Brandon Pacheco

       Gits' main purpose is to store source code for software projects. People can work independently or as a team and collaborate on the same project from anywhere around the world. Users can merge source code, keep revisions of code, see edits, and timestamps, and even revert the code to its previous version if necessary. For example, a developer was asked to make some changes to a website but was then later asked to remove the change. The developer can revert to the change with ease by reverting to a previous version of the code. This allows developers and programmers to be able to work on big projects as efficiently as possible. For instance, two people can work on two different parts of the same file.

       GitHub has some features that assist programmers such as easy project management. Easy project management allows team leaders and managers to coordinate and keep track of the project. Another feature GitHub has available for its users is the version control system. The version control system records all changes made to the file or set of files. This is to make sure that all members of the project are working on the most current updated version of the file. A Git workflow is a guide that is offered by GitHub for people on how to use Git in the most efficient way possible. Git is used by developers and teams and so it is important for its members to be on the same page. Not all teams are the same and the same method will not work for everyone. So Git workflow offers flexibility to developers so that they can find what works best for them.

       Some terms to be familiar with are Git commit, Git diff, Git push, pull requests, merge conflicts, and branching. A git commit is a snapshot of the user's repository. It captures what the files look like at the exact moment the git commit action was executed. An individual can save that snapshot and save the timestamp which is known as the history. This is useful because the user is able to revisit that recorded moment in the future. Git diff is a command that allows an individual to see what has been modified within a file. For instance, an individual is able to compare an older version of a text to the modified version side by side. Git push is used to upload local repository content to a remote repository. A user must initialize the git repository, and commit the files staged in the local repository by writing a commit message. Then the user must copy the remote repository's URL from Github and finally publish the branch on the Github desktop to upload all their files to Github. Pull requests help teams review, improve, and even offer suggestions for the code being worked on. The suggestions can be discussed within the team before any changes are implemented to the original code.

       Branches is a tool where a user can create features, fix bugs and errors, or experiment with new ideas within the area of their repository. Users are able to merge their new ideas or corrections from the new branch into their main branch if they are satisfied with the results. Sometimes when an individual tries to merge branches with competing commits, Git will need assistance in deciding which changes to incorporate into the final merge. Now, to create a new branch the individual simply types in the command, git branch. An individual is allowed to build a branch off another existing branch. A branch an individual creates is called a feature branch or a topic branch. You can use a branch to publish a GitHub page as well. The user has to have write access to a repository to make a branch open a pull request or delete and restore branches in a pull request.

       In general, GitHub is a website that runs the software Git which is a repository hosting service. Git allows programmers and other individuals to keep track of project files. Programmers are able to combine source codes, keep old revisions of a code, see who made edits, and even revert to an older version of the code or even the original. GitHub allows every member of a team to work on a big project simultaneously. People are able to work together on a

project from anywhere in the world. Developers are able to contribute and even share knowledge with the rest of the community using Github.

Brandon Pacheco

Works Cited

https://docs.github.com/en/repositories