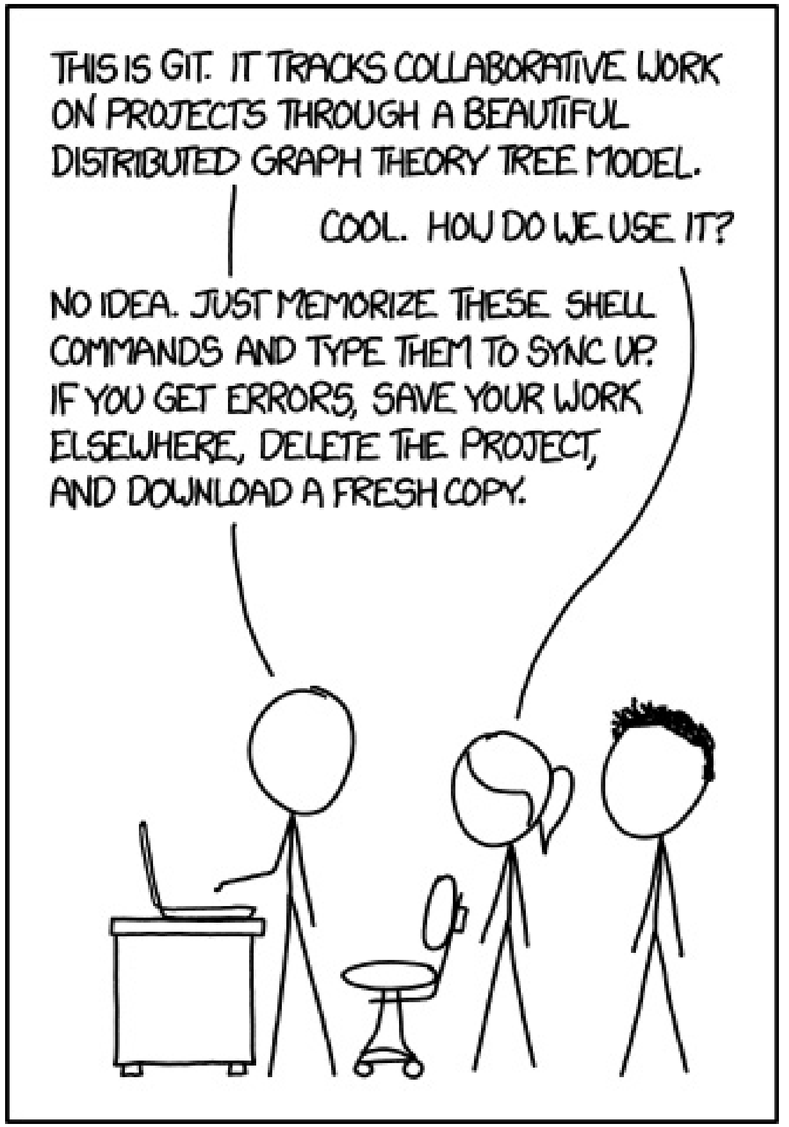
MDIA 3292

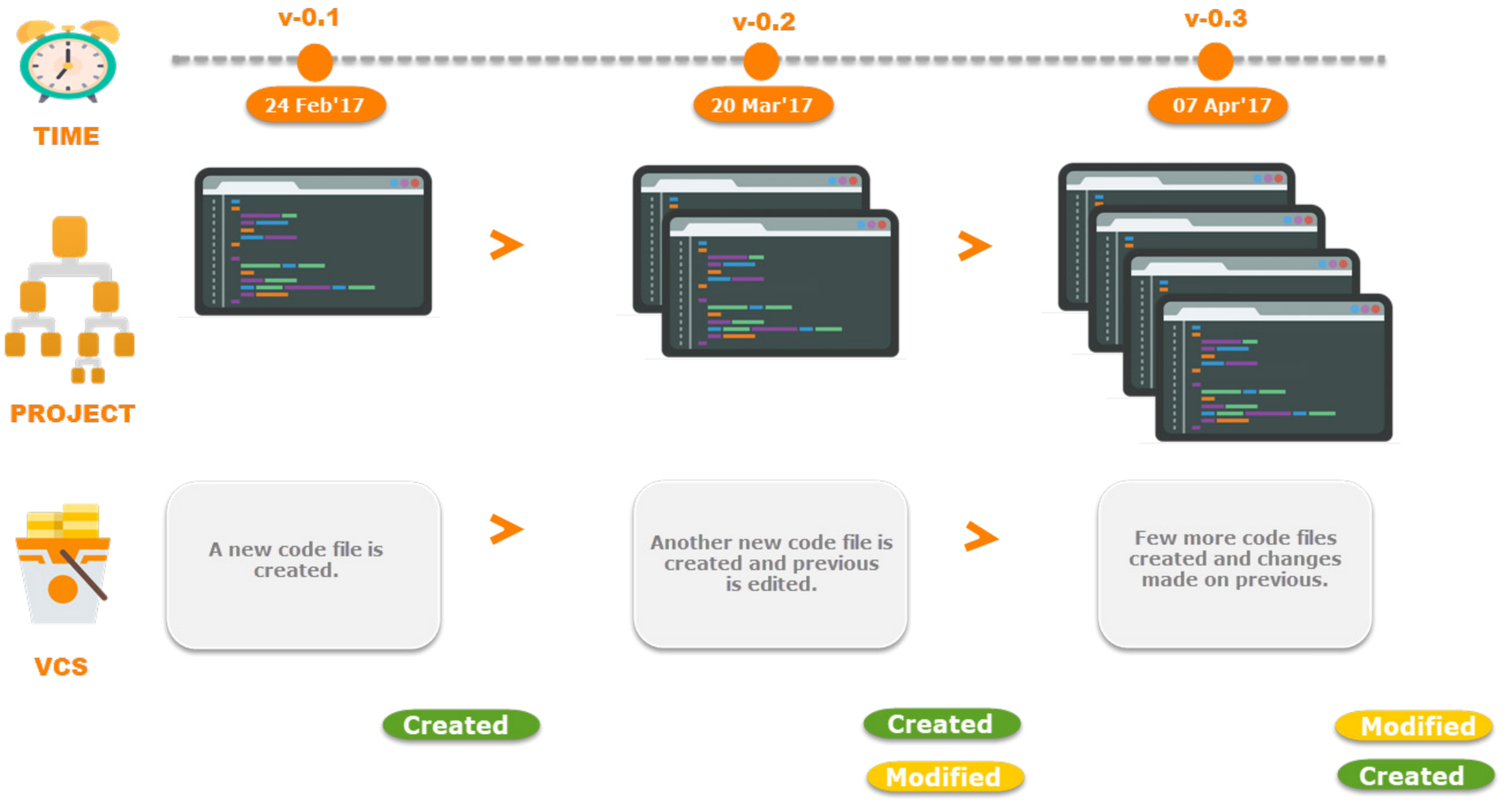
| 07 WEB DESIGN & INTERACTION

BCIT | NEW MEDIA DESIGN AND WEB DEVELOPMENT | JOYCE LAM


THIS IS GIT. IT TRACKS COLLABORATIVE WORK ON PROJECTS THROUGH A BEAUTIFUL DISTRIBUTED GRAPH THEORY TREE MODEL.
COOL. HOW DO WE USE IT?
NO IDEA. JUST MEMORIZE THESE SHELL COMMANDS AND TYPE THEM TO SYNC UP. IF YOU GET ERRORS, SAVE YOUR WORK ELSEWHERE, DELETE THE PROJECT, AND DOWNLOAD A FRESH COPY.

VERSION CONTROL

- A repository contains all of your code, your files, and each file's revision history.
- You can discuss and manage your work within the repository.
- Instead of keeping only the latest copy of something, you hold on to each successive revision as you work, so that you can refer or revert back to an older version if you need to.
- The 3 most well known version control systems (VCS) is Git, SVN and Mercurial


TIME
v-0.1
v-0.2
v-0.3
24 Feb'17
20 Mar'17
07 Apr'17
PROJECT
VCS
A new code file is created.
Another new code file is created and previous is edited.
Few more code files created and changes made on previous.
Created
Created
Modified
Modified
Created

SOURCE

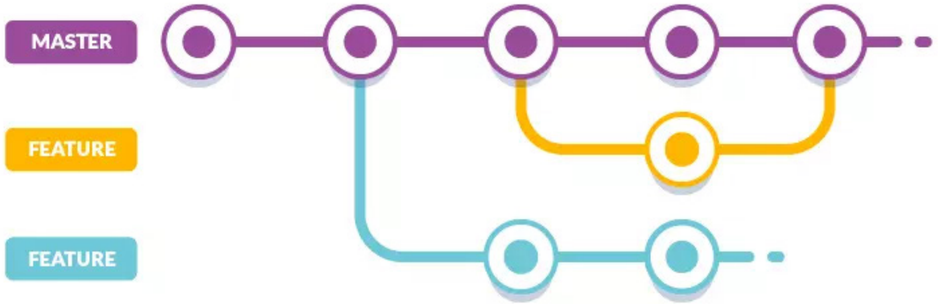
GITHUB

- **Git** is an open-source version control software, while **Github** is web-based hosting service for Git repositories
- A repository is the most basic element of GitHub
- It's a place where you can store your code, your files, and each file's revision history.
- Repositories can have multiple collaborators and can be either public or private.
- You can own repositories individually, or you can share ownership of repositories with other people in an organization.

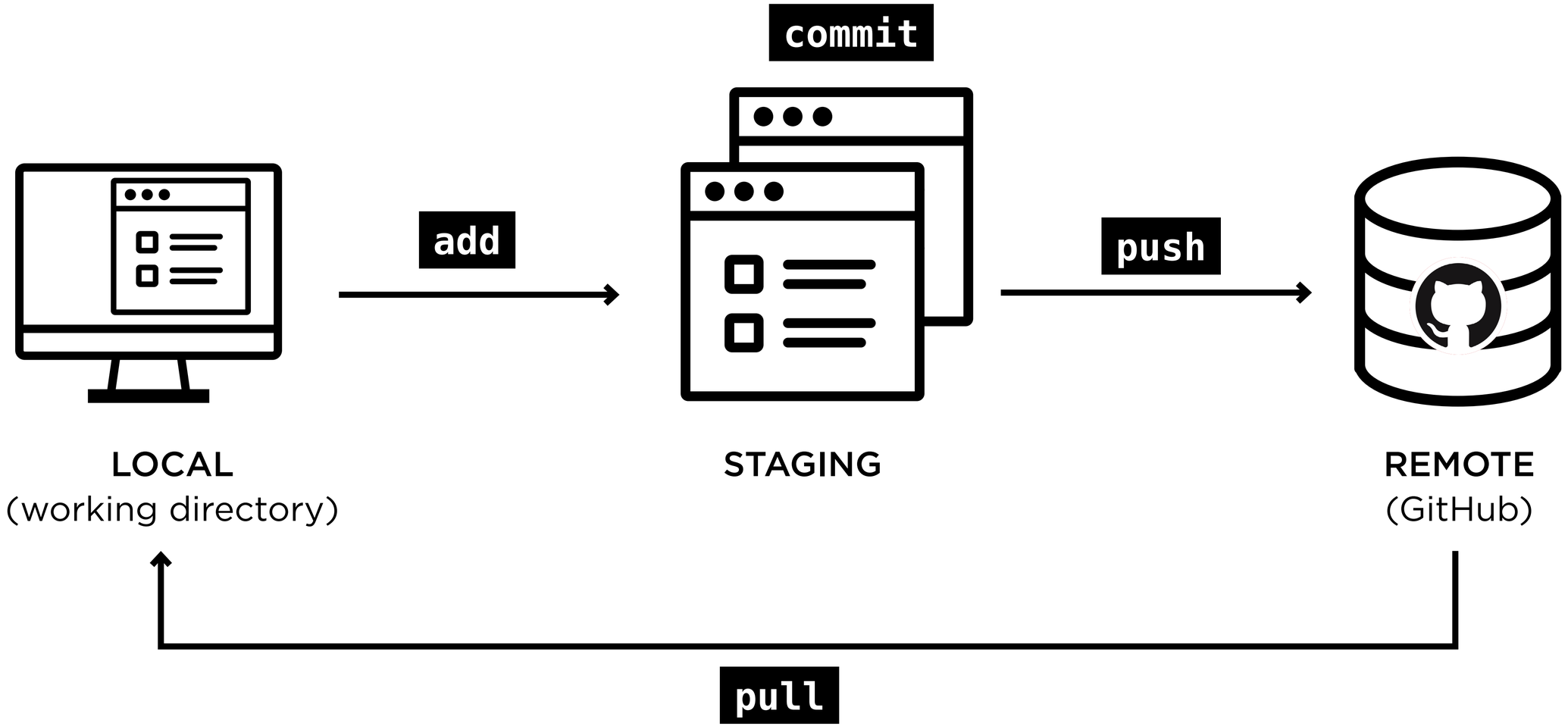
github.com

BRANCHES

- Branches allow you to develop features, fix bugs, or safely experiment with new ideas in a contained area of your repository.
- Each repository has one default branch, and can have multiple other branches.
- You always create a branch from an existing branch. You can then work on this new branch in isolation.
- You can merge a branch into another branch (or the default) using a pull request



HOW IT WORKS


commit
add
push
LOCAL
(working directory)
STAGING
REMOTE
(GitHub)
pull

REPOSITORY TERMINOLOGY

branch	a parallel version of your code that is contained within the repository, but does not affect the primary or main branch
clone	to download a full copy of a repository's data from GitHub.com, including all versions of every file and folder.
fork	A new repository that shares code and visibility settings with the original "upstream" repository

REPOSITORY TERMINOLOGY

merge	To take the changes from one branch and apply them to another.
clone	A request to merge changes from one branch into another.
fork	A repository stored on GitHub, not on your computer
upstream	The branch on an original repository that has been forked or cloned. The corresponding branch on the cloned or forked branch is called the "downstream."

REMEMBER TERMINAL?

1. Check to see which version of Git is on your computer

```
$ _

$ git --version
```

2. The computer will return the version of Git installed. It it returns something like "Git is not recognized" or "Command not found", Git is probably not installed or installed incorrectly.

```
$ git --version
git version 2.42.0
```

git-scm.com

GIT COMMANDS

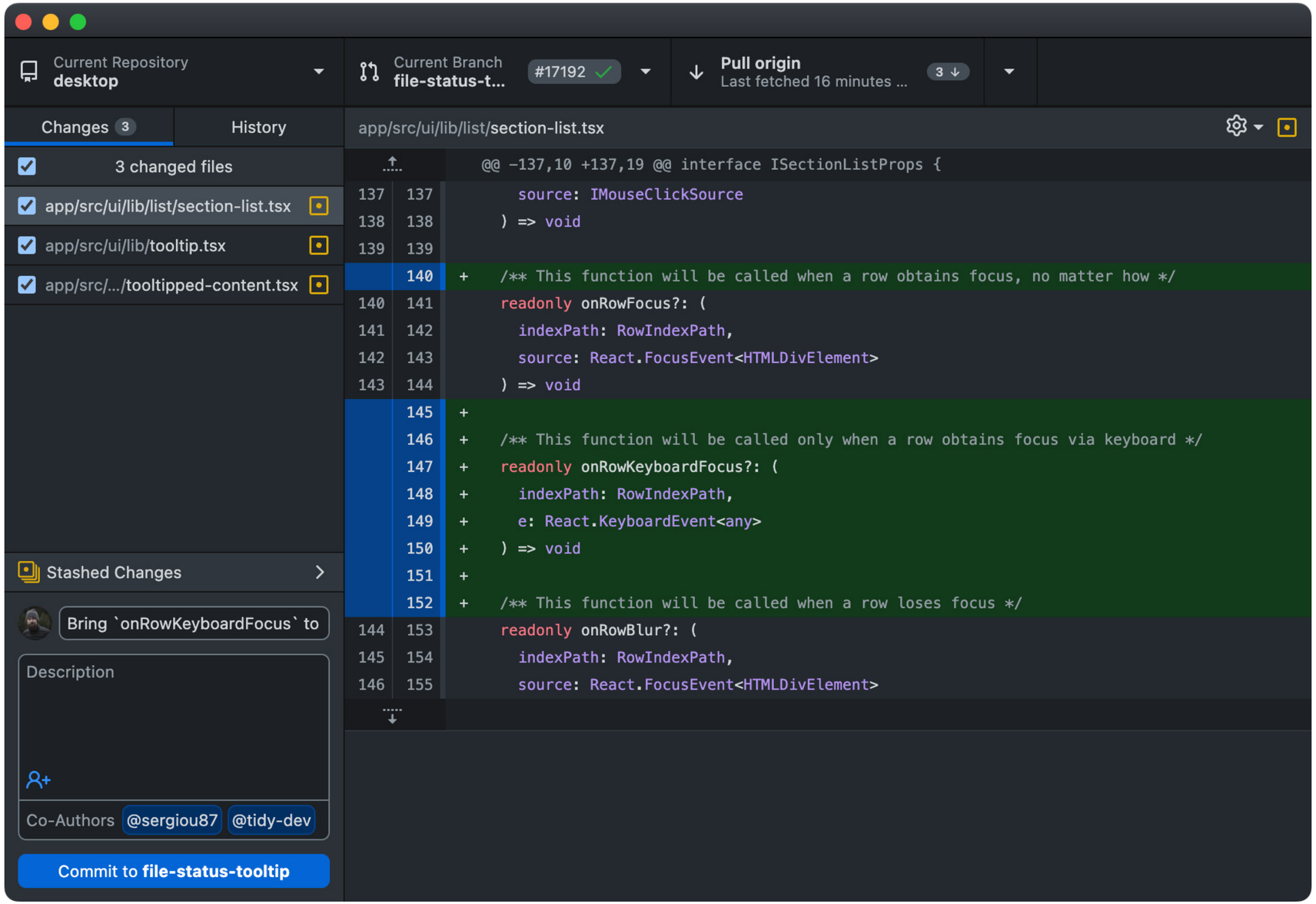
`git init`	initializes a repository
`git branch <branch-name>`	creates a new branch
`git checkout <branch-name>`	checks out a branch from repository into the working directory
`git status`	check which files have been changed

GIT COMMANDS

`git add <file-or-folder>`	adds a changed file/folder to staging
`git add ..`	adds all local changes to staging
`git commit -m "message"`	commits a change set from working directory into repository with message
`git commit -a -m "message"`	add all local changes and commit

GIT COMMANDS

`git push <remote> <name-of-branch>`	push all local changes to the remote repository
`git push origin main`	pushes main branch of the origin remote repository
`git pull <REMOTE> <name-of-branch>`	pull all changes from a remote repository
`git pull origin master`	pulls master branch of the origin remote repository



GITHUB DESKTOP