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CS 389

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GitHub Exercise

**Part 3**

What is GitHub? When was it created? Why? By who? What similar platforms exist? Why would you use such a platform? (Answer between 5 and 10 lines)

GitHub is a web based open-source version control repository and Internet hosting service. It uses Git which is a version control system. The development of GitHub started on October 1, 2007 and the site was released in April 2008. It was created by Tom Preston-Werner, Chris Wandstrath and PJ Hyett. It was created because even though Git is useful to use it is hard to use unless you are familiar with Linux. GitHub was created so that it would be easier for people to use Git. Other similar platforms include Bitbucket and SourceForge. Bitbucket is usefor for organization or groups that have 5 people or less since they allow you to have unlimited public and private repositories. SourceForge is also an alternative because it supports different languages like Ruby, Python and PHP. So this would be useful if you wanted to use different languages on projects or have different projects that are using different languages.

**Part 5**

Define the following terms in the context of Git (2 lines maximum):

* Repository
  + A directory where Git had been initialized to start version controlling of files. It holds a set of commit objects and a set of references to commit objects called heads.
* Commit
  + A command in Git that records changes to the repository and used to interact with local repository
* Push
  + A command in Git that updates remote references along with the associated objects. Also used to interact with a remote repository
* Branch
  + A branch is a movable pointer to one of the commits. The default branch is master.
* Fork
  + It is a copy of a repository. Using fork allows you to make changes to the project without modifying the original project.
* Merge
  + It joins two or more commits together. It can add the changes from one branch to another branch.
* Clone
  + A command in Git that allows you to clone or duplicate a repository into a new directory.
* Pull
  + It updates remote references along with the corresponding objects
* Pull request
  + This allows you to notify others about the changes you have pushed in a GitHub repository.
  + The original owner of the project must approve of the changes to add it into the repository.

Part 6

Add your name (lastname, firstname) in the file, **add a comment (date and time) (REQUIRED)**, and update the README.md file at: <https://github.com/paceuniversity/courses>. Your name should appear at the provided <https://github.com/paceuniversity/courses>. Please check the work of previous students.

List the commands and strategy you use to do this part of the exercise in the *LastnameFirstnameGitTutorial-mm-dd-yyyy.docx* file and push it to: [https://github.com/yourpseudo/CSXXX20XX](https://github.com/yourpseudo/CSXXX2016).

* $ cd desktop
  + goes to desktop directory
* $ git clone <https://github.com/szhang96/courses.git>
  + clones the repository from GitHub to my local computer
* $ cd courses
  + Changes directory from desktop to courses
* $ git remote –v
  + Check if connected to remote repositories
* $ git status
  + Check to see changes in the repository and see if README.md was modified
* $ git add README.md
  + Add README.md to be staged and tracked for changes
* $ git commit -m "Update README.md"
  + Save changes to README.md and wrote a message describing what I modified
* $ git remote add upstream <https://github.com/paceuniversity/courses.git>
  + Points to the original repository
* $ git remote –v
  + Check to see if upstream added properly
* $ git fetch upstream
  + Fetches the changes and sends it to branch called upstream/master
* $ git merge upstream/master
  + Merges upstream branch to current branch
* $ git push origin master
  + Uploads changes to repository in GitHub