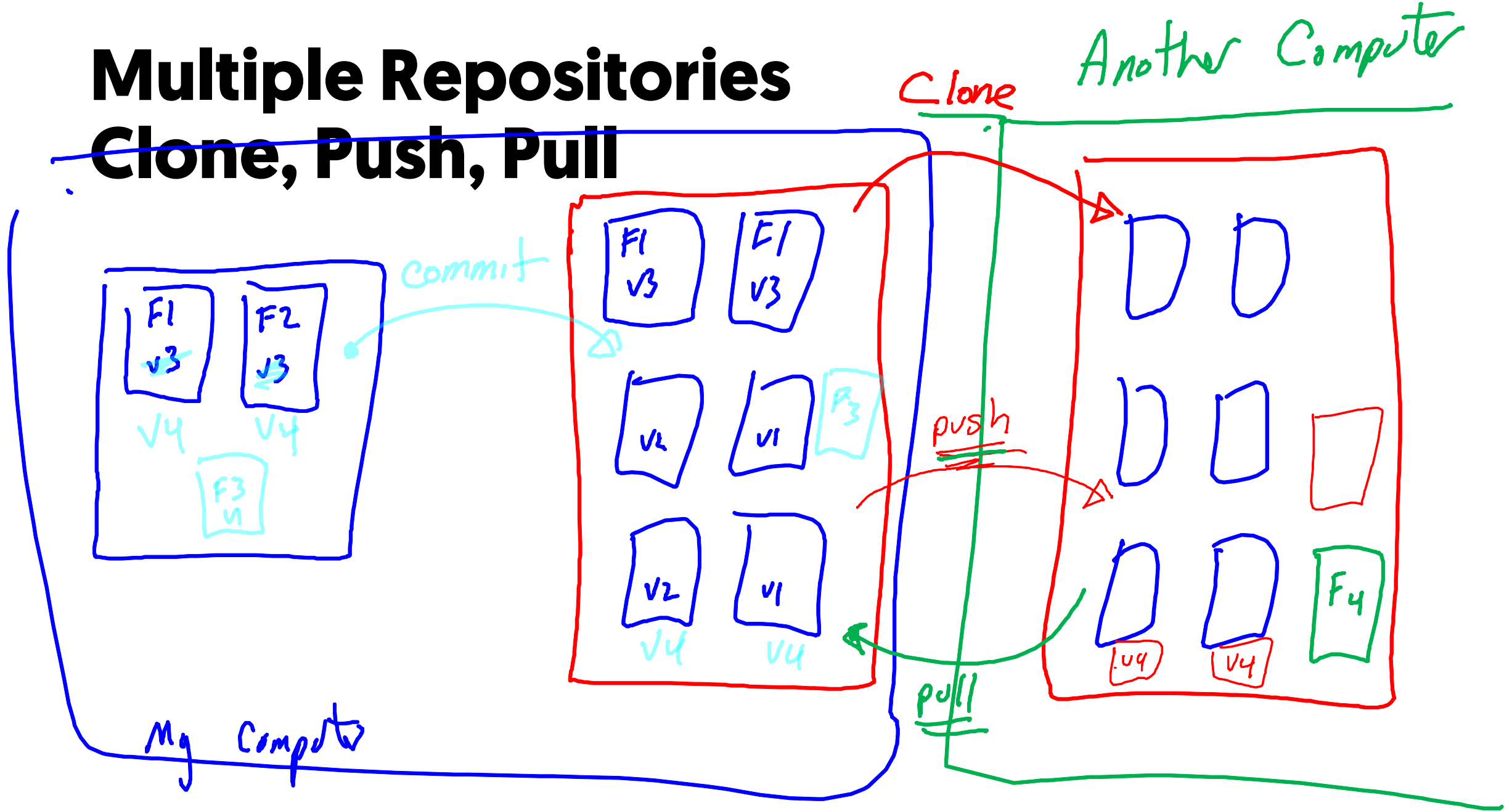
Keep all old versions!

# Repository Commit Checkout



# Multiple Repositories

## Clone, Push, Pull

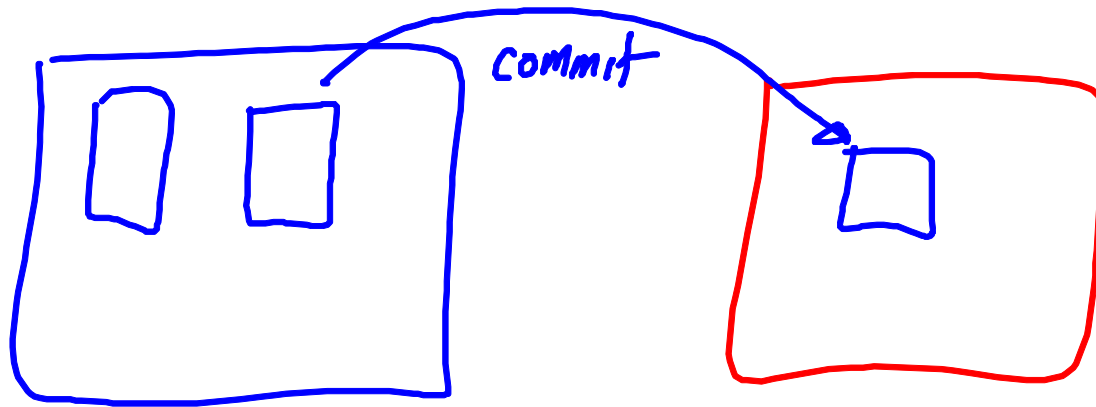


# 3 Phases to saving your work

Add – “stages” the work (tells GIT you want to commit the file)

Commit – makes copies of the staged files

Push – copies the repository to the server

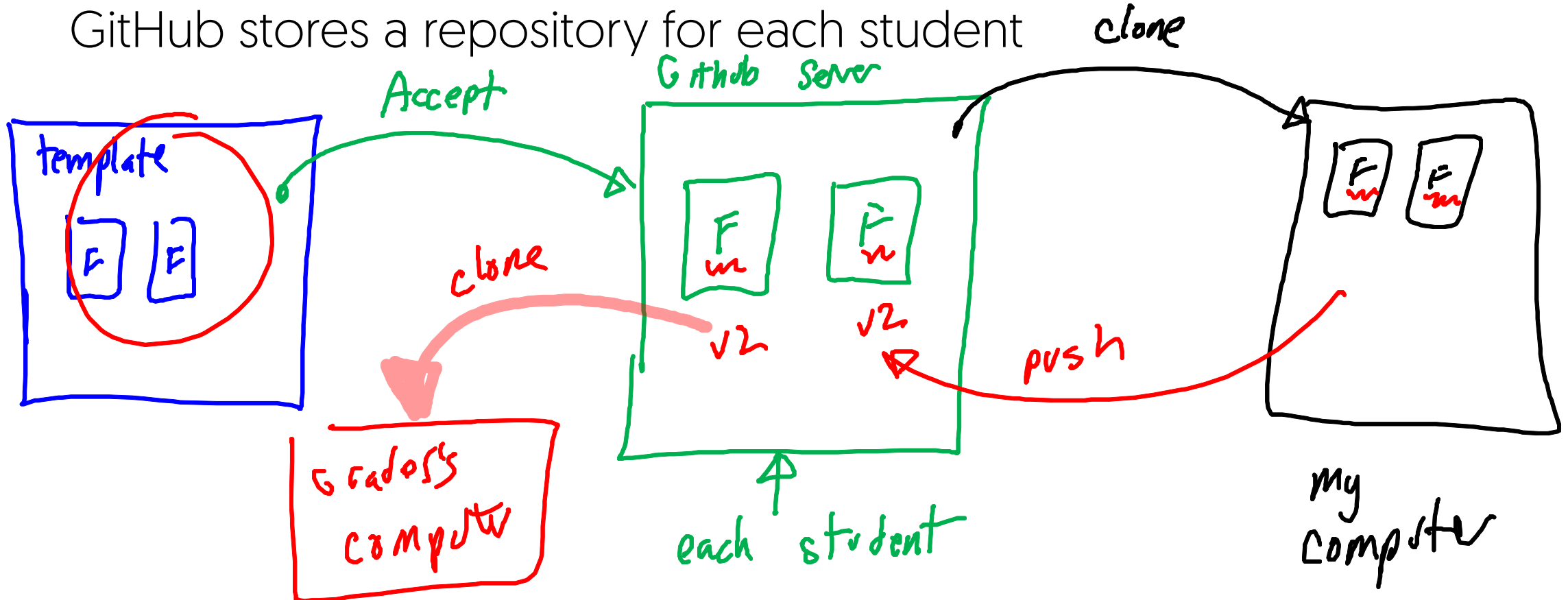




# GitHub and GitHub Classroom

GitHub Classroom makes you a repository on GitHub

GitHub stores a repository for each student



# Behind the scenes

1. Course staff made the workbook
2. Course staff made a “template repository” for everyone to copy
3. Course staff created a GitHub classroom assignment

GitHub classroom copies our template to make your repository

Initially, your repository is a copy of our master

**Template Repo on GitHub**

**GitHub Classroom copies for students**

**Private repositories on GitHub**

CS559-Spring21 / wb01-gleicher Private  
generated from CS559/S21-Workbook01-Master

Watch 1 Star 0 Fork 0

Code Issues Pull requests Actions Projects Wiki Security Insights Settings

master 1 branch 0 tags

YoungWu559 Initial commit 1 minute ago 1 commit

css	Initial commit	1 minute ago
docs	Initial commit	1 minute ago
for_students	Initial commit	1 minute ago
js	Initial commit	1 minute ago
README.md	Initial commit	1 minute ago
index.html	Initial commit	1 minute ago
sitemap.xml	Initial commit	1 minute ago

Your repo was created  
By GitHub Classroom

About

wb01-gleicher created by GitHub Classroom

Readme

README.md

# CS559 Workbook , Spring 2021

This set of web pages forms a "workbook" assignment for CS559, Computer Graphics at the University of Wisconsin for

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Watch 1 Star 0 Fork 0

Code Issues Pull requests Actions Projects Wiki Security Insights Settings

master 1 branch 0 tags  
YoungWu559 Initial commit  
css Initial commit  
for\_students Initial commit  
js Initial commit  
README.md Initial commit  
index.html Initial commit  
sitemap.xml Initial commit

Your repo is a copy of our template

I don't know what it says that Young (a TA) created it (and not me)

About

wb01-gleicher created by GitHub Classroom

Readme

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README.md

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# GitHub Classroom Summary

Follow the link to get your own repository on GitHub

announcement

Clone the repository to your own computer

Do the work

Commit the changes

Push the changes back to GitHub

We clone your repository to grade your work