Cheat Sheets

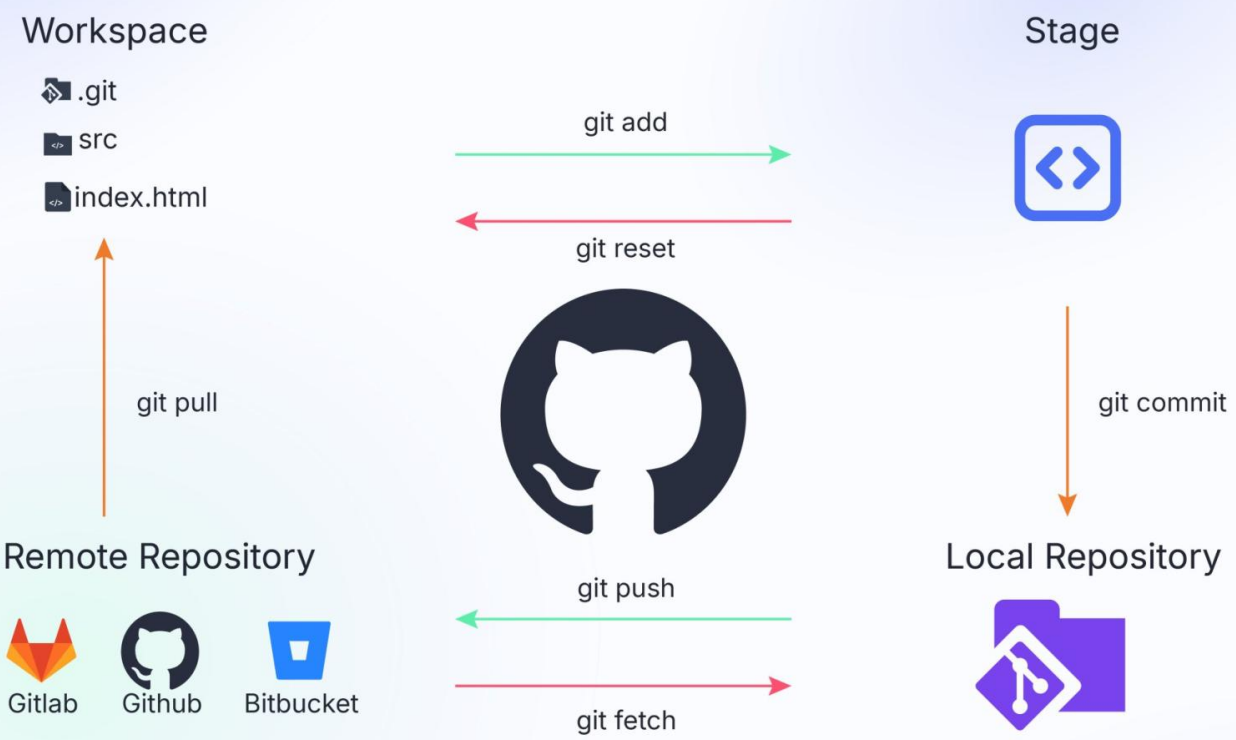
How Git Work

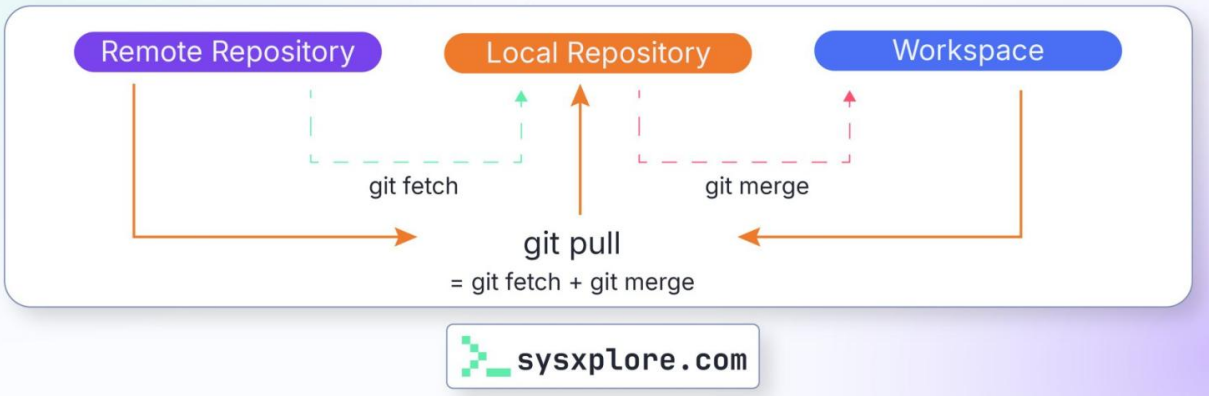
Git ?????Modified/Untracked/Staged/Commited

1. **Modified/Untracked**: ?????????? `git add`
2. **Staged**: ???? `git add` ????? `git commit`
3. **Commited**: ???? `git commit`

> ?? 2 ? 3 ?????? Git ???????

HOW GIT WORK





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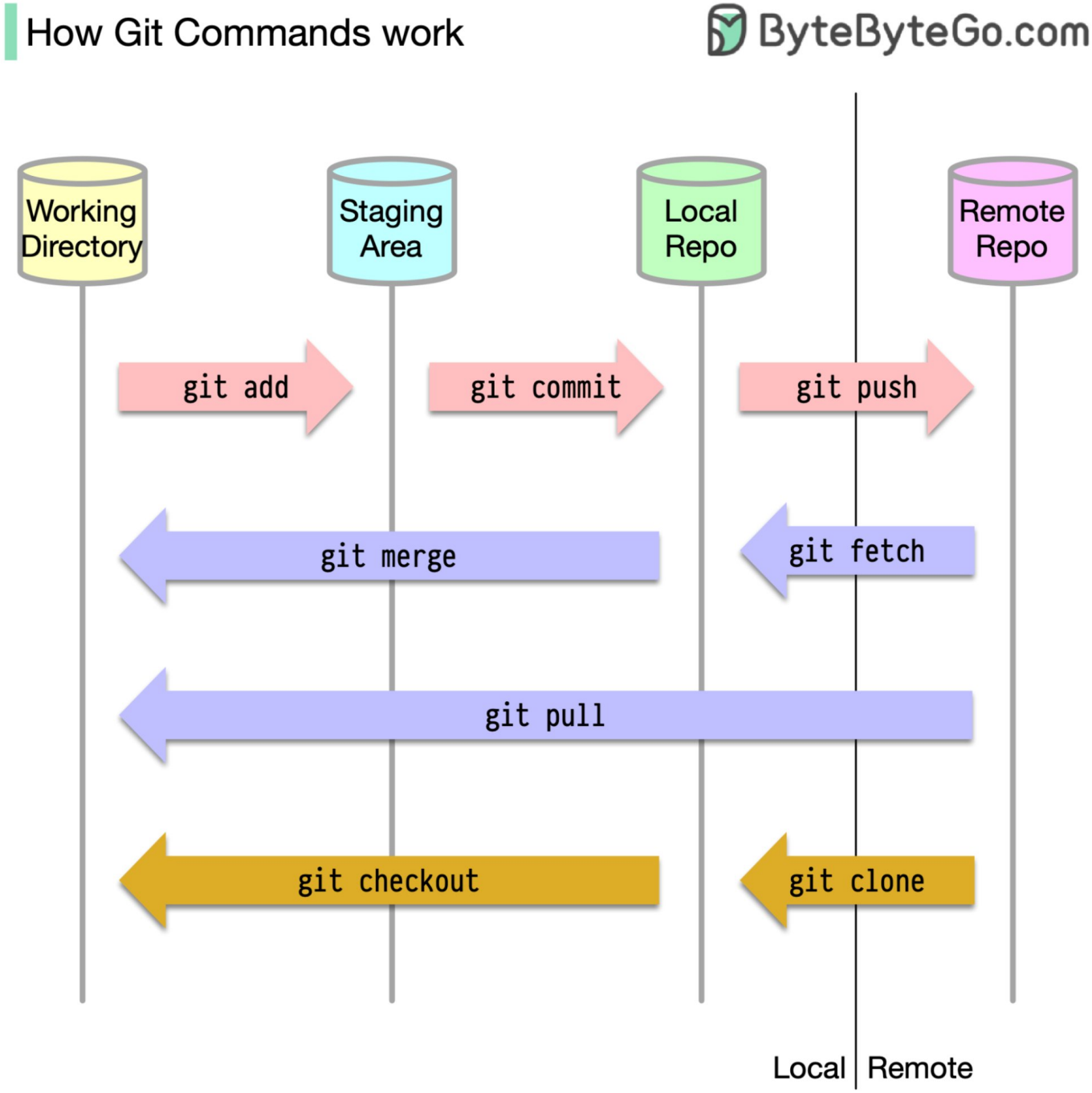


Git Commands

GIT Cheatsheet

Essential Commands for Developers

📁 Repository Setup

`git init`	Initialize repo
`git clone <url>`	Clone repository
`git config --global user.name "Name"`	Set username
`git config --global user.email "email"`	Set email

⚡ Basic Commands

`git status`	Check status
`git add <file>`	Stage file
`git add .`	Stage all
`git commit -m "msg"`	Commit changes
`git commit -am "msg"`	Add & commit
`git log`	View history
`git diff`	Show changes

🌿 Branching

`git branch`	List branches
`git branch -a`	List all branches
`git branch <name>`	Create branch
`git checkout <branch>`	Switch branch
`git checkout -b <name>`	Create & switch
`git merge <branch>`	Merge branch
`git branch -d <name>`	Delete branch

🌐 Remote Operations

`git remote`	List remotes
`git remote -v`	Show remote URLs
`git push <remote> <branch>`	Push to remote
`git pull <remote> <branch>`	Pull from remote
`git fetch`	Fetch changes

↩️ Undo Changes

`git reset <file>`	Unstage file
`git reset --hard`	Reset to HEAD
`git checkout <file>`	Discard changes
`git revert <commit>`	Revert commit

🚀 Advanced

`git stash`	Stash changes
`git stash pop`	Apply stash
`git rebase <branch>`	Rebase branch
`git tag <name>`	Create tag
`git log --oneline`	Compact log

Git Commands Cheat Sheet

ByteByteGo

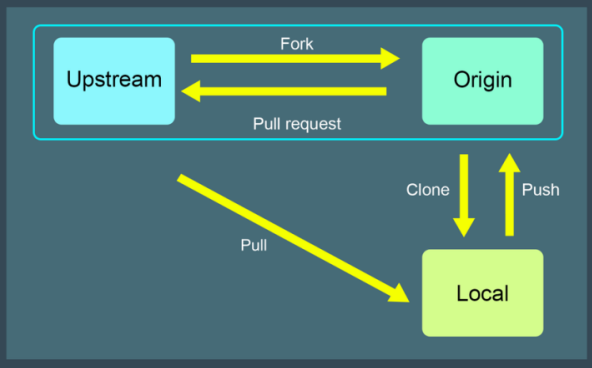
Basics

git help [commands]
Use this when you are stuck

Terminology

main	default primary branch
origin	default upstream branch
HEAD	current branch
HEAD^	parent of HEAD
HEAD~3	great grandparent of HEAD

Start to Work



git init
create a new local Git repo

git clone
copy a repo

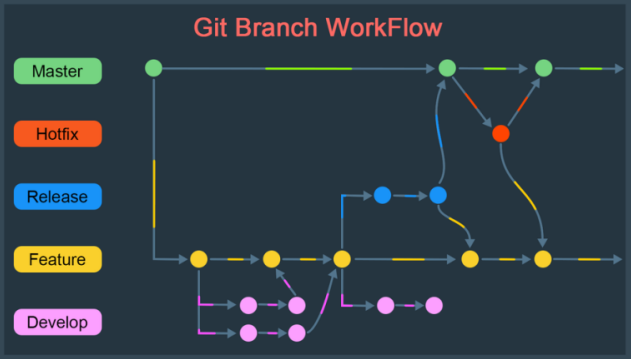
git pull
fetch remote version and update local branch

git add [file]
stage changes to tracked and untracked files

git commit
commit previously staged chages

git push origin HEAD
push local changes to the origin

Branches



git branch --all
list all the local and remote branches

git checkout hotfix
change to an existing branch called hotfix

git checkout main
git merge hotfix
merge branch changes from hotfix to main

git log --graph --oneline
show a pretty branch history

Conflicts

git diff
see specific local changes

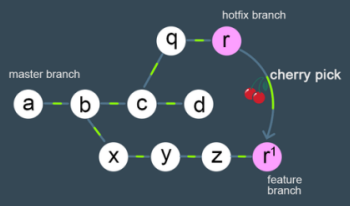
git diff --ours
compare the working tree with our branch

git diff --theirs
compare the working tree with their branch

Useful Tools

git archive
create release tarball

git cherry-pick [commit-id]
enable arbitrary Git commits to be picked by reference



Git Fundamentals

GIT FUNDAMENTALS

Git Fundamentals

Version Control System
Track changes in code with history, enabling collaboration and reverting to previous states

Distributed Architecture
Works offline with full local repository; no constant network connection needed

Powerful Branching
Create isolated environments for feature development, fixes, and experiments

Lightweight
Small footprint with high performance even for large projects

Open Source
Free and widely supported across platforms

Multiple Remote Support
Can connect to multiple remote repositories simultaneously

Basic Operations

```
git status                          # Check status of working directory
git add <file>                      # Add file to staging area
git add .                           # Add all changes to staging area
git commit -m "Commit message"      # Commit staged changes
git log                             # View commit history
git diff                # Show changes between working directory and staging
git diff --staged           # Show changes between staging and last commit
```

Core Git Concepts

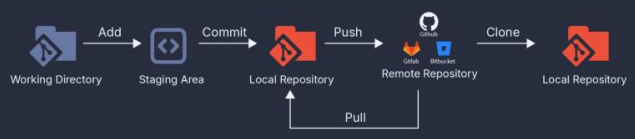
Repository States

- **Working Directory:** Where you edit files
- **Staging Area:** Prepared changes for commit
- **Local Repository:** Committed history on your machine
- **Remote Repository:** Shared server repository (GitHub, GitLab, BitBucket, etc.)

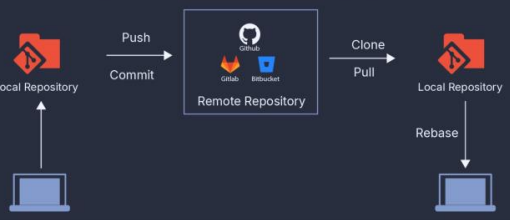
Branching & Merging

```
git branch                          # List branches
git branch <branch-name>            # Create new branch
git checkout <branch-name>          # Switch to branch
git checkout -b <branch-name>       # Create and switch to new branch
git merge <branch-name>             # Merge branch into current branch
git branch -d <branch-name>         # Delete branch locally
```

Basic Workflow



Git Remote Repositories



Essential Git Commands

```
git config --global user.name "Your Name"
git config --global user.email "your.email@example.com"
git init                            #Initialize new repository
git clone <repository-url>          #Clone existing repository
```

Remote Operations

```
git remote -v                       # List remote repositories
git remote add <name> <url>         # Add remote repository
git fetch <remote>                  # Download objects from remote
git pull <remote> <branch>          # Fetch and merge changes
git push <remote> <branch>          # Push commits to remote
git push -u <remote> <branch>       # Push and set upstream
```

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