# Technical Documentation Git and GitHub Commands

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## **Setting up Git**

### **Check git Version**

Ensure git is installed on your system by running the following command in your terminal.



If git is installed on your system a version will be displayed. If no version was displayed git still needs to be installed on your system.

### **Set up user**

For git to identify your commits you must set up a user. Run these commands:



### **Initialize a Git Repository**

To create a new git repository or reinitialize an existing repository run this command.



This will create or remake a .git file in the current directory.

## **General Git Workflow**

### **Checking Status**

Checking the status of your current git repository is important because it tells you some key pieces of information while working with a git repository. The status command tells the developer which branch they are currently working on and the state of the working directory to see what files are staged, modified, or untracked.



### **Staging Changes**

To add files to the staging area to prep for a commit.



If you just want to add a specific file then specify the file in the command if you want to add all modified files just add a period.

### **Commit Staged Changes**

Commits are snapshots of your repository signifying a segment of work completed to the repository. Commit your staged changes with a message describing what you've done.



### **Git Logs**

To see commit history you can run the logs command.



## **Connecting a Local Repository to GitHub**

### **Create a GitHub Repository**

To connect a local repository to a GitHub repository you must first create a GitHub repository.

1. Go to <https://github.com/>
2. Click on the plus icon in the top right and select new repository.
3. Follow the prompts to setup a new repository.
4. Don’t initialize with a README or .gitignore because the local repository already has these files.

### **Link Your Local git Repository to the New GitHub Repository**

1. Copy the URL of the GitHub repository
2. Run the following command to add the GitHib repository:



To verify the the two repositories were linked run this command:



### **Push The Local Repository to the GitHub**

To push your local repository to GitHub run this command:



This pushes your local main branch to the main branch on GitHub. If your branch is named differently, replace main with the correct branch name.

## Cloning an existing GitHub Repository

Cloning a repository copies an existing repository on GitHub to the local system. For this command you will need the URL of the GitHub repository you wish to clone.



## Updating Local Repository

To update a local repository already linked to a GitHub repository run the following command.



## Branching

### **Creating a New Branch**

To create a new branch run the following command:  


### **Switching Branches**

To switch the current working branch run the following command:



### **Deleting a Branch**

To delete a branch run the following command:



## Tagging

Tags are used to mark specific historical points in your repository, such as version 1.0. To add a tag run the following command:



Where v1.0 is the actual tag name and “Version 1.0” is the message that describes the tag.