Some conceptual questions

1. How does Git use the SHA-1 hash?

The SHA-1 hash is a checksum of the file that we are storing plus the header. GIT LOG returns the sha1 hashes of the files that have been uploaded, and the web site should have the same hash values. If not, then the data was corrupted in transit.

1. Explain the 3 states: modified, staged and committed.

Modified means the file has been changed but the file is not committed to the local database yet.

Staged means a file has been marked to be committed. The staging area is like an index.

Committed means the data is stored in the local data base.

1. What is the working directory? What does is mean for files to be tracked or untracked?

It is a single checkout of one version of the project.

Each file in my working directory can be in one of two states: tracked or untracked. Tracked files are in the last snapshot, which means ‘git add *filename*” was recently run on them. Untracked files are everything else, including previously tracked files.

1. What is a remote repository?

Remote repository is https://github.com/*user*/*repository*/, also known as the file storage server that collaborators can attach to.

Scavenger hunt. What is the command to:

1. start tracking an existing project (i.e., set up a repository)

There are two methods: import or clone. **GO TO THE PROJECT’S FOLDER** (do I need to yell this louder to myself ?) and type in $git init

A new subfolder is created that contains the repository files. Next do $ git add *filename* on each file in the project. “\*.java” will work for the file name. Then do $ git commit –m ‘*your comment here.*’

You can also go to https://github.com and make a repository. After the repository is made on the remote system, import it with $ git clone git://github.com/*username/repository.*git.

http://git-scm.com/book/en/Git-Basics-Getting-a-Git-Repository

1. specify that you want to track the file README.txt

$ git add README.txt

1. specify you want to track all java source files (assume you are in the src directory)

$ git add \*.java

1. determine which files are in which state (e.g., untracked, changed, etc.)

$ git status ( this assumes you are in the correct folder)

1. rename a file from README to README.txt

$ mv README README.txt

1. assume the file code.java is being tracked, and you have modified it. What is the command to stage it?

$ git add *code.java*

1. assume you want to know what changes you've made (but have not yet staged) since your last commit (i.e., you want to know what files you should add so that all modified files are staged). What command do you use?

$ git diff $ git add must be run first

1. assume the file junk.java is being tracked by Git. What is the command to remove this file from both your tracked files and your working directory? What is the command to remove the file from being tracked, but *not* from your working directory?

$ git rm –f junk.java

$ git rm –cached junk.java

1. view of list of the commits in the repository

$ git log

1. view only the last 2 commits to the repository

$ git log -2

1. view only changes committed since Sept 1 of this year

$ git log –help (two minus signs in front of help)

$ git log –since 9/1/2012 (two minus signs in front of since.

1. view only changes you committed

$ git log author mihughes

$git log –committer mihughes

1. unstage the file blah.java

$ git rm blah.java

1. add a remote server. Use the shortname demos. Use the url: git://github.com/CyndiRader/JavaDemos.git

$ git remote add demos git://github.com/CyndiRader/JavaDemos.git

1. list the remote servers you have configured

$ git remote –v The –v gives verbose information.

http://git-scm.com/book/en/Git-Basics-Working-with-Remotes

1. get a copy of an existing Git repository stored at git://github.com/crader@mines.edu/DemoJava.git

$ git remote add *cr* git://github.com/crader@mines.edu/DemoJava.git

(*cr* is my alias)

fatal: remote error:

crader@mines.edu/DemoJava.git is not a valid repository name

On the git web site, a search for username:CyndiRader returns 4 repositories, but a search for username:crader@mines.edu or crader does not return anything.

A few more questions

1. In what situation would a file be listed by git status as both staged and unstaged?

This happens when git add *filename* is executed, and then the file is changed and saved again with its local editor function.

1. Explain the two uses of the command git add

Git add has 14 switch/options.

It adds a recently modified file to the local index. The –n switch will let you do a dry run to see if anything is going to be ignored.

1. What is the purpose of .gitignore? What types of files might you want to list in that file?

.gitignore is a file that contains a list of files that are intentionally untracked and should not be included in a git add. Patterns which should be version-controlled and distributed to other repositories via clone should go into a .gitignore file.

1. What would the command git checkout -- myCode.java do? Why should you use git checkout with extreme caution?

This command restores myCode.java from the index. Incorrect usage will create branches that you don’t want, and you may place your code on an unintended branch.