Version Control System

- Git is a type of a **Version Control System** (VCS)
- VSC is a tool that helps developers manage changes to their code over time
- Alows multiple versions of a project to exist simultaneously → you can recall specific iterations later on or as needed. (It basically creates a kind of snapshot database or your code.)
- VCS makes any collaboration easier, since it maintains a record of all modifications → fundamental tool for software development

How does the darn thing work?

Git objects:
- **commits**
- **blobs**
- **trees**

Important commands:
- **clone**
- **commit**
- **branch**
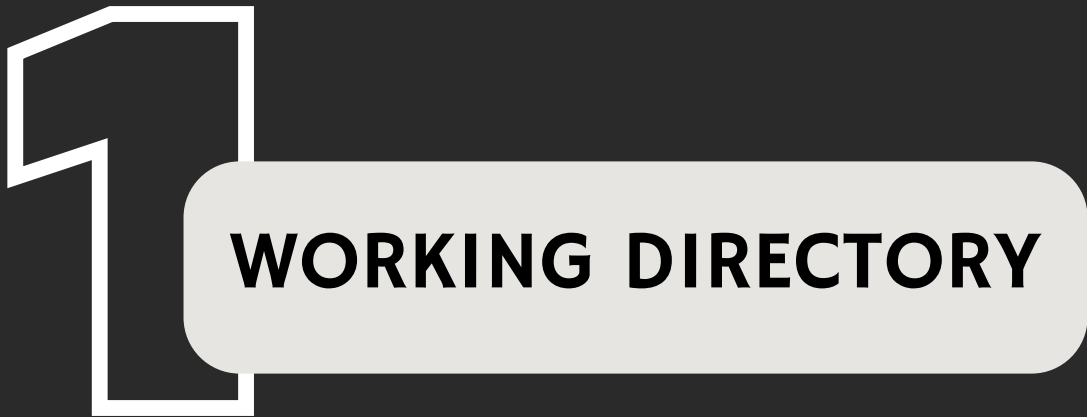- **merge**
- **fork**
- **push**

LOCAL GIT WORKFLOW

1 **WORKING DIRECTORY**

The folder where you're working on a project

2 **STAGE**
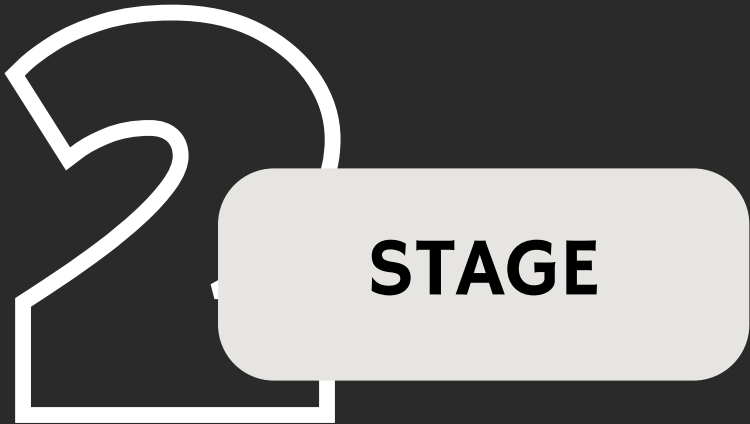
My changes are ready and I can more to the next step

3 **LOCAL REPOSITORY**

Temporary area where files sit between working directory and repository save
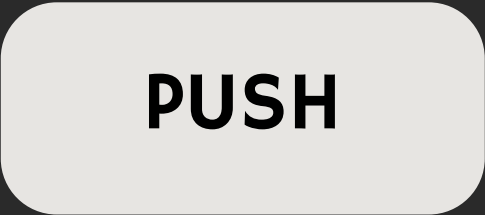
COMMIT

PUSH

Code is pushed to **remote repository**

GIT WORKFLOW

LOCAL			REMOTE
WORKING DIRECTORY	STAGING AREA	LOCAL REPOSITORY	CENTRAL REPOSITORY

1 GIT CLONE

2 GIT CHECKOUT

GIT ADD 3

GIT COMMIT 4

GIT PUSH 5

Repository
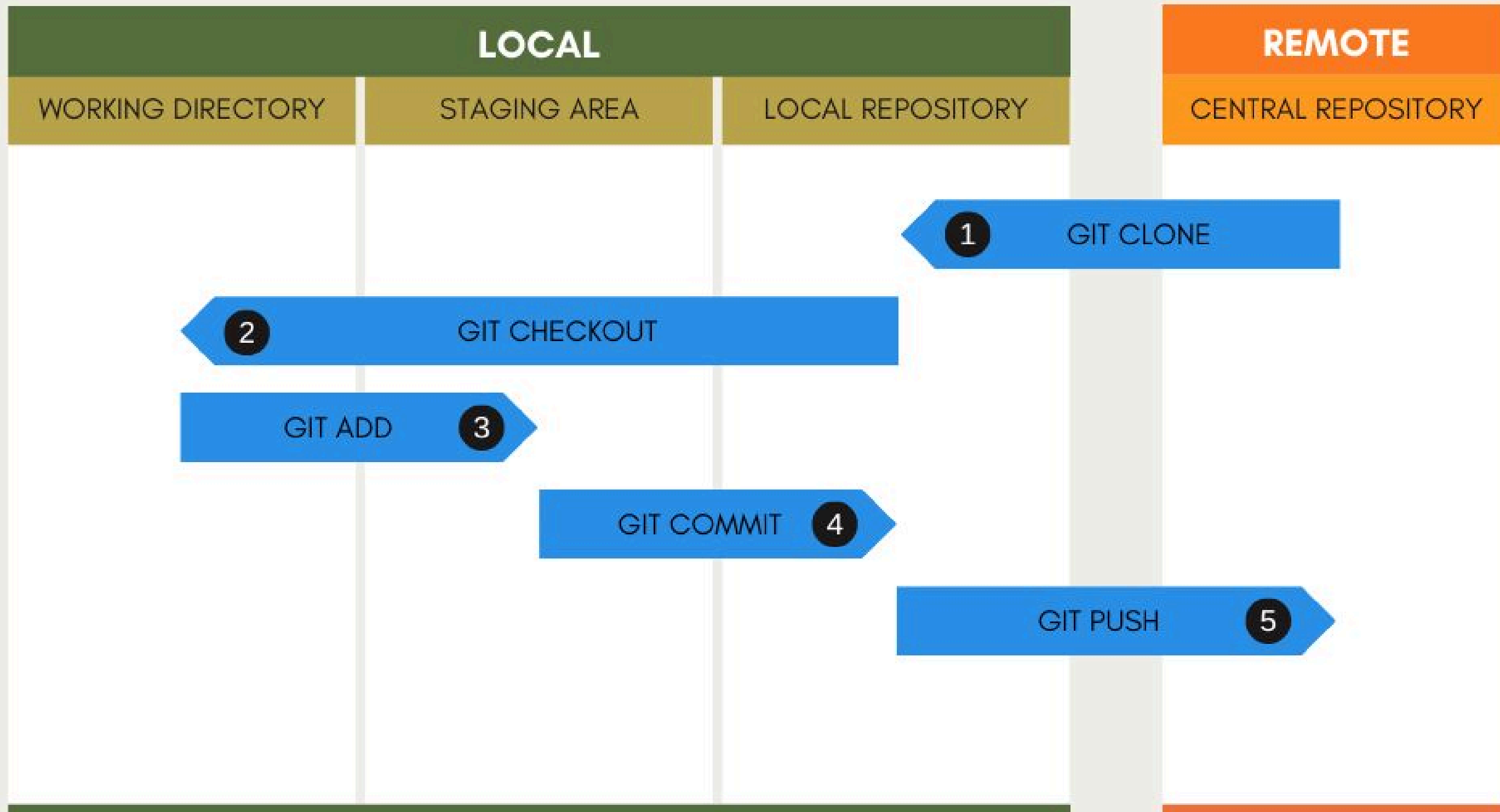- a folder where Git tracks your project history

    `git innit`

Clone
- Make a copy of a remote repository on your computer

    `git clone <url>`

Commit
- saves a snapshot of changes

    `git commit`   `git commit -m 'message'`

Add
- Adds a file/s to the staging area
- Once there, they can be committed to the repository

    `git add <filename>`

Stage
- tells Git which changes you want to save next

Branch • Work on different versions or features at the same time

`git switch -c <name>`   `git checkout -b <name>`

Merge • Combine changes from different branches

`git switch main` → `git merge <branch name>`

Pull • Get the latest changes from a remote repository

`git pull`

Push • Send your changes to a remote repository

`git push`

Working with Git

- Initialize Git on a folder, making it a **Repository**
- Git now creates a hidden folder to keep track of changes in that folder
- When a file is changed, added or deleted, it is considered **modified**
- You select the modified files you want to Stage
- The **Staged** files are **Committed**, which prompts Git to store a **permanent** snapshot of the files
- Git allows you to see the full history of every commit.
- You can revert back to any previous commit.

Git Branching

- branching and merging explained on official Git website
- try it yourself

```
$ git init project1                          ← creates a directory project1
$ cd project1                                ← move into directory project1


create file1.txt                             ← create some files


$ git add file1.txt                          ← add to version control
$ git commit -m"My first commit"             ← commit your work and add a
                                               message
```

Installing Git

Linux

`$ sudo dnf install git-all`   or   `$ sudo apt install git-all`

MacOS

`$ git --version`

Windows

Download from https://git-scm.com/download/win

(note: this is a separate project called Git for Windows, that is different from the Git itself)

What is GitHub

- Developer platform using Git
- Often hosts open-source projects
- At this time, still the most popular platform for code hosting and collab
- Currently owned by Microsoft (boooo)

- All personal accounts can own an **unlimited number** of public and private repositories, with an unlimited number of collaborators on those repositories.
- If you use GitHub Free, private repositories owned by your personal account have a limited feature set.

pfp

README
description

general
info &
contact

pinned
projects

achievements

contributions

MaggieAppleton / README.md

Designer-anthropologist-developer growing wild code and gardening public knowledge.

I write public notes and create illustrated essays on my digital garden

Follow

Design engineer exploring how LLMs can help us think different kinds of thoughts. Enthusiastic about metaphors, EUP, and marmite. Building at **@githubnext**

👥 2k followers · 17 following

🏢 @githubnext
📍 London
🕐 23:04 · 1h behind

MaggieAppleton Follow

✕ @mappletons

Achievements

Block or Report

Pinned

📖 **maggieappleton.com-V3** Public
My digital garden built with Astro and MDX. Featuring loosely opinionated notes, half-formed ideas, and content that is always growing.
🔴 Astro ⭐ 134 ⑂ 14

📖 **digital-gardeners** Public
Resources, links, projects, and ideas for gardeners tending their digital notes on the public interwebs
🟡 JavaScript ⭐ 4.6k ⑂ 197

📖 **react-metaphors-slides** Public
Slides from my talk "Drawing the Invisible: React Explained in Five Visual Metaphors" at Women of React Conf 2020
⭐ 361 ⑂ 22

📖 **maggieappleton.com-V2** Public
⚠️ Now retired. My previous digital garden built with Next.js, React, and MDX. Featuring loosely opinionated notes, half-formed ideas, and content that is always growing.
🟡 MDX ⭐ 348 ⑂ 29

📖 **lodestone** Public
A research project exploring how language models can help us think more, not less.
🔵 TypeScript ⭐ 91 ⑂ 7

📖 **arbour** Public
A growing place
🔴 Astro ⭐ 14 ⑂ 2

📖 **Overview** 📦 Repositories 30 ▦ Projects 📦 Packages ⭐ Stars 76

821 contributions in the last year

	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb

Learn how we count contributions
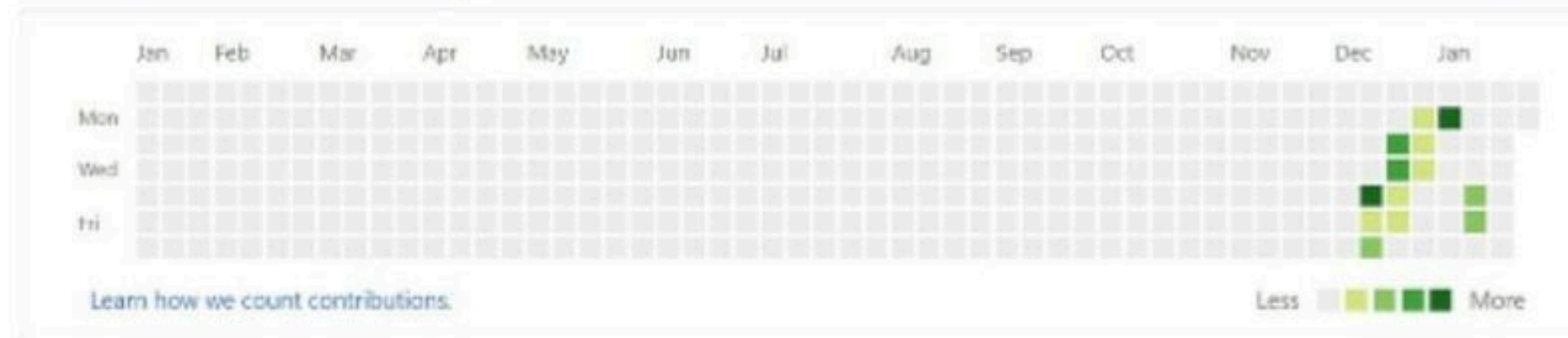
Less ⬜🟩🟩🟩 More

Contribution activity

February 2026

🔄 Created 45 commits in 3 repositories

MaggieAppleton/ektachrome 21 commits

MaggieAppleton/kodachrome 20 commits

MaggieAppleton/explainers 4 commits

2026
2025
2024
2023
2022

You

136 contributions in the last year

Contribution settings ▾

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan
Mon													
Wed													
Fri													

Learn how we count contributions.

Less ▢▢▢▢▢ More

Vs The guy she told you not to be worried about

Project description and README

- Used to communicate descriptive information about the content of a directory in which the file is located (e.g. it's purpose, relevant links & contacts etc.)
- Typically in plain text or **Markdown**

Common type of info includes:
- Configuration, Installation and Operating instructions
- List of files in the directory (file manifest)
- Contact info for distrubutor/author
- List of known bugs and issues
- Troubleshooting instructions
- Copyright and licensing
- Credits and acknowledgements

Starting a project

GitHub project best practices

Website hosting

- Done through GitHub Pages
- tutorial here or here

- User repositories are always named `<username>.github.io`

- You can then create your website using **HTML** or **Markdown**
- There are also theme templates like Jekyll

Homework

1. Download Git
2. Create a Github account,
3. Go through their introductory course,
4. Set up your profile,
5. Create a repo for GitHub Pages

   + bonus
     • start looking into HTML and CSS

because next time...

LVL UP!

XP: + 100

Skills: + Git
        + Github

Next LVL:
HTML, CSS, UX and Resume

Git

- **https://git-scm.com/cheat-sheet**
- **https://www.w3schools.com/git/**

https://git-scm.com/book/en/v2

- https://dev.to/__whyd_rf/a-deep-dive-into-git-internals-blobs-trees-and-commits-1doc
- https://learn.microsoft.com/en-us/training/modules/intro-to-git/3-basic-git-commands?ns-enrollment-type=learningpath&ns-enrollment-id=learn.github-foundations
- https://docs.ionos.space/blog/git-intro/
- https://missing.csail.mit.edu/2020/version-control/
- https://www.datacamp.com/blog/all-about-git
- https://www.atlassian.com/git/tutorials/what-is-version-control

Videos
- https://www.youtube.com/watch?v=ecK3EnyGD8o
- https://www.youtube.com/watch?v=mAFoROnOfHs
- https://www.youtube.com/watch?v=2ReR1YJrNOM
- https://www.youtube.com/watch?v=hwP7WQkmECE

GitHub

- https://docs.github.com/en/get-started/learning-about-github/types-of-github-accounts
- https://www.w3schools.com/git/git_remote_getstarted.asp?remote=github
-

Github Pages Resume
- https://developer.mozilla.org/en-US/docs/Learn_web_development/Howto/Tools_and_setup/Using_GitHub_pages
- https://www.geeksforgeeks.org/git/how-to-host-a-website-on-github-for-free/
- https://docs.github.com/en/pages/getting-started-with-github-pages/configuring-a-publishing-source-for-your-github-pages-site
- https://bartoszgorka.com/your-github-professional-card
- https://www.youtube.com/watch?v=R346BRBU0aI
- https://github.com/topics/resume-website
- https://jekyllthemes.io/free

HTML, CSS

- https://www.w3schools.com/html/default.asp
- https://www.w3schools.com/css/default.asp
- https://developer.mozilla.org/en-US/
- https://developer.mozilla.org/en-US/docs/Web/HTML/Reference/Elements