



BRANCHING PATTERNS

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KAAN IPEK

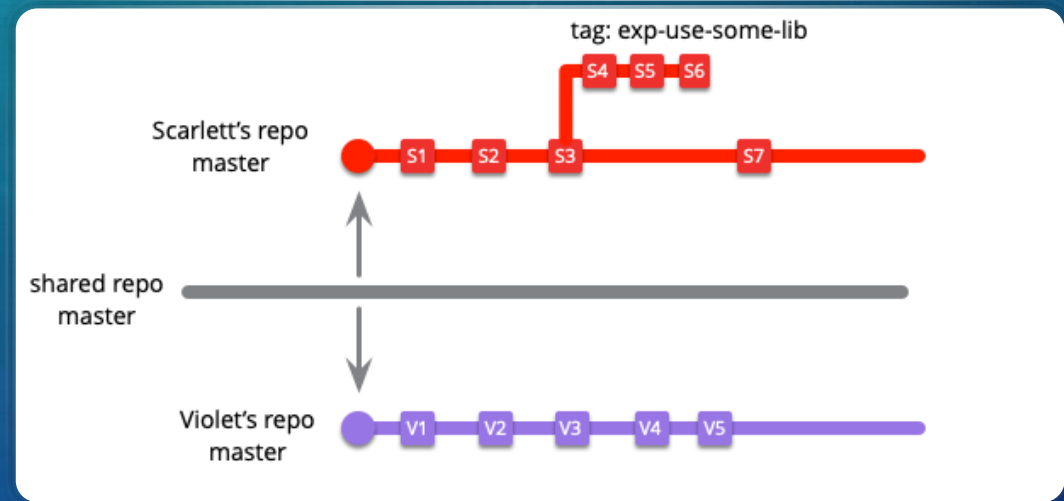
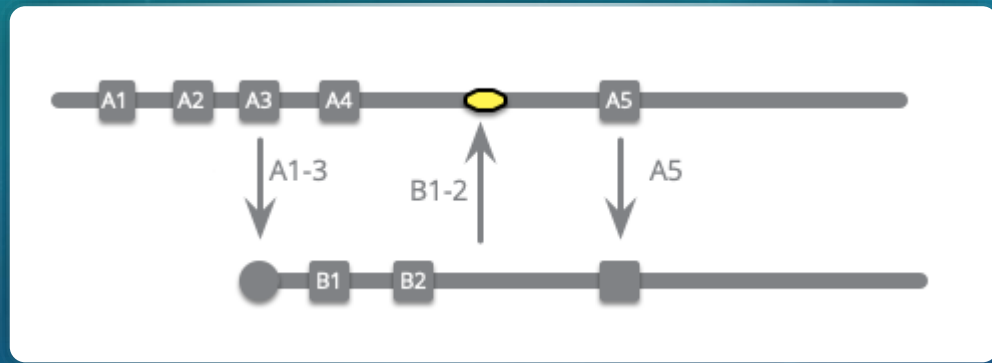
MIGUEL LIGERO ARBESÚ

CARMEN RENDUELES MARTÍNEZ

BASE PATTERNS

The background is a solid blue color with faint, light blue technical drawing elements. On the right side, there is a large circular scale with degree markings from 0 to 210. In the top left, there is a small circular arc with a degree symbol. In the bottom left, there is a dashed circular arrow. In the bottom right, there is a circular arrow with a degree symbol. The text 'BASE PATTERNS' is centered in a white, sans-serif font.

SOURCE BRANCHING



MAINLINE

“A SINGLE, SHARED, BRANCH THAT ACTS AS THE CURRENT STATE OF THE PRODUCT”

HEALTHY BRANCH



Self Testing Code



Directly implementation

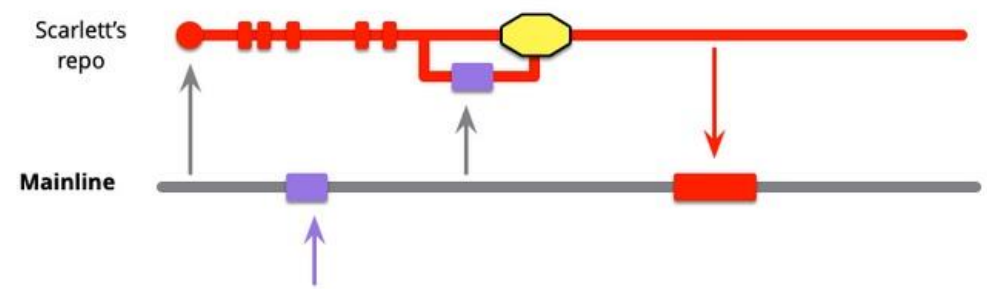


More production

INTEGRATION PATTERNS

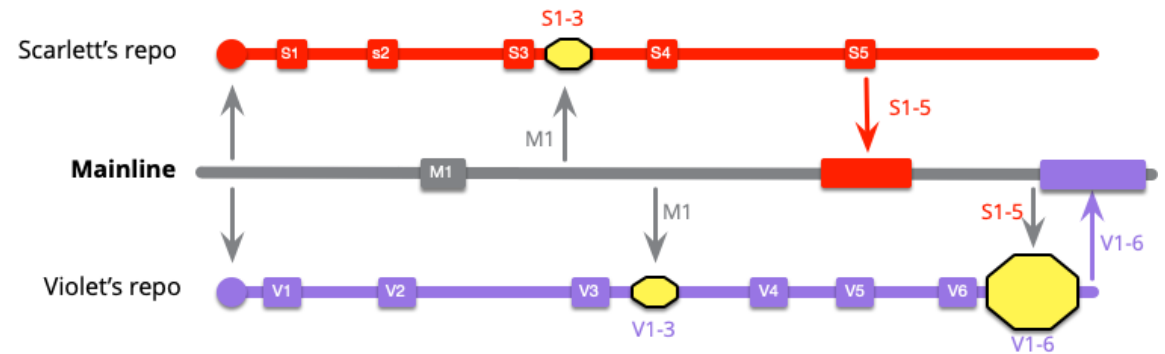
The background is a solid blue color. It features several faint, light blue technical diagrams. In the top right, there is a large circular scale with numerical markings from 80 to 210 in increments of 10. The scale has an outer ring with tick marks and an inner ring with a dashed line and an arrow pointing counter-clockwise. In the bottom right, there is a smaller circular diagram with a dashed line and an arrow pointing clockwise. In the bottom left, there is another circular diagram with a dashed line and an arrow pointing clockwise. In the top left, there is a small circular diagram with a dashed line and an arrow pointing clockwise.

MAINLINE INTEGRATION



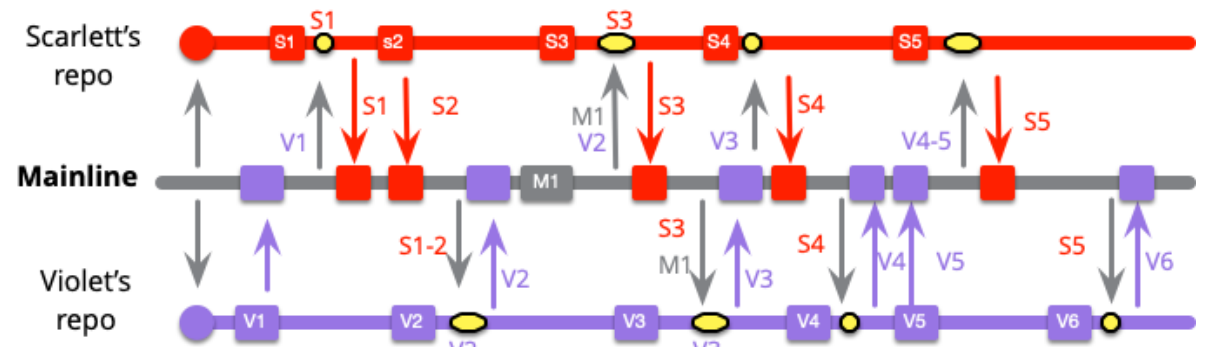
Integration Frequency

LOW FREQUENCY



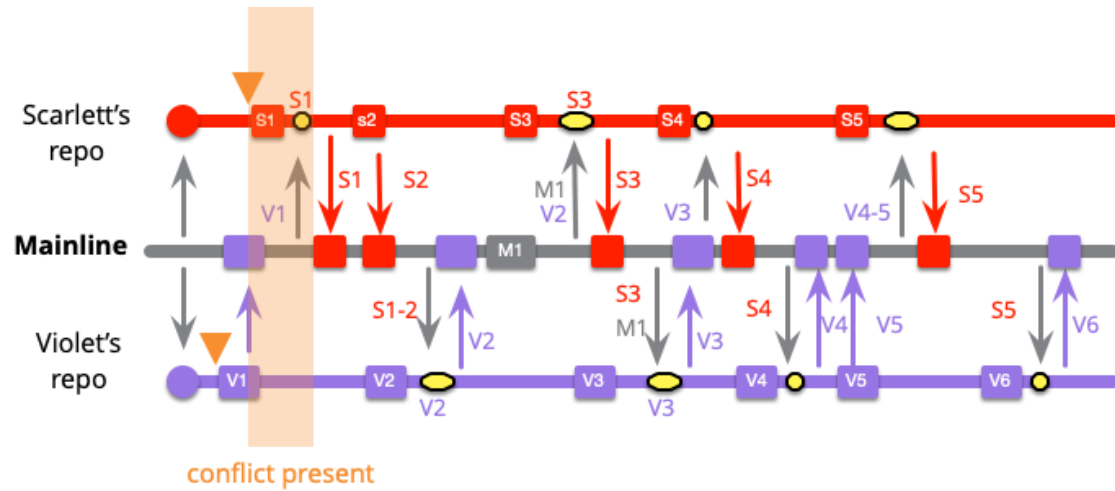
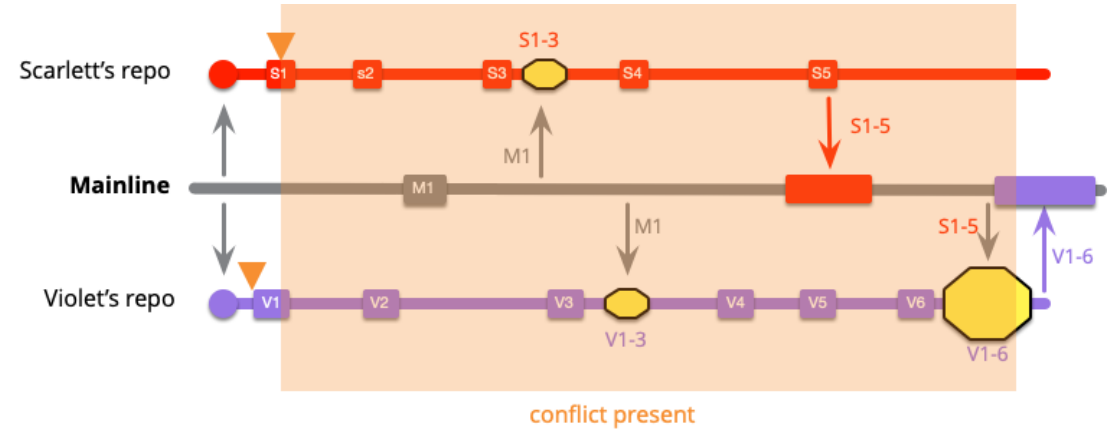
Integration Frequency

HIGH FREQUENCY

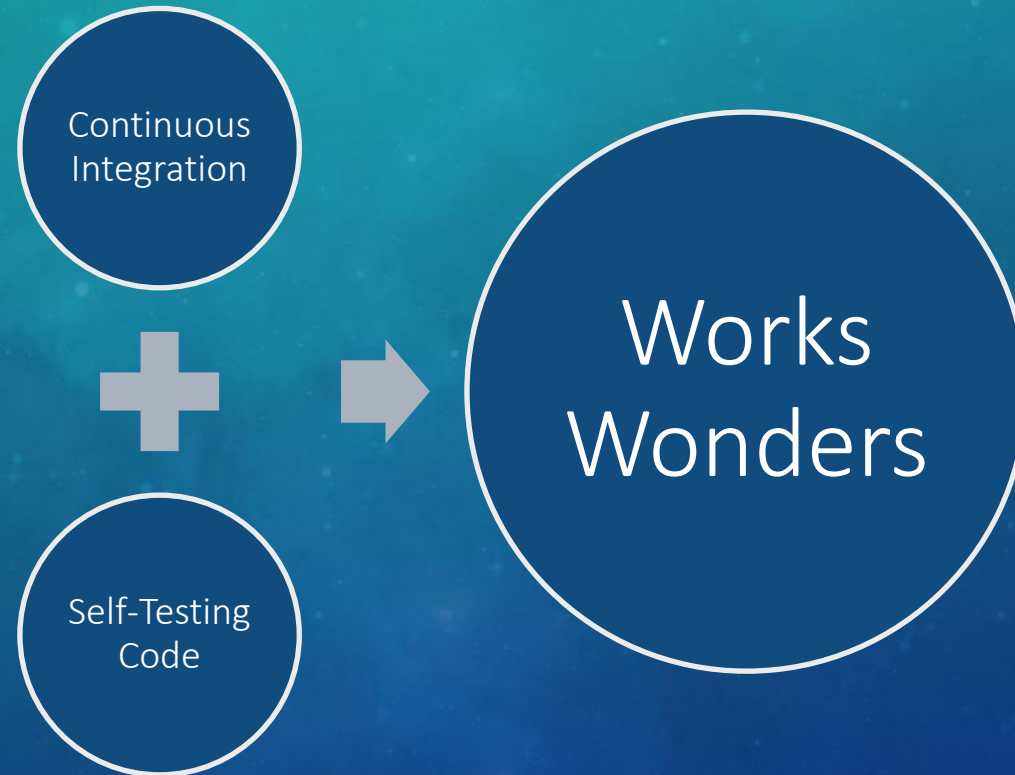


COMPARING FREQUENCIES

"if it hurts... do it more often"



CONTINUOUS INTEGRATION



COMPARING FEATURE BRANCHING AND CONTINUOUS INTEGRATION



If you know You can merge every day

Choose

Continuous Integration



If you do not know that

Choose

Feature Branching

COMPARING FEATURE BRANCHING AND CONTINUOUS INTEGRATION

Feature Branching

- ✓ All the code in a feature can be assessed for quality as a unit
- ✓ Feature code only added to product when feature is complete
- ✗ Less frequent merges

Continuous Integration

- ✓ Supports higher frequency integration than feature length
- ✓ Reduced time to find conflicts
- ✓ Smaller merges
- ✓ Encourages refactoring
- ✗ Requires commitment to healthy branches (and thus self-testing code)
- ✓ Scientific evidence that it contributes to higher software delivery performance

PREINTEGRATION REVIEW

Commit sent to be reviewed

Other member checks it and makes comments

Commit is changed

Pushed to mainline



PREINTEGRATION REVIEW

Popular for Open Source projects

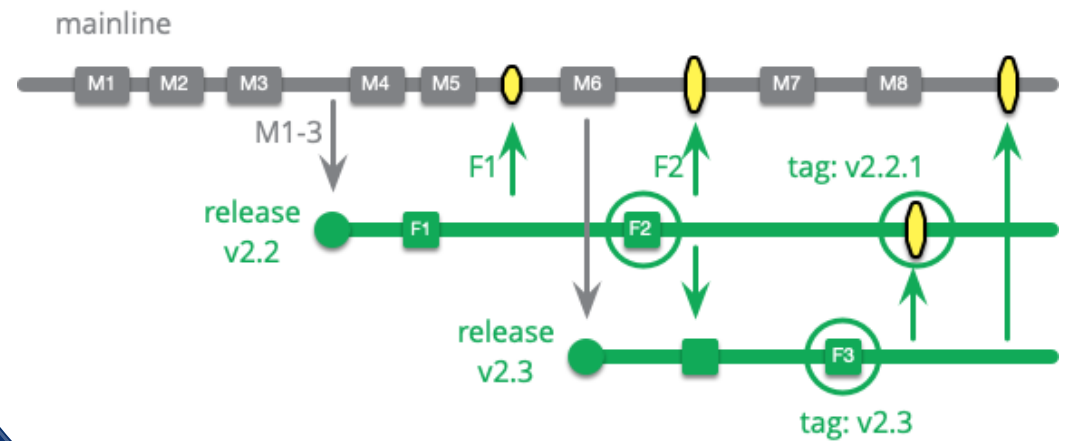
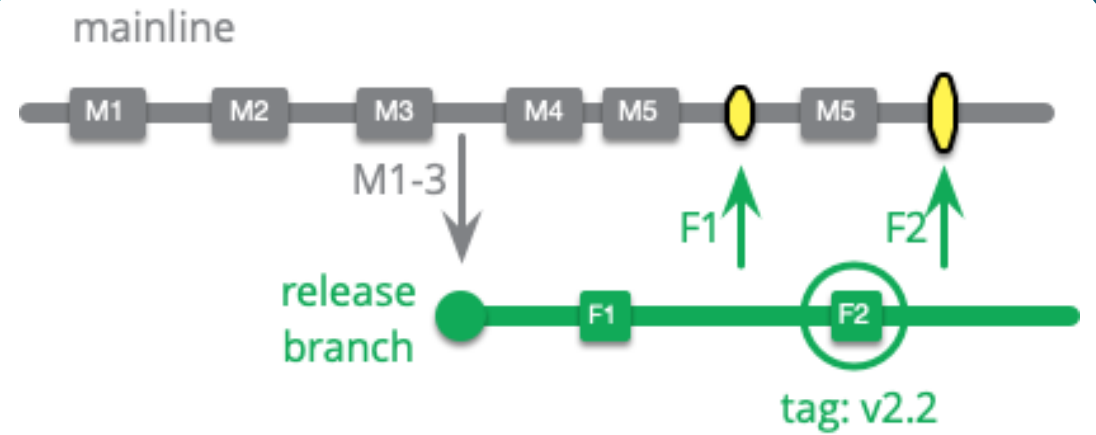
Generates integration friction

Modularity is very important for integration

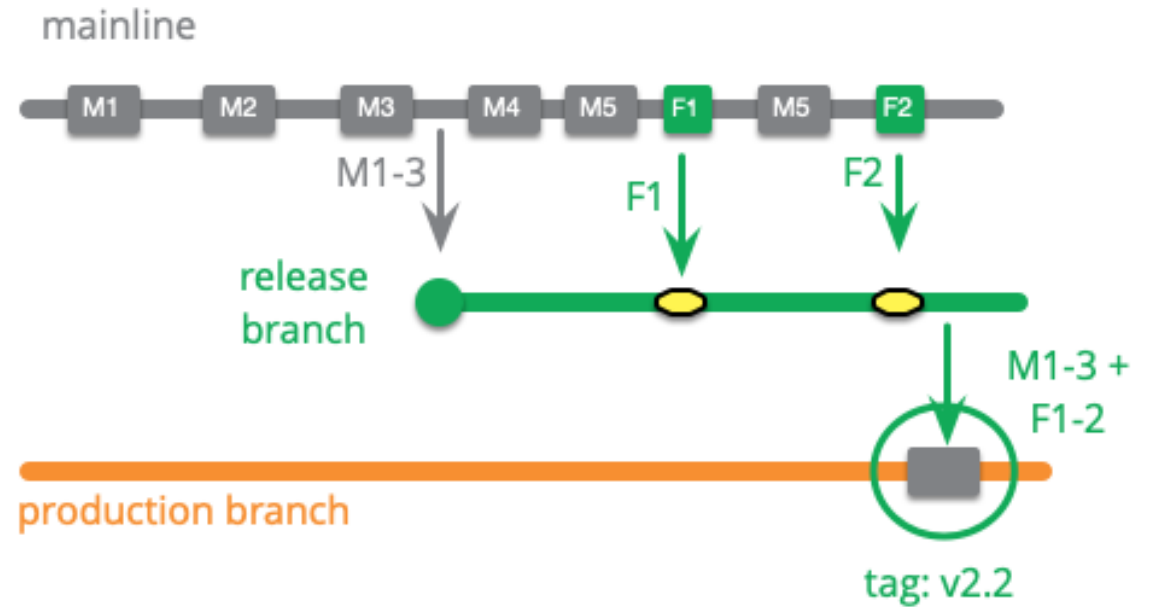


MAINLINE TO PRODUCTION

RELEASE BRANCH

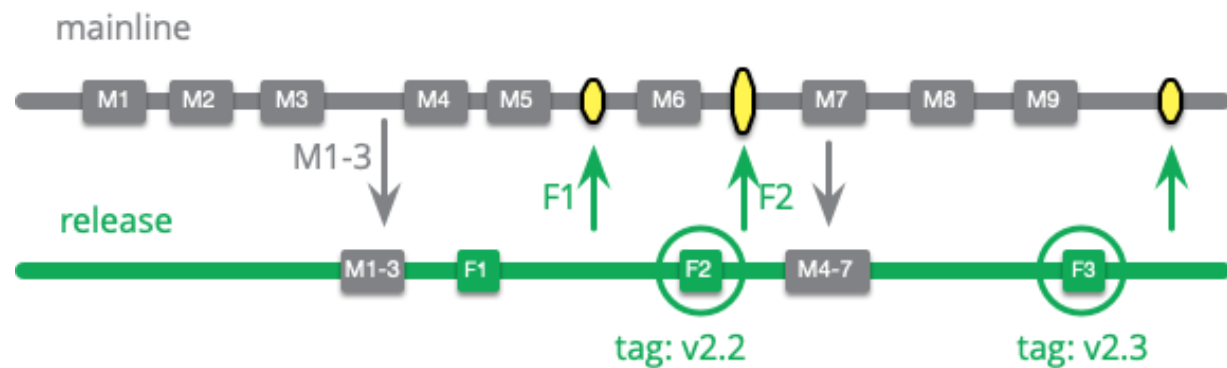


MATURITY BRANCH

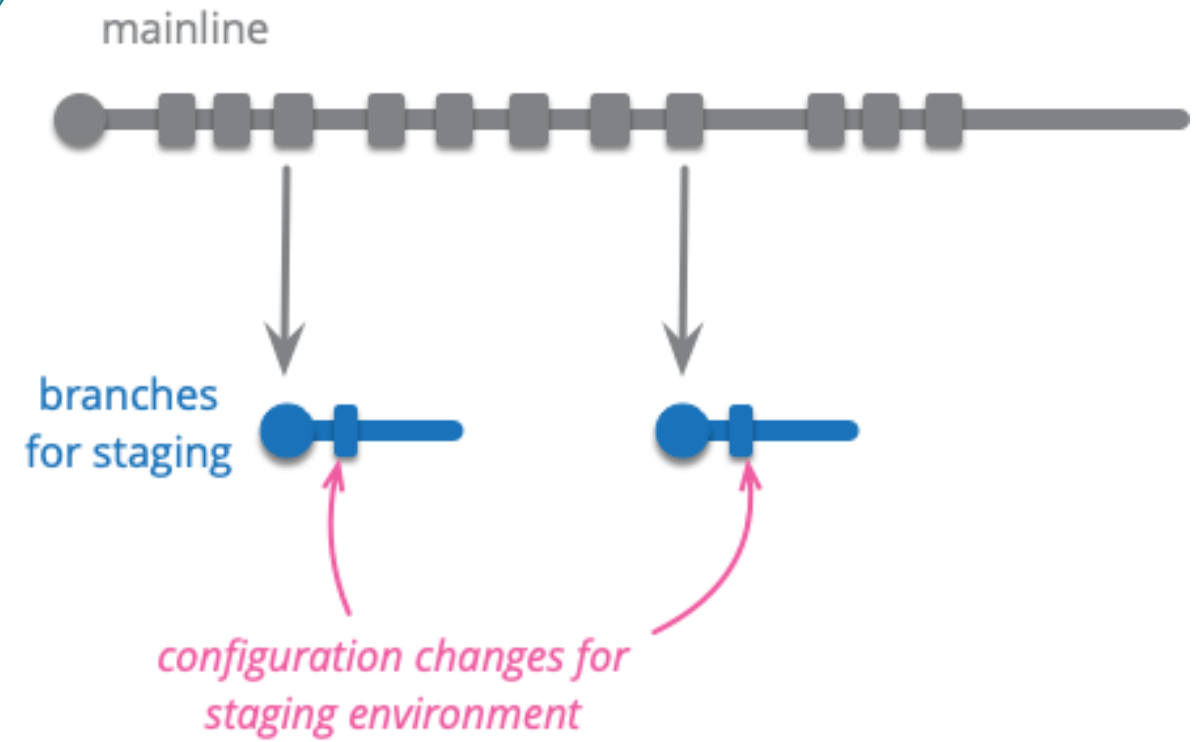


LONG LIVED RELEASE BRANCH

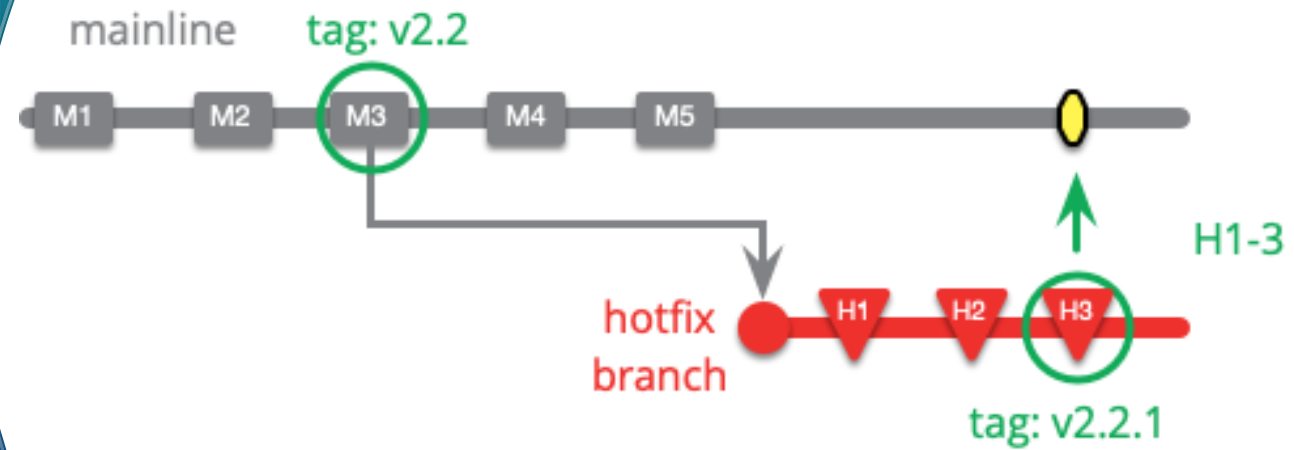
Release Branch + Maturity Branch



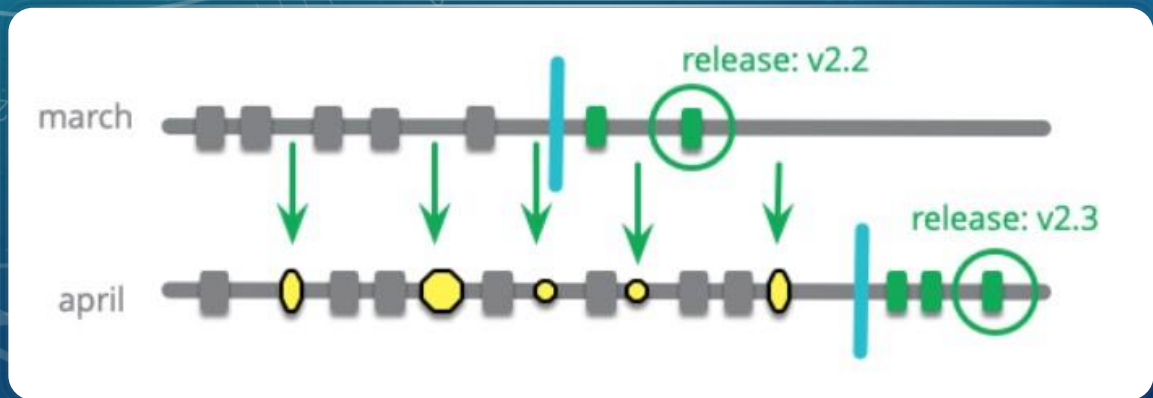
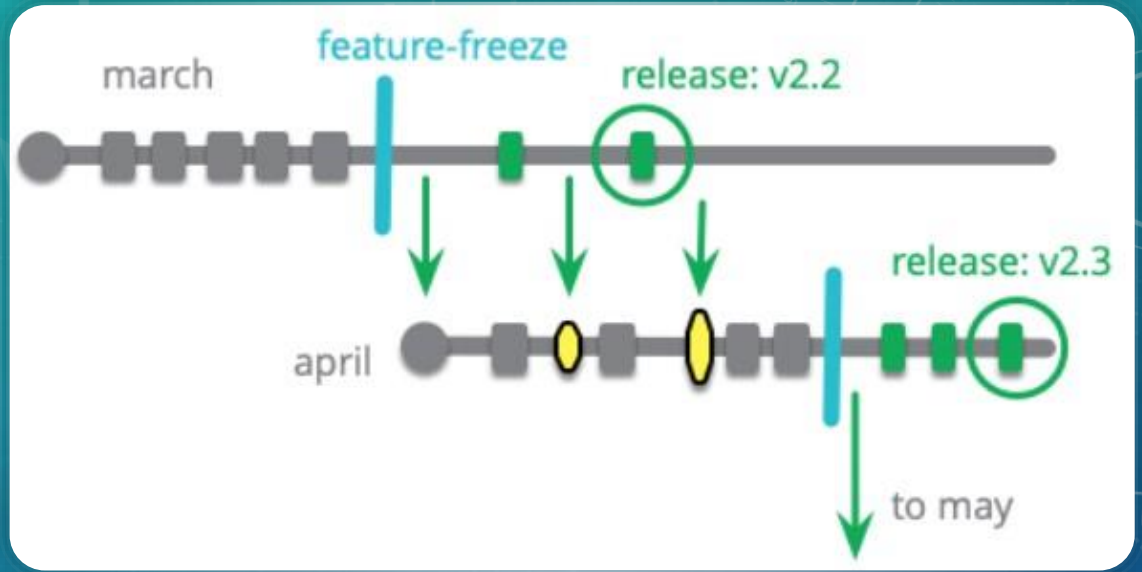
ENVIROMENT BRANCH



HOTFIX BRANCH

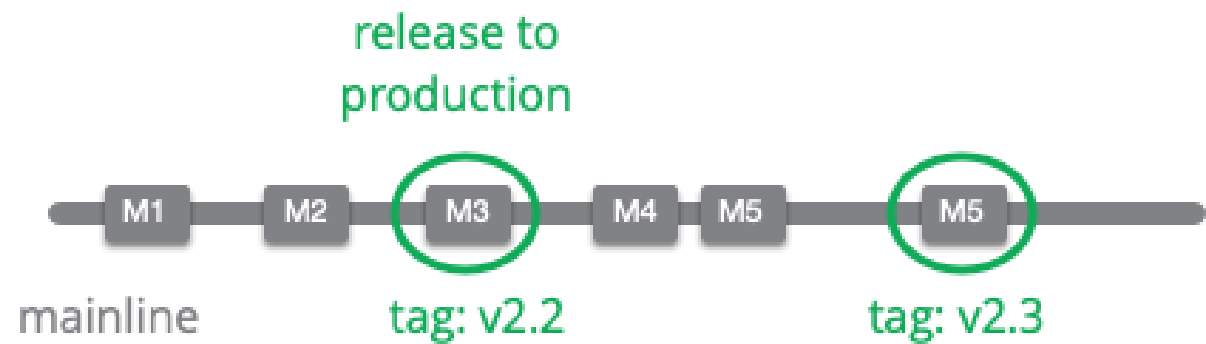


RELEASE TRAIN



Variation: Loading future trains

RELEASE-READY MAINLINE



OTHER PATTERNS

The background is a solid blue color. It features several faint, light blue circular patterns. In the top right, there is a large circular scale with numerical markings from 80 to 210 in increments of 10. Below this scale are several concentric circles, some solid and some dashed, with arrows indicating a clockwise direction. In the bottom left, there are more concentric circles, some solid and some dashed, with arrows indicating a counter-clockwise direction. The overall aesthetic is technical and geometric.



Experimental Branch

- Several experimental approaches
- Code may be abandoned



Collaboration Branch

- Share code among colleagues
- When code is not visible to others.



Team Integration Branch

- Used when work is divided into sub-groups
- MAINLINE of the sub-group