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31 January 2023

Git Workflow

Git Workflow is a helpful tool that can be used in a variety of ways to assist Software Development teams to collaborate on a project in a consistent and productive manner. Although, it is important that everyone on the team comes to agreement on the same type of workflow to ensure that they're on the same page. If successful, this can create an environment where it enhances productivity amongst a team. Ultimately, Git workflow can set the foundation for a team to accomplish amazing things through teamwork and accessibility.

Centralized Workflow is often recommended when new developers begin to collaborate on Git. This method uses a central repository as the single point-of-entry for all edits that are made to the project. The default development branch is called main and whenever a change is made will then be committed to this branch. This is very useful because each collaborator can clone the central repository and work on their own copy of the project to work individually. Then once they feel comfortable to add commits to the central repository, they can push changes to the local main branch of the central repository.

In addition to how Git can be beneficial, it is important to go over exactly what some of the important features actually mean. As some have already been mentioned, these are some actions/messages that a user of Git will always be encountering while using the platform. A "commit" is a revision that is an individual change to a file on a user's local repository. Whenever a commit is made, Git will actually keep track of who made the change and when. It is also important to note that a user should give a detailed description about what they are changing so it's not vague for the other team members. A "push" is like a commit but sends those committed changes to the remote repository for the other team members to see. A "pull" refers to when a user is downloading the changes that their team members made to the remote repository, so they can have it on their local repository. These are the three main actions that users will most often take while using Git.

User's might also run into a few problems while using Git. It can be beneficial to understand what a "merge conflict" is. A merge conflict is whenever the same two people edit the same line of the same file, or when a person has edited a file and another person has deleted the file. Either of these actions will create issues for the collaborators and must be resolved before a user can merge the branches. This term also relates to the next one, which is "branching". Branching enables users to isolate their code and not edit the existing version. Once done, a user is then able to test to make sure everything runs smoothly and then can merge the branch back to the main branch.

Overall, these were just some of the features of Git Workflow. An efficient process to enhance developer team's and offer them a set of tools to do their work conveniently. It is to be expected that if one wishes to succeed in this field software development/engineering, then they must know how to implement these functions into their routine. It can dictate which interviewee is getting hired. If one person that interviews has never used Git Workflow before and another has, it could be said that the probability of the second person getting hired is quite probable. Ultimately, making Git Workflow not only a tool, but a necessity amongst the people who aspire to do well and thrive in this field.

Work Cited

Atlassian. (n.d.). *Git workflow: Atlassian Git Tutorial*. Atlassian. Retrieved January 31, 2023, from https://www.atlassian.com/git/tutorials/comparing-workflows#:~:text=A%20Git%20workflow%20is%20a,in%20how%20users%20manage%20changes

GitHub glossary. GitHub Docs. (n.d.). Retrieved January 31, 2023, from https://docs.github.com/en/get-started/quickstart/github-glossary

Wisniowski, K. (2022, November 11). *Git commit vs push - what's the difference ? (tutorial)*. Cloud Infrastructure Services. Retrieved January 31, 2023, from https://cloudinfrastructureservices.co.uk/git-commit-vs-push-whats-the-difference-tutorial/#:~:text=Summing%20up%2C%20git%20commit%20saves,working%20developers%20will%20access%20them.

Brown, J. (2022, June 27). *Git branching and merging: A step-by-step guide*. Varonis. Retrieved January 31, 2023, from https://www.varonis.com/blog/git-branching#:~:text=Git%20branching%20allows%20developers%20to,without%20modifying%20the%20existing%20version.