What is Github?

Have you ever…

- Deleted a file accidently?
- Wished you had a backup of the program or document that you are working on?
- Wished that your project partner can also access your files without you sending a copy with email, text or photo?
- Wished that you didn’t overwrite your partners hard work?
- Thought that there must be a better way to work on team projects without having to meet after school or during the weekend?

A Solution: GitHub

- GitHub is a website and cloud-based service that helps developers store and manage their code or projects, as well as track and control changes to them.

I don’t Git it. What is GitHub?

- It’s a collaborative tool
- A better way of working together on joint projects
- What is GitHub Video

Git Vocabulary

- Command Line:
- Repository: A directory or storage space where your projects live.
- Version Control: A snapshot of a point in time of your project
- Commit: Takes a snapshot of your project when you commit. “Saving” the project
- Branch: “Branching off” makes a copy of the full version of your team’s project so that you can work on it independently. When you are ready, you can “merge” that branch back with the “master”

How To Get Started With GitHub

To get started with GitHub

- Sign up for a free GitHub account

- Follow the GitHub Hello World guide to understand the most popular actions you'll likely want to take

GitHub - Remote, Cloud based Git

- A *remote* is a Git repository that lives *outside* your Git project folder. Remotes can live on the web, on a shared network or even in a separate folder on your local computer.

So what's in it for me?

- A great way to collaborate and share information
- Add your GitHub link to your resume

.

How to include a GitHub project on a resume

- Have one project to show
- Include a README
  - Describe what the application does and tell the reader how to install and execute it
- Make your code clean and easy to read

Backup

Git init

- Init = initialize
- Sets up all the tools Git needs to begin tracking changes made in the project

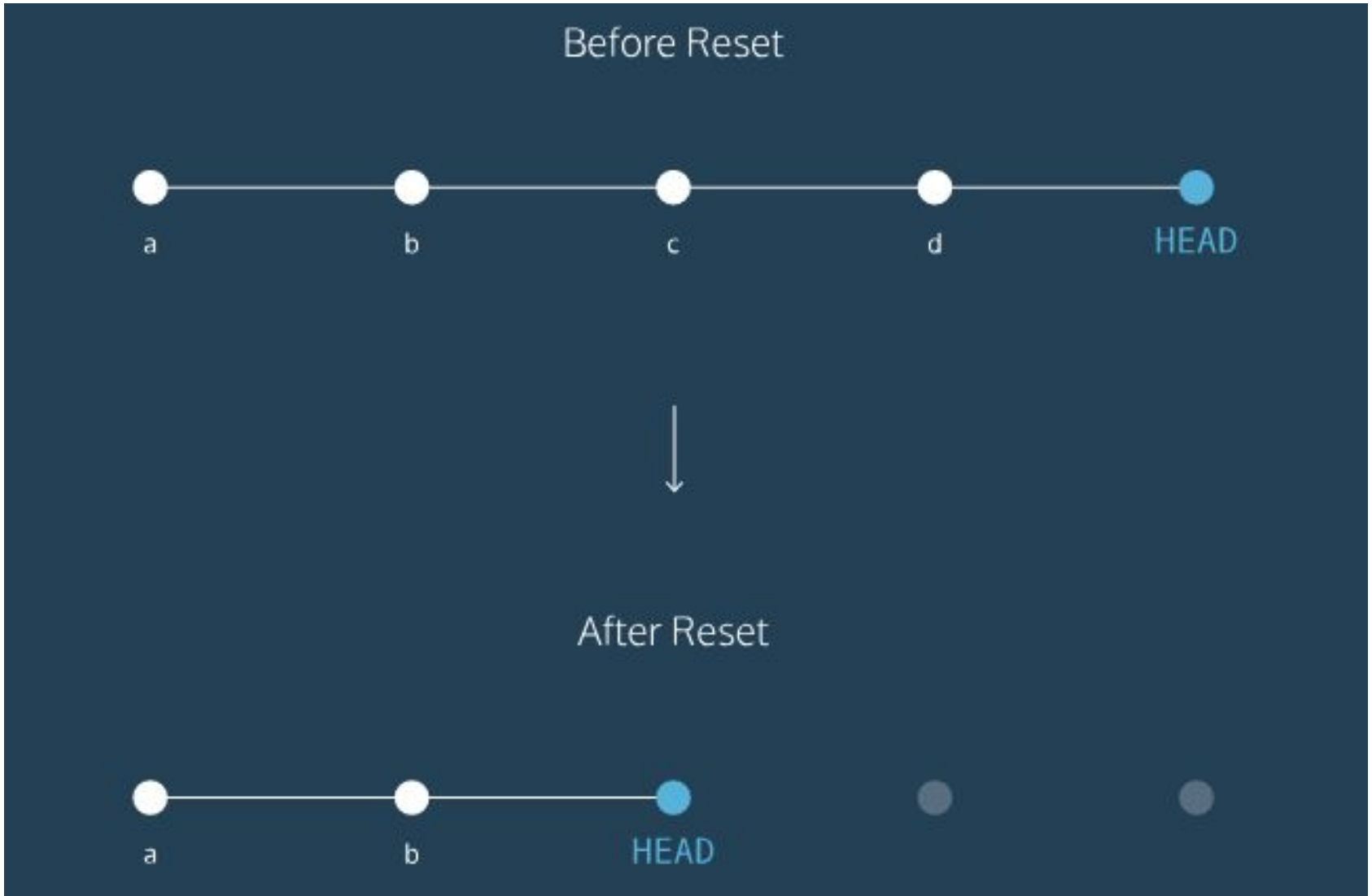
Git Workflow

Basic Commands

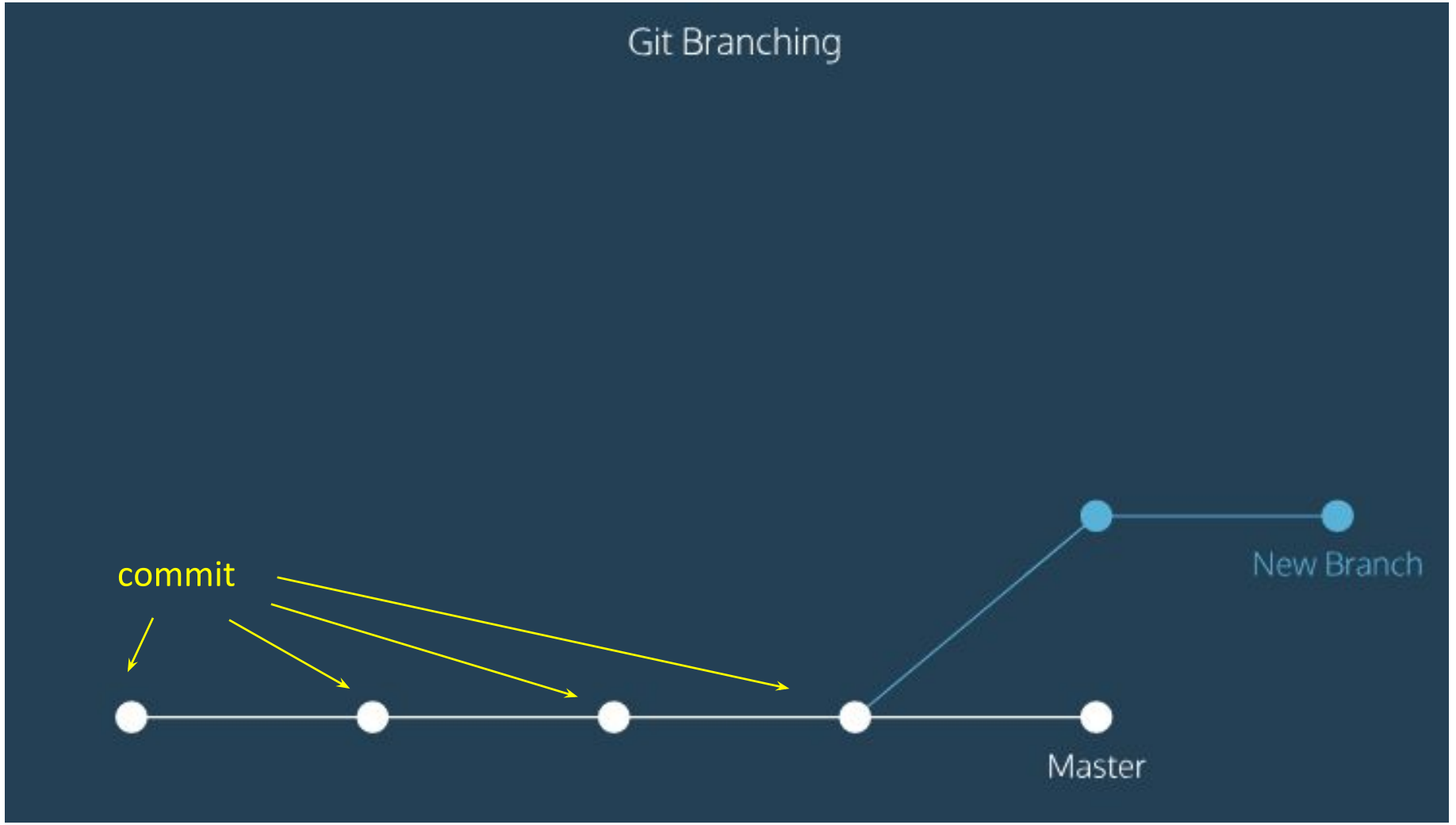
- git status
  - Shows the contents of the working directory and the staging area
- git add filename
  - Adds the files form the working directory to the staging area
- git diff
  - Shows the difference between the working directory and the staging area.
- git commit
  - Permanently stores changes from the staging areas into the repository
  - “-m” is an argument to add a note as to what has changed
- git log
  - Show a list of all previous commits

- git show HEAD
  - Displays eveything the git log command displays for the HEAD commit, plus all the file changes that were committed
- git checkout HEAD filename
  - Will restore the file in your working directory
- git add filename1 filename2
- git reset HEAD filename
  - Resets the file in the staging area
- git reset SHA
  - Resets to a previous commit in your commit history

git reset review



git branch



git branching & merging commands

- git branch: Lists all a Git project's branches.
- git branch branch_name: Creates a new branch.
- git checkout branch_name: Used to switch from one branch to another.
- git merge branch_name: Used to join file changes from one branch to another.
- git branch -d branch_name: Deletes the branch specified.

git Remote Commands

- *Git Collaborative Workflow* - steps that enable smooth project development when multiple collaborators are working on the same Git project.
- git clone: Creates a local copy of a remote.
- git remote -v: Lists a Git project's remotes.
- git fetch: Fetches work from the remote into the local copy.
- git merge origin/master: Merges origin/master into your local branch.
- git push origin <branch_name>: Pushes a local branch to the origin remote