

# CLI Git Workshop

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# A few considerations...

- This is a beginner-level workshop
- No prior experience required
- There's something for every level
- Follow along to the practical demo
- Ask questions
- Have fun! 😊

# Outline

- Presentation
  - What is Git
  - Why Git
  - How to Git
    - Basic CLI usage
    - Useful terminology
    - Git Terminology
  - Git Workflow
- Workshop
  - Setup
  - Basic Git usage
  - Github Page setup

# What is Git

- Version Control System (VCS)
- Multiple different versions of the same project
- Used \*everywhere\* in the industry



# Why Git?

- Keep track of changes
  - Doesn't apply only to code!
- Freedom to try different approaches and make mistakes
- Contribute to open source projects (good for resume)

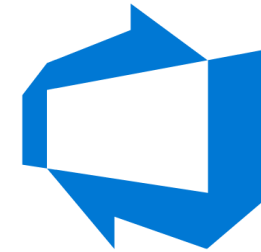
# How to Git

# Git vs Github

- Git
  - VCS tool to manage your code
  - Works locally
- Github
  - Cloud-based host for Git repositories



There are others!



Azure DevOps

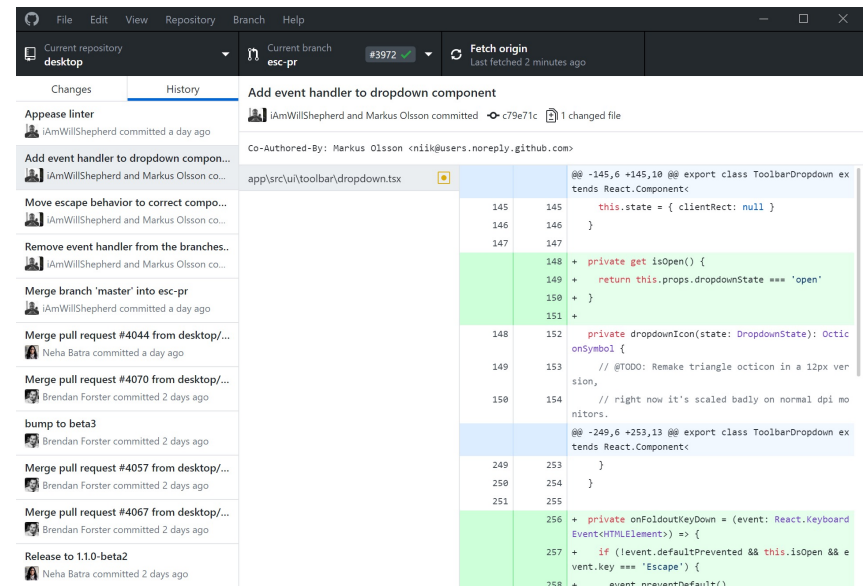


GitLab



# Desktop vs CLI

- Github has a desktop client
  - It's really easy to use!
- Git concepts are the same across all platforms
- CLI is less user-friendly
  - ...sometimes it's your only option



The screenshot shows the GitHub Desktop application. The left sidebar displays a list of commits and pull requests. The main area shows a diff for the commit 'Add event handler to dropdown component' by iAmWillShepherd and Markus Olsson. The diff highlights changes in the file 'app/src/ui/toolbar/dropdown.tsx'. The changes include adding a new method 'get isOpen()' and a new class 'ToolbarDropdown'.

```
@@ -145,6 +145,10 @@ export class ToolbarDropdown extends React.Component {
  this.state = { clientRect: null }
}
+
+ private get isOpen() {
+   return this.props.dropdownState === 'open'
+ }
+
+ private dropdownIcon(state: DropdownState): OcticonSymbol {
+   // @TODO: Remake triangle octicon in a 12px version,
+   // right now it's scaled badly on normal dpi monitors.
+   @@ -249,6 +253,13 @@ export class ToolbarDropdown extends React.Component {
+ }
+
+ + private onFoldoutKeyDown = (event: React.KeyboardEvent<HTMLElement>) => {
+   +   if (event.defaultPrevented && this.isOpen && event.key === 'Escape') {
+     event.preventDefault()
+   }
```

# CLI Navigation Cheat Sheet

## Windows

- Help – shows help
- [tab] -- autocomplete
- Dir – lists current directory
- Cd – change directory
- Mkdir – make directory
- Rmdir – remove directory
- Cls – clear screen
- [ctrl] + [c] – interrupt process

## Mac/Linux

- Help – shows help
- [tab] -- autocomplete
- ls – lists current directory
- Cd – change directory
- Mkdir – make directory
- Rm (-r) – remove directory
- clear – clear screen
- [ctrl] + [c] – interrupt process

# Useful Terminology

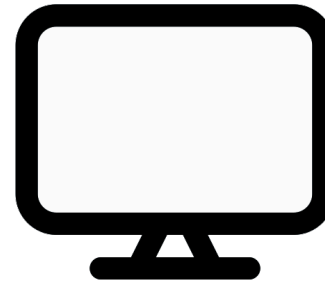
## **Remote**

- Needs network connection



## **Local**

- Works offline



# Git Terminology

- Repository
  - Contains project files and stores file version history
- Branch
  - A version timeline within a repository
- Commit
  - “Save” the changes done to the project to the working version
- Clone
  - A local copy of a remote repository
- Fork
  - Personal copy of another user’s repository
  - Changes made to your fork don’t affect the other user’s directly

# Git Terminology (cont.)

- Fetch
  - Get changes from a remote repository without merging them
- Merge
  - Get changes from one branch and applies it into another
  - Either in the same repository or on another fork (aka Pull Request)
- Pull
  - Fetch and merge changes in one command
- Push
  - Send committed changes to a remote repository
- Pull Request (PR)
  - proposed changes to a repository submitted by a user and accepted or rejected by a repository's collaborators

# General Workflow

- Clone/Fork/Create repository
- Create working branch
- Work and make changes
- Commit changes (frequently)
- Push local changes
- Merge changes into main branch

# Workshop

# References

- Git documentation - <https://git-scm.com/>
- Github documentation - <https://docs.github.com/en>
- Git cheat sheet - <https://training.github.com/downloads/github-git-cheat-sheet.pdf>
- Github Pages documentation- <https://docs.github.com/en/pages>
- Github Student - <https://education.github.com/students>