# Linux & Git-GitHub Cheat Sheet

## Linux Commands

### File & Directory Management

* ls - List files and directories
* ls -al - List all files, including hidden ones, with details
* pwd - Print current working directory
* cd <directory> - Change directory
* mkdir <directory> - Create a new directory
* rmdir <directory> - Remove an empty directory
* rm -r <directory> - Remove a directory with its contents
* touch <file> - Create an empty file
* rm <file> - Remove a file
* cp <source> <destination> - Copy files or directories
* mv <source> <destination> - Move or rename files

### File Content & Permissions

* cat <file> - Display file content
* less <file> - View file content one page at a time
* nano <file> - Edit file using nano editor
* chmod <permissions> <file> - Change file permissions
* chown <user>:<group> <file> - Change file owner
* find <directory> -name <file> - Find a file in a directory
* grep '<pattern>' <file> - Search for a pattern in a file

### Process Management

* ps - Show running processes
* top - Display real-time system resource usage
* kill <PID> - Kill a process by ID
* killall <process> - Kill all processes with the given name
* htop - Interactive process viewer (if installed)

### Networking

* ifconfig / ip a - Display network configuration
* ping <host> - Check connectivity to a host
* curl <URL> - Fetch data from a URL
* wget <URL> - Download files from the internet
* netstat -tulnp - Show listening ports and services

### User Management

* whoami - Show current user
* who - Show logged-in users
* adduser <username> - Add a new user
* passwd <username> - Change user password
* usermod -aG <group> <user> - Add user to a group
* deluser <username> - Delete a user

### Disk & System Monitoring

* df -h - Show disk usage
* du -sh <directory> - Show size of a directory
* free -m - Display RAM usage
* uptime - Show system uptime
* uname -a - Display system information
* history - Show command history

## Git & GitHub Commands

### Git Basics

* git init - Initialize a new Git repository
* git clone <repo-url> - Clone an existing repository
* git status - Show changes in the working directory
* git add <file> - Stage a file for commit
* git add . - Stage all changes
* git commit -m "Commit message" - Commit changes with a message
* git push origin <branch> - Push commits to a remote branch
* git pull origin <branch> - Pull the latest changes from a remote branch
* git branch - List all branches
* git checkout <branch> - Switch to another branch
* git checkout -b <new-branch> - Create and switch to a new branch

### Git Reset & Revert

* git reset --hard <commit> - Reset to a specific commit (loses changes)
* git reset --soft <commit> - Reset to a commit but keep changes staged
* git revert <commit> - Create a new commit that undoes a previous commit

### Git Logs & History

* git log - Show commit history
* git log --oneline - Show brief commit history
* git diff - Show differences between commits and working directory

### Git Stash

* git stash - Temporarily save changes without committing
* git stash pop - Reapply the last stashed changes
* git stash list - Show all stashed changes

### GitHub Collaboration

* git remote add origin <repo-url> - Link local repo to GitHub
* git remote -v - Show remote repositories
* git push origin <branch> - Push changes to GitHub
* git pull origin <branch> - Pull changes from GitHub
* git fetch - Fetch changes from a remote repository
* git merge <branch> - Merge another branch into the current one
* git rebase <branch> - Reapply commits on top of another branch
* git tag <tagname> - Create a tag for a specific commit
* git push origin --tags - Push all tags to GitHub

This cheat sheet serves as a quick reference for Linux and Git-GitHub commands, making DevOps tasks smoother. Keep practicing, and happy coding! 🚀