Git basics

POWERING
POTENTIAL
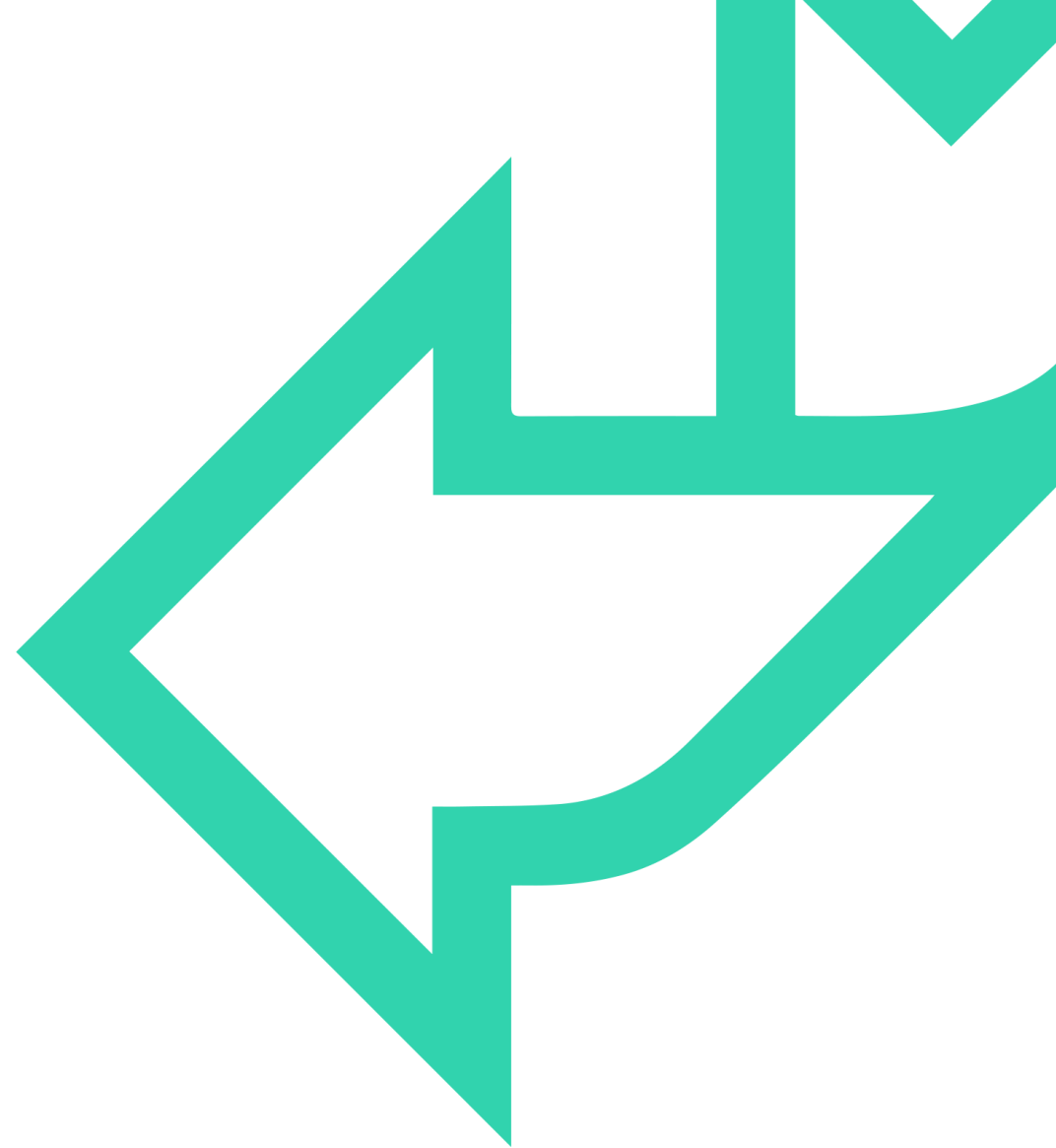
GIT BASICS

Git (Global Information Tracker) is an open source Source Control Tool developed by Linus Torvald while he was creating Linux due to the limitations of other source control systems
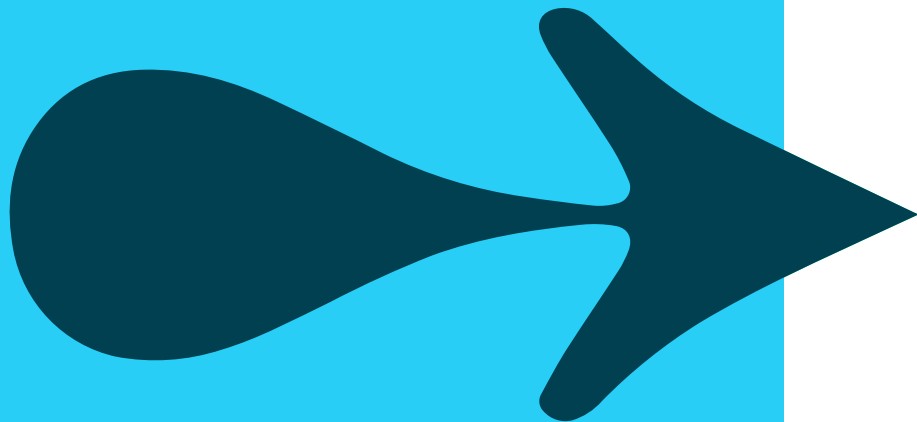
GitHub, GitLab, CodeCommit, BitBucket are all online repositories for Git Based projects. All of these websites and tools use Git as their engine and all do very similar things

You don't choose to use Git or GitHub, all of these tools use Git so you always use Git
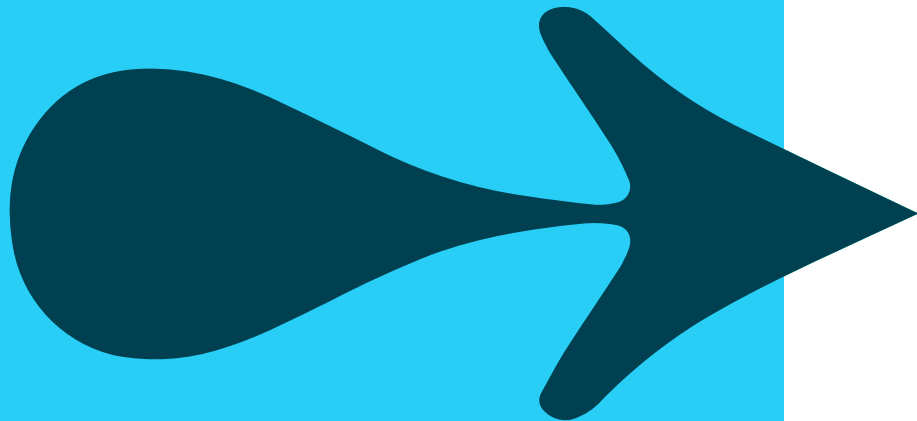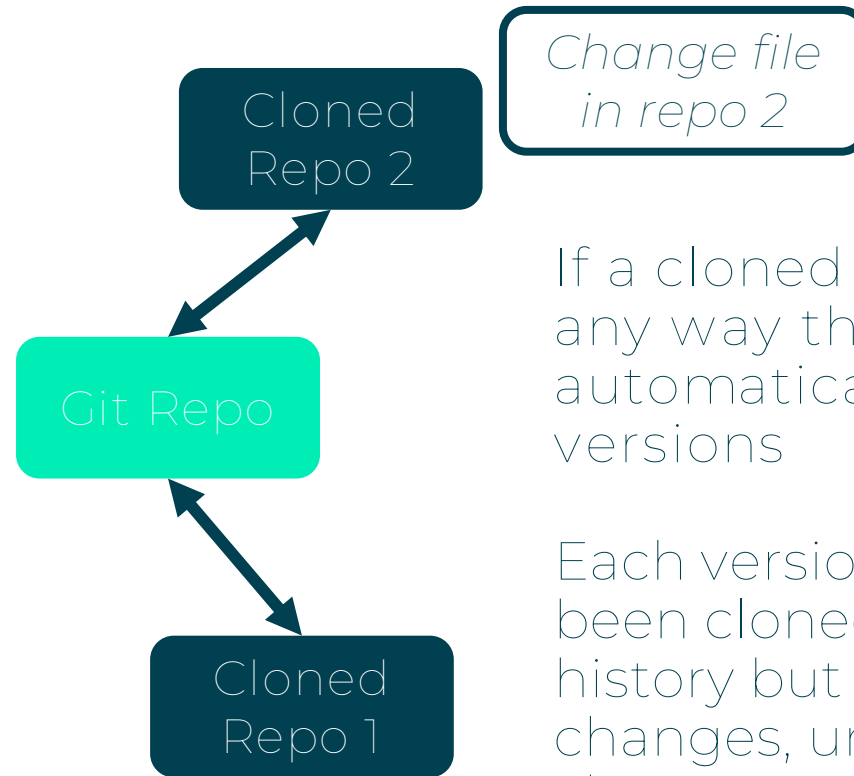
DECENTRALISED

Gits main benefit over other source control systems is it is Decentralised, meaning there can be multiple versions of a single repo existing at any one time

Cloned Repo 2

Change file in repo 2

Git Repo

If a cloned repo is modified in any way the changes aren't automatically made in any other versions

Cloned Repo 1

Each version of the repo that has been cloned contains all past history but isn't affected by future changes, unless you pull the changes

Git Commits

Git tracks and keeps a record of modifications through commits

A commit is a snapshot of the state of the project with current files and their contents recorded

Whenever a change is detected (Adding file, removing, changing file, moving file) the changes are saved to a new commit showing the current state of the project

Commits build on top of each other showing the development of a project, the latest commit is known as the head of a project and is the latest recorded state

Commit 4 is the HEAD and is the latest state

Commit 4 – Add JavaScript

Commit 3 – Add images

Commit 2 – Change index.html

Commit 1 – Create index.html

Git Staging

Git Commits only contain files we want to track, in order to tell Git to track the changes to files and store them in a Commit we must stage them

The Staging Area is a temp storage space for files until they are committed, like passengers waiting at a train station

Once a commit is made and the changes are tracked the staging area empties for the next commit to be made

A series of commits can be pushed to the original repo (GitHub) for the changes to be reflected there

Computer

File1.js   index.html

Staging Area

index.html

Commits

Commit 1 –Add HTML

GitHub

Original Repo

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