DaoYuan Mu

CS 623 Individual Project Responses

July 10th,2017

3.

A.What is GitHub?

a.GitHub is a web-based version control repository. It is used to organize programming projects. It allows users to maintain several versions of all files associated with a project so that all changes to the files can be carefully tracked.

b.It uses Git, which is a version control system. It is an open source software created by Linus Torvalds. Git allows a user to create a repository of files that they would like to track all changes to.

B.When was it created?

a.GitHub was founded in 2008.

b.Git was created in 2005.

C.Why?

a.GitHub was created to bring the functionality of Git to a mass audience. It was built because Git is a command line application that is difficult for most users to use. The creator’s saw an opportunity to provide a web-based version control system to users around the world.

b.Git was created when BitKeeper, a proprietary version control software, was no longer allowed to be used for free. The Linux developers that depended on BitKeeper for version control sought a new tool. Git was developed to serve the needs of the Linux kernel developers in need of a new version control software.

D.By who?

a.GitHub was created by Tom Preston-Werner, Chris Wanstrath, and PJ Hyett.

b.Git was created by Linus Torvalds, the creator of the Linux Kernel.

E.What similar platforms exist?

There are many alternatives to GitHub with similar version control functionality. Some alternatives are:

1. Bitbucket
2. GitLab
3. SourceForge
4. Apache Allura
5. Cloud Source by Google

F.Why would you use such a platform?

a.GitHub is useful for large projects with many users working on them. All changes can be tracked and are attributed to the user who created them. If there are errors, older versions of the source code can be recovered. It also serves as a backup.

b.GitHub is also useful for large open source projects worked on by a community. All changes can be tracked, and multiple versions of the project can be branched from the original repository. This allows a project to evolve into new versions/projects.

4.

Press enter to submit commands

> git init

* git status
* git status
* git add octocat.txt
* git status
* git commit -m "Add cute octocat story"
* git add '\*.txt'
* git commit -m 'Add all the octocat txt files'
* git log
* git remote add origin https://github.com/try-git/try\_git.git
* git push -u origin master
* git pull origin master
* git diff HEAD
* git add octofamily/octodog.txt
* git diff --staged
* git reset octofamily/octodog.txt
* git checkout -- octocat.txt
* git branch clean\_up
* git checkout clean\_up
* git rm '\*.txt'
* git commit -m "Remove all the cats"
* git checkout master
* git merge clean\_up
* git branch -d clean\_up
* git push

>

5.

Become familiar with the following terms:

1. Repository – git stores all project files and metadata files in a repository to track all changes over time
2. Commit – submitting updated files to the local repository
3. Push – submitting updated files to a remote repository
4. Branch – creates an independent series of changes to the files in the repository. Multiple branches can be made, with the intention to recombine them and reconcile the changes that have been made during the merge process
5. Fork – a fork is a copy of a repository, forking a repository allows a user to work on the project without changing the original
6. Merge – combining two separate branches of a project and reconciling the differences between them
7. Clone – copies a git repository to the local environment, usually copied from a remote repository
8. Pull – downloads the latest files from a remote repository
9. Pull request