

Branching

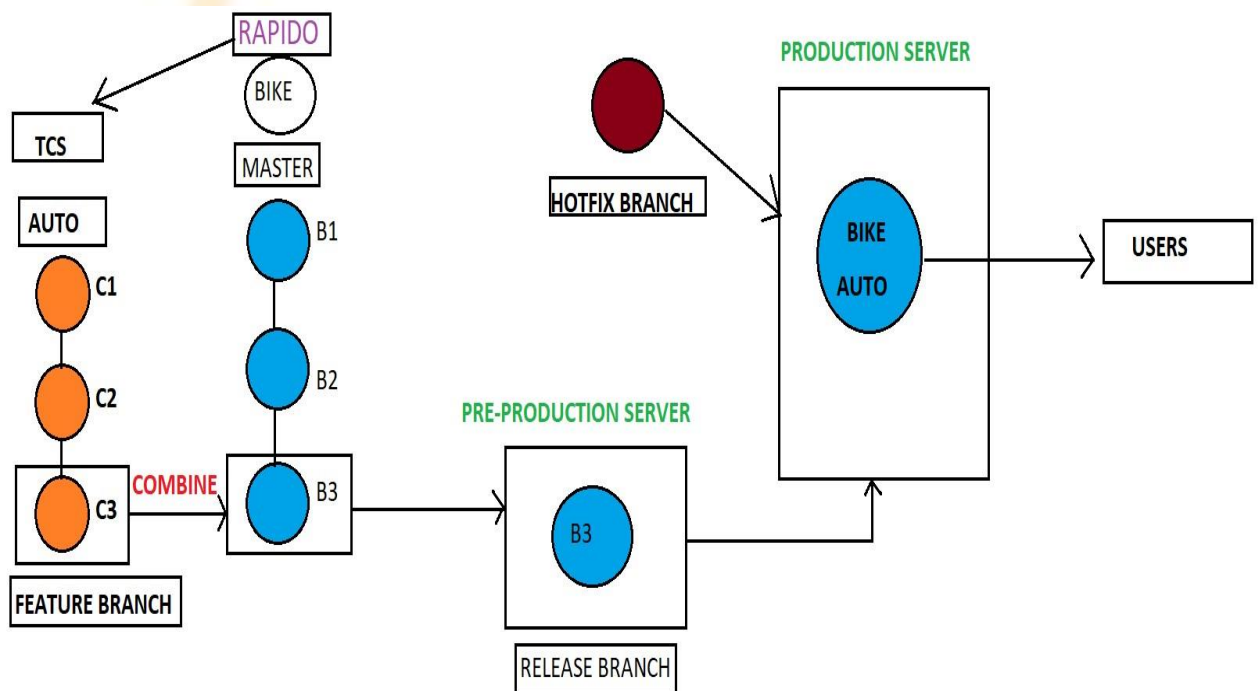
What is a Branch?

In Git, A branch is a new or separate part of a main repository that is used to develop an independent line of code without effecting main / Master.

(OR)

A branch is a separate part of master branch in git. Branching means diverging from the master and continue to work separately on the same project.

Why we need branch?



- Branches allows developers to work together in a same project using different branches.
- Developers can easily develop new features of a software without effecting the main branch code.
- To maintain Stability when changes are made to a particular code.

Types of Branches:

- 1.Master Branch
- 2.Feature Branch
- 3.Release Branch
- 4.Hotfix Branch

1. Master branch:

This branch contains production code. All the development code is combined into master to send to the production environment.

2. Feature branch:

Feature branches are used to develop new features for the next release. Once the feature is completed it is combined / merged into master branch.

3. Release branch:

Release is a temporal supporting branch to the production release, mainly bug fixes will be done in this branch.

4. Hotfix branch:

Hotfix branch is necessary to perform immediate bug fixing in production environment.

Various Commands used in Branch:

- To Create a branch
`git branch <branch_name>`
- To see all the branches
`git branch`
(or)
`git branch -list`
- To switch from one branch to the other branch
`git checkout <branch_name>`
(or)
`git checkout -b <new branch_name>`
(or)
`git switch <branch name>`

- To rename a branch
`git branch -m <branch_name>`
- To rename a branch from the master:
`git branch -m <old branch name> <new branch name>`
- To delete a branch in local repository
`git branch -d <branch_name>`
- To push a branch to remote repository
`git push alias <branch_name>`
- To delete a branch in remote repository
`git push alias -d <branch_name>`
- To list out all the local and remote branches
`git branch -a`
- To list only the remote branches
`git branch -r`

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