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# Introduction to Git

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# Why do we need Branching?

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# Develop Branch

- **Deploy Frequently**
- **Work on very small stories**
- **Work towards big goals, “epics”**
- **Work on some new experiments.**
- **Balance production fixes and ongoing development work.**
- **Keep the testing environments straight.**

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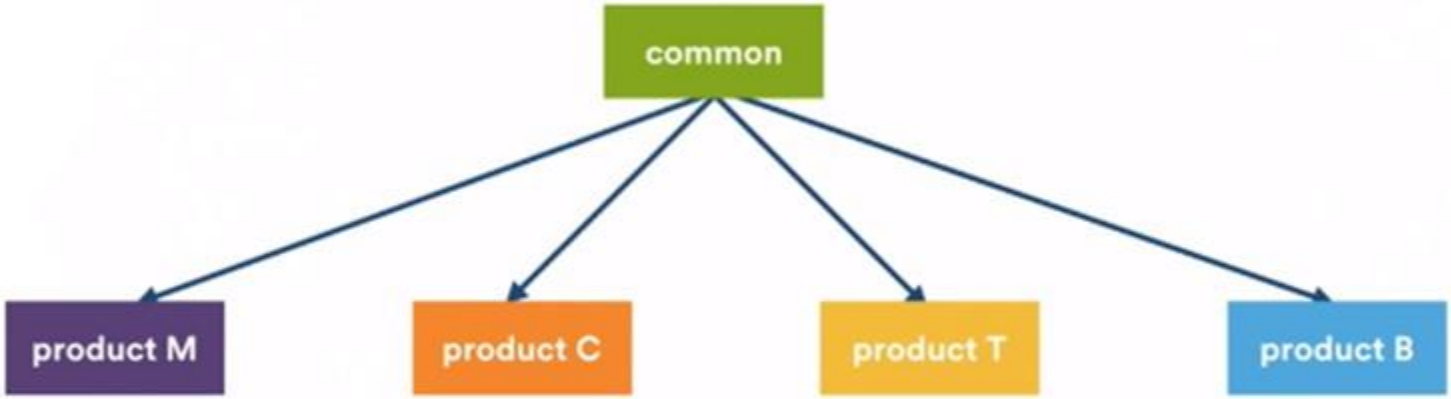
# Develop Branch




**Let's say your organization is working on 4 products.**
**They use some common components, dependencies and libraries.**
**They also use some specific components, dependencies and libraries.**

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# Branching-Merging Strategy Types

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# Single Branch

Single Branch

**Every developer works on master branch.**

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# Feature Branch

Feature Branching

**Developer can create a branch to work on new feature**

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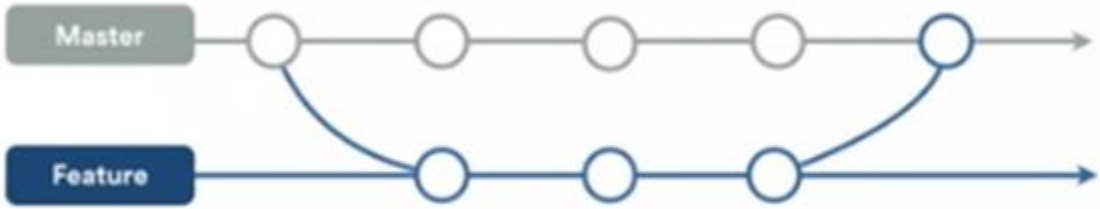
# Feature Branch




Feature Branching

**Developer can merge back feature branch to master branch once it is complete.**

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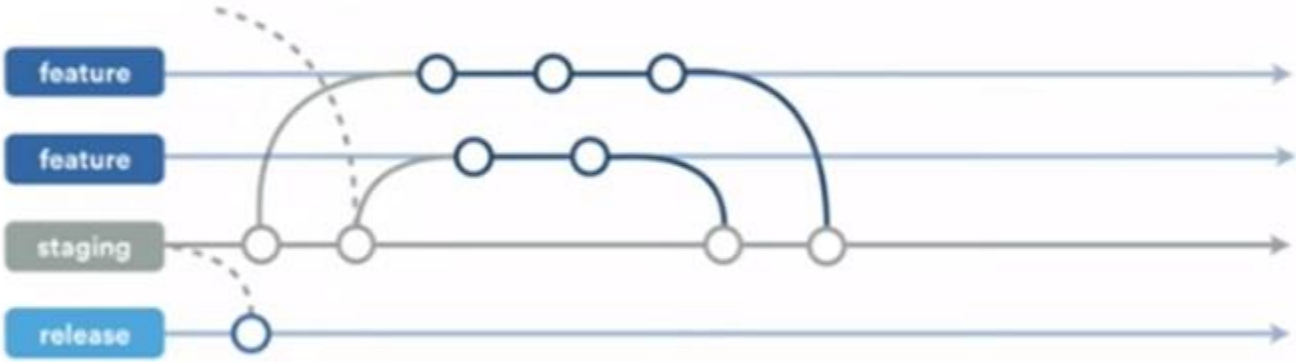
# Release Branch - CD




Continuous Delivery

**Staging holds what is going next on production.**
**QA Process is executed in Staging Branch.**
**Dev Process is executed in Feature Branch.**

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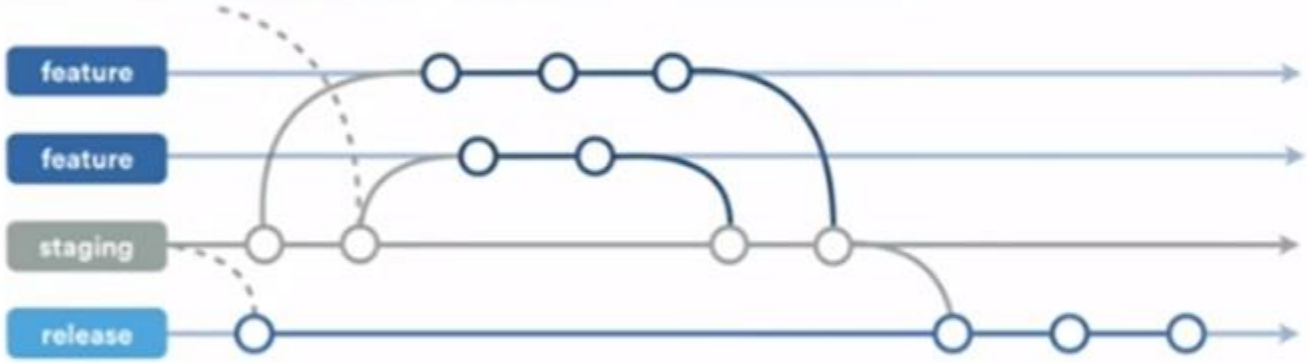
# Release Branch - CD




Continuous Delivery

**Staging Branch is then merged to release branch (Production Branch)**

**From release branch the CD step can take off.**

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# Long Running Versions - Release Branch - CD

**Version Specific release branches are created.**

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# Long Running Versions - Release Branch - CD

**Long running release branches for the release which are on field.**

**Bugfix branch to fix production bugs.**

**Master always has the latest code.**

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# Branching-Merging Strategy

# Develop Branch

**Every developer works on develop. Changes are merged back to master branch.**

**Master branch is always clean.**

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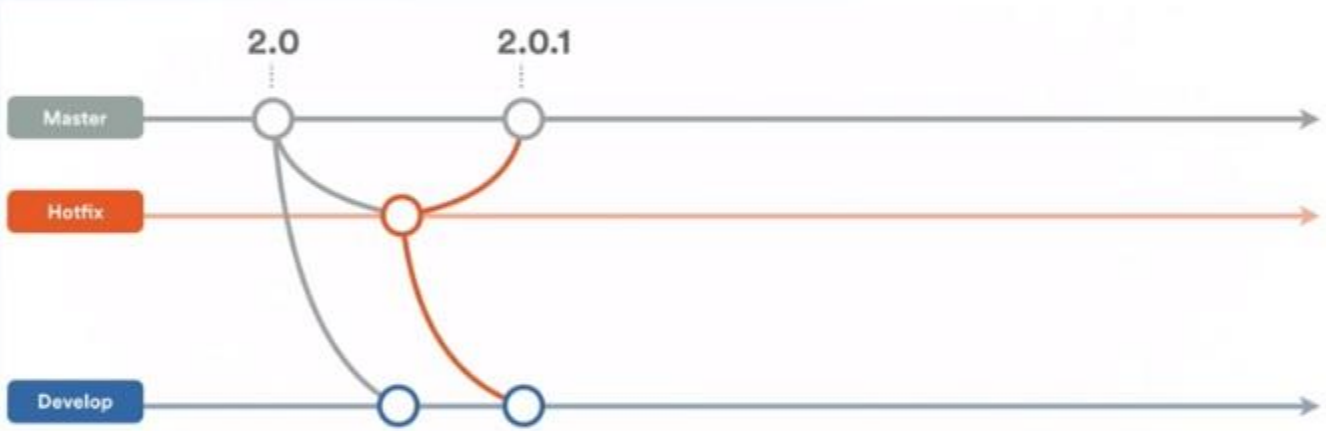
# Develop Branch




**In case of any issue in production, hotfix branch is created.**
**Once everything is fixed in hotfix it is pushed to master and tagged.**
**Then it is pushed to develop so that development progresses.**

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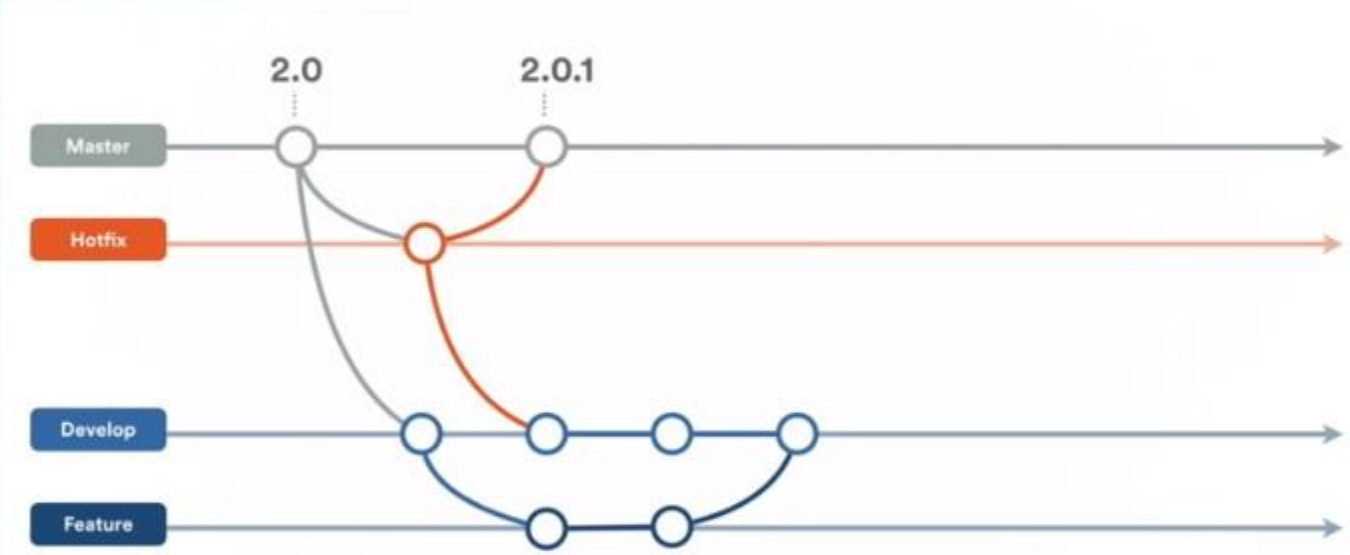
# Develop Branch




**For working on a feature Developer must create a feature branch. Upon completion of feature they push back to develop branch.**

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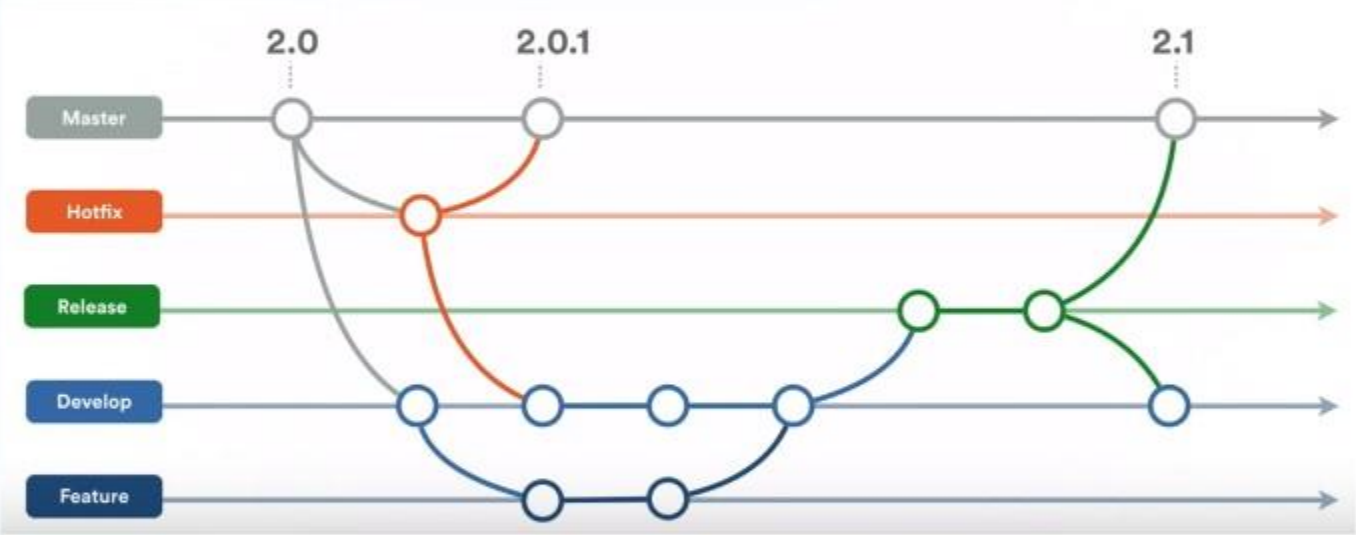
# Develop Branch




**Create release branch from develop branch.**
**Final testing is done here.**
**It is then pushed to master branch.**
**If there any changes they it is also pushed to develop branch.**

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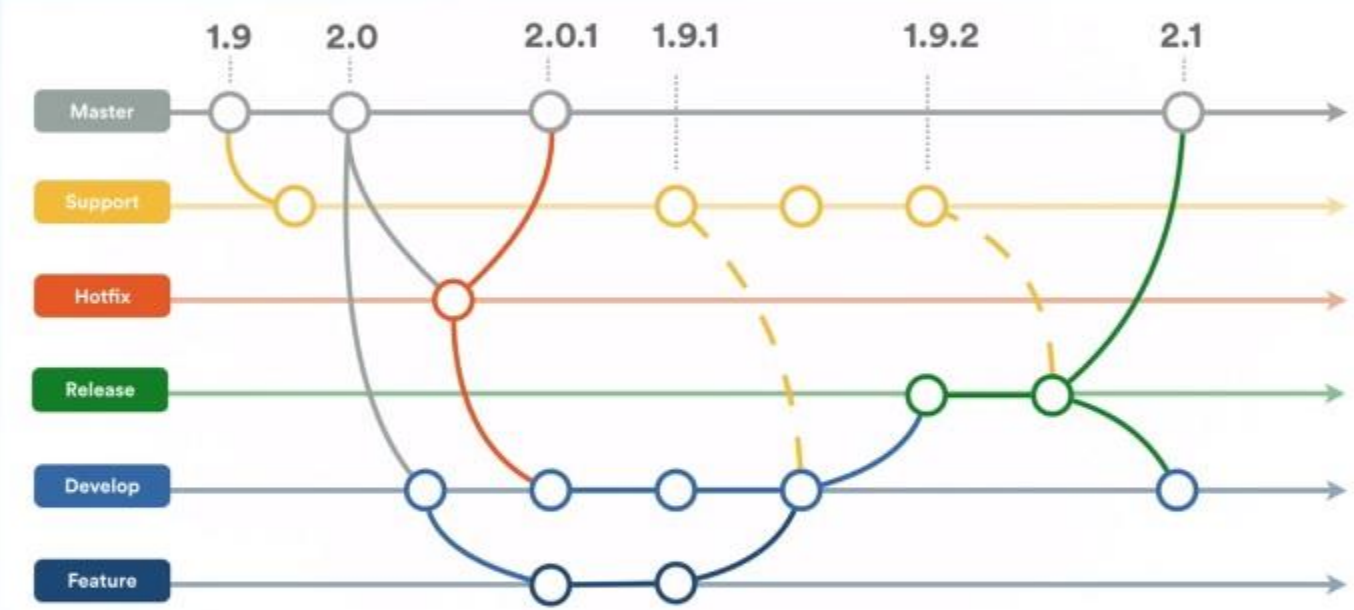
# Develop Branch




**If we have hotfix for fixing bugs, why do we need support?**

**Purpose of support differs from hotfix.**

**Support branch are for the changes which are not of latest version. These can also be for changes that are hard to merge. (Cherry-pick, hand merge or not merge at all)**

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# Thank You