



# GitHub Foundations *Cheat Sheets*

These cheat sheets are provided for non-commercial purpose for personal study.

Please do not redistribute or upload these cheat sheets elsewhere.

Good luck on your exam!

## Git Commands

### Repository Setup

- Initialize a new repository: `git init`
- Clone a repository: `git clone <repository_url>`

### Basic Operations

- Check the status: `git status`
- Add files to staging area: `git add <file_path>` or `git add .` for all files
- Commit changes: `git commit -m "commit message"`
- View commit history: `git log`
- View a concise commit history: `git log --oneline`
- View changes: `git diff`
- View changes in the staging area: `git diff --staged`
- Remove files from staging area: `git reset <file_path>`
- Discard local changes to a file: `git checkout -- <file_path>`

### Branching and Merging

- Create a new branch: `git branch <branch_name>`
- Switch to a branch: `git checkout <branch_name>`
- Create and switch to a new branch: `git checkout -b <branch_name>`
- Merge a branch: `git merge <branch_name>`
- Delete a branch: `git branch -d <branch_name>`
- List all branches: `git branch`
- Rebase a branch: `git rebase <base_branch>`

## Remote Repositories

- **Add a remote repository:** git remote add **<name>** **<url>**
- **View remote repositories:** git remote -v
- **Fetch changes from a remote repository:** git fetch
- **Pull changes from a remote repository:** git pull
- **Push changes to a remote repository:** git push **<remote>** **<branch>**
- **Delete a remote branch:** git push **<remote>** --delete **<branch>**

## Advanced Operations

- **Stash changes:** git stash
- **Apply stashed changes:** git stash apply
- **List stashes:** git stash list
- **Create a tag:** git tag **<tag\_name>**
- **Push tags to remote:** git push --tags
- **Show commit details:** git show **<commit\_hash>**
- **Reset to a previous commit:** git reset --hard **<commit\_hash>**
- **Cherry-pick a commit:** git cherry-pick **<commit\_hash>**

## GitHub CLI (gh) Commands

### Authentication and Setup

- **Authenticate with GitHub:** gh auth login
- **Check authentication status:** gh auth status

### Repository Management

- **Create a new repository:** gh repo create **<repository\_name>**
- **Clone a repository:** gh repo clone **<repository\_name>**
- **View repository details:** gh repo view

### Issue and Pull Request Management

- **List issues:** gh issue list
- **View an issue:** gh issue view **<issue\_number>**
- **Create a new issue:** gh issue create
- **Close an issue:** gh issue close **<issue\_number>**
- **List pull requests:** gh pr list
- **View a pull request:** gh pr view **<pr\_number>**
- **Create a new pull request:** gh pr create
- **Merge a pull request:** gh pr merge **<pr\_number>**
- **Close a pull request:** gh pr close **<pr\_number>**

## Workflow and Actions

- **List workflow runs:** gh run list
- **View a workflow run:** gh run view **<run\_id>**
- **Re-run a workflow:** gh run rerun **<run\_id>**

## Miscellaneous

- **Open repository in browser:** gh browse
- **Create a GitHub gist:** gh gist create
- **List gists:** gh gist list
- **View a gist:** gh gist view **<gist\_id>**