**Configuration Commands**

Git Configuration Commands

What's the current directory (present working directory)?

pwd

Git Config (Global/User-level) Syntax

git config --global setting value

Configure User and Email

General Syntax:

git config --global user.name "Your Name"

git config --global user.email "you@someplace.com"

Example using course author's information:

git config --global user.name "Jason Taylor"

git config --global user.email "jason@jasongtaylor.com"

Listing All Global Configuration Settings

git config --global --list

Seeing Git's User-based Config file

cat ~/.gitconfig

#### Git Starting Commands

pwd

cd projects/

git init git-demo

#### Git First Commit Commands

##### **Lecture Command Listing**

pwd

ls

mate README.md

ls

git status

git add README.md

git status

git commit -m "Initial commit"

clear

git status

##### **Command Reference**

List

ls

Lists files and folders in current directory. Without parameters, will list non-hidden folders and files.

Git Status

git status

Shows which files have been modified in the working directory vs Git's staging area.

Git Add

git add file-name

Adds the new or newly modified file-name to Git's staging area (index).

Git Commit

git commit -m "A really good commit message"

Commits all files currently in Git's staging area. The -m parameter allows for a commit message directly from the command line.

Clear!

clear

Clears all previous commands from the terminal screen -- just a bit of clean up.

Text Mate

mate file-name

All command line demos are preformed on the MacOS. Creating and editing files is done with TextMate 2 (free) using the **mate** command from Terminal. Passing a file-name to the **mate** command will create or open that file. Windows users can use the **notepad file-name** command instead.

#### Git Working Locally Commands

##### **Lecture Command Listing - Working Locally, Part One**

pwd

git status

mate README.md

git status

git add README.md

git status

git commit -m "Adding some ipsum"

clear

git status

mate README.md

git status

git commit -am "Adding more ipsum"

git status

##### **Lecture Command Listing - Working Locally, Part Two**

pwd

git status

clear

mate index.html

git status

git add index.html

git status

mate README.md

git status

clear

git status

git add README.md

git status

git commit -m "A few changes for the website"

clear

mate README.md

mate index.html

git status

git add .

git status

git commit -m "A few more changes for website"

clear

mate README.md

git status

git add README.md

git status

git reset HEAD README.md

clear

git status

mate README.md

git checkout -- README.md

mate README.md

git status

##### **Command Reference**

Express Commit for Tracked files

git commit -am "Awesome commit message"

Use the -a parameter with the **git commit** command to directly commit newly modified tracked files. Warning: Only do this for small changes. Tracked files are files that have been previously added to Git (committed or staged).

Adding All Changed Files

git add .

The period parameter for the git add command will recursively add all new and newly modified files.

Unstage File

git restore –-staged file-name

Following the above command will "unstage" the specified file from Git's staging area (aka index).

Backout Working Directory Changes

git restore file-name

Following the above command will back out any changes made to the specified file and replace it with the version last committed in Git

**History and File Management Commands**

#### Git History / File Management Commands

##### **Lecture Command Listing -- History**

git log

git help log

git log --oneline --graph --decorate --color

##### **Lecture Command Listing -- Removing Files**

pwd

git status

mate debug.log

ls

git status

git add .

git status

git commit -m "adding log file that really does not belong here"

clear

git status

git rm debug.log

ls

git status

git commit -m "removing log file"

clear

mate info.log

ls

git add info.log

git commit -m "adding info log"

git status

clear

ls

rm info.log

ls

git status

git add .

git add -u

clear

git status

git commit -m "Removing info.log"

##### **Lecture Command Listing -- Moving Files**

ls

mkdir web

ls

git mv index.html web

cd web/

ll

pwd

cd ..

ls

git status

git commit -m "Moving index.html file to web folder"

clear

##### **Lecture Command Listing -- Ignoring Files**

mate application.log

ls

git status

mate .gitignore

git status

ls -a

git add .gitignore

clear

git status

git commit -m "adding ignore file"

##### **Command Reference**

Seeing Repository History

git log

git log --oneline --graph --decorate --color

Git's **log** command displays the repository's history in reverse chronological order. The no-params version displays the standard view.

Git log options from above: --oneline Compacts log data on to one line, abbreviating the SHA1 hash --graph Adds asterisk marks and pipes next to each commit to show the branching graph lines --decorate Adds the markers for branch names and tags next to corresponding commits --color Adds some color to the output -- nice to have, depending on the operating system

Removing a file using Git

git rm file-name

Removing a file using Terminal

rm file-name

This removes the file outside Git's knowledge

Updating Git's Index (staging area)

git add -u

The -u parameter will recursively update Git's staging area regarding deleted/moved files outside of Git.

Making a directory (folder)

mkdir folder-name

The **mkdir** command is a nearly universal command for creating a directory/folder.

Making a directory (folder)

git mv source destination

The **git mv** command will move the source (file or folder) to the destination with Git.

**SSH Authentication Commands**

#### SSH Authentication Commands

##### **Lecture Command Listing**

cd ~

cd .ssh

mkdir .ssh

cd .ssh

pwd

ssh-keygen -t rsa -C "jason@jasongtaylor.com"

mate id\_rsa.pub

ssh -T git@github.com

##### **Command Reference**

Generating an SSH Key

ssh-keygen -t rsa -C "your.name@your-company.com"

Use your actual email address in the example above.

Location ; c/Users/002U4X744/.ssh/id\_rsa

cat /c/Users/002U4X744/.ssh/id\_rsa.pub

update the ssh key in git .

git@github.com:forssarkar/ss1.git

Verify SSH authentication

ssh -T git@github.com

Above command uses **ssh** to connect to GitHub over the SSH protocol.

**Git Remote Commands**

#### Git Remote Commands

##### **Lecture Command Listing**

git status

git remote add origin git@github.com:scm-ninja/git-demo.git

git remote -v

git push -u origin master

git push origin master

ls

cd web/

mate index.html

clear

git commit -am "Updating index page for GH"

git status

git pull origin master

git push origin master

git push origin master

User Name : private key

##### **Command Reference**

Creating a remote repository reference

git remote add remote-name remote-repository-location

Using **git remote add** command allows us to associate a remote repository. Normally, you want to paste in the full URL for the remote repository given to you by your Git host (GitHub). By convention, the first or primary remote repository is named origin.

List Git's Remotes

git remote -v

The **git remote** command lists the names of all the remote repositories and the -v parameter (verbose) will display the full URL of the remote repository for each remote name listed

Send Changes to Remote

git push -u remote-name branch-name

git push remote-name branch-name

The **git push** sends all your local changes (commits) on branch branch-name to the remote named remote-name. The **-u** parameter is needed the first time you push a branch to the remote.

Receive Changes from Remote

git pull remote-name branch-name

The **git pull** receives all your remote changes (commits) from the remote named remote-name and on branch branch-name.

### …or create a new repository on the command line

echo "# git-demo" >> README.md

git init

git add README.md

git commit -m "first commit"

git branch -M main

git remote add origin https://github.com/ssinfosystem/git-demo.git

git push -u origin main

### …or push an existing repository from the command line

git remote add origin https://github.com/ssinfosystem/git-demo.git

git branch -M main

git push -u origin main

🖥️ GIT COMMANDS CHEAT SHEET

Set configuration values for your username and email

git config --global user.name YOUR NAME

git config --global user.email YOUR EMAIL

Set default branch to main

git config --global init.default branch main

Get help on a command

git help COMMAND

git COMMAND -h

Initialize a new git repository

git init

Clone a repository

git clone REPOSITORY URL

Add a file to the staging area

git add FILE

Add all file changes to the staging area

git add --all

git add -A

git add .

Check the unstaged changes

git diff

Commit the staged changes

git commit -m "MESSAGE"

Reset staging area to the last commit

git reset

Check the state of the working directory and the staging area

git status

Remove a file from the index and working directory

git rm FILENAME

Rename a file

git mv (OLD NAME) (NEW NAME)

List the commit history

git log

List all the local branches

git branch

Create a new branch

git branch BRANCH NAME

Rename the current branch

git branch -m NEW BRANCH NAME

Delete a branch

git branch -d BRANCH NAME

Switch to another branch

git switch BRANCH NAME

Merge specified branch into the current branch

git merge BRANCH NAME

Create a connection to a remote repository

git remote add (NAME) (REPOSITORY URL)

Push the committed changes to a remote directory

git push (REMOTE) (BRANCH)

Download the content from a remote repository

git pull REMOTE

git push origin BRANCH NAME

git remote set-url origin [git@gitserver.com:user/repo\_name.git](mailto:git@gitserver.com:user/repo_name.git)

git remote -v

git push -u origin –all

git config --local --unset user.e.email

git remote show origin

**git restore --staged** :/

How to view to the files in staging area

git ls-files -s

find .git/objects -type f

git cat-file 3b95 -t

How to move file from Git Repository from Staggin area

git read-tree 3b95

How to move files from Stagging area to working area?

git checkout -index -a