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Technical Writing

Positives of Branching

In software development it is a necessity to have an effective and efficient branching scheme to ensure branches are up to date and separated from the release branch. Branches allow developers to separate the features they are working on to the release branch. Feature branching is a very effective and efficient branching scheme. Branching by features allows big companies and small companies with many or few developers work on their own features without stepping on each other's toes and keeping their features out of the release branch until they were tested and code reviewed.

Feature branching is a necessity for companies with many developers but will also be an improvement even for companies with a small amount of developers. The reason that feature branching is important for companies with many developers is because it gives developers the freedom to work in their branch. This allows the developer to work without fear of causing issues that could hold up a release because one person's feature caused a ripple effect making the product unusable. Dividing features into branches also allows the developer to merge other features or the master branch into their branch to get the code or features they need to stay current with the product.

In a feature branching scheme there is always a master branch that will have all features that have been tested and passed merged into it to be released to customers. Master is always the most current branch and should regularly be merged into feature branches to keep feature branches current. Think of the master branch as being the trunk of the branching tree, everything comes from and goes through the trunk. Keeping feature branches current eliminates scenarios where the developer is ready to merge to the master branch but cannot because something changed before the developer was done and they have to modify their code.

Hotfix branches are similar to release branches because they are meant for last minute fixes that need to be done immediately due to an undesired state of the live product. A hotfix could occur right before a release or before depending on the urgency of the fix. Hotfixes are branched off of the master branch. This allows a developer or developers to quickly work on the fix while the other team members can continue working on other features for the release down the road.

The release branch is the final branch that all features and hotfixes pass through. Companies typically have a release cycle weekly, bi-monthly or monthly. Each time the release cycle comes around a release branch needs to be created. The release branch is used to gather all of the features and hotfixes and put them in a centralized branch to be sent to the customers. Putting all of the work done in between releases in the same branch allows the developers to get out last minute kinks and to ensure all new features are working together.