



Tecniche e architetture avanzate per lo sviluppo del software

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Universita' degli Studi Di Torino - Dipartimento di Informatica





Gitflow

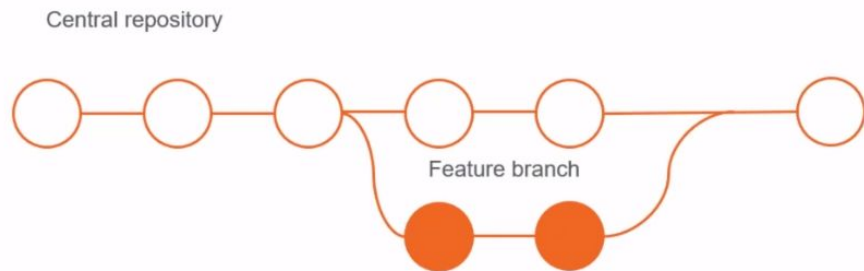


guide and implement the workflow in your branch

Comparison

- Centralized (like SVN, CVS):
 - Centralized repository
 - End users clone the repository
 - Pull changes from repository to local
 - Push local changes to central repository
- Feature branch:

Feature Branch Workflow

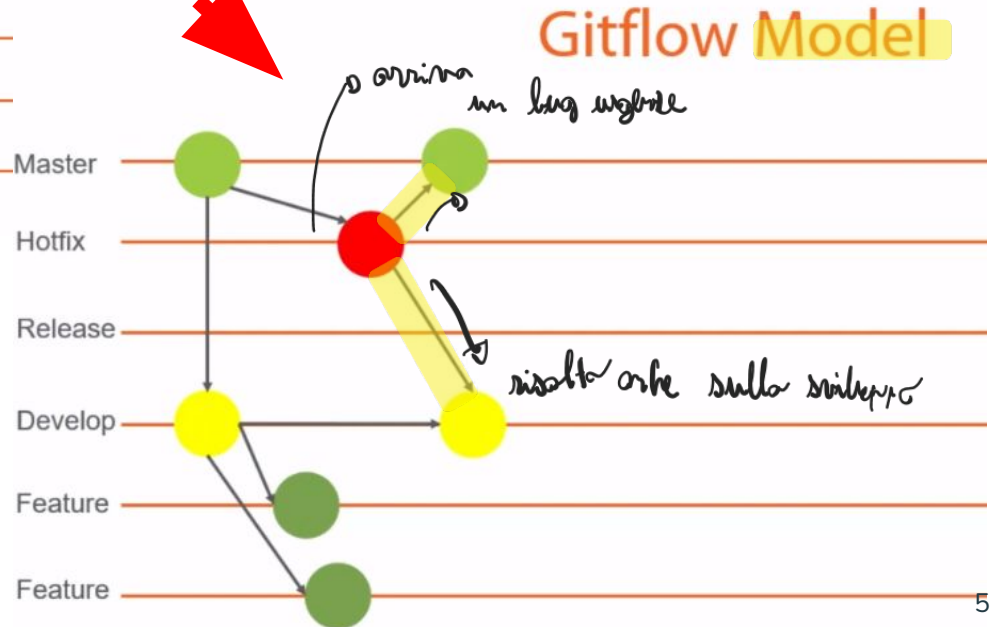
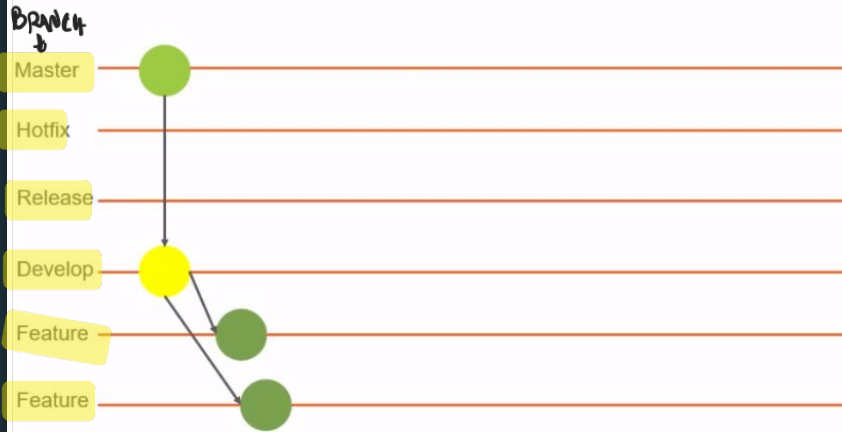


`git checkout -b my-feature master`

What is Gitflow?

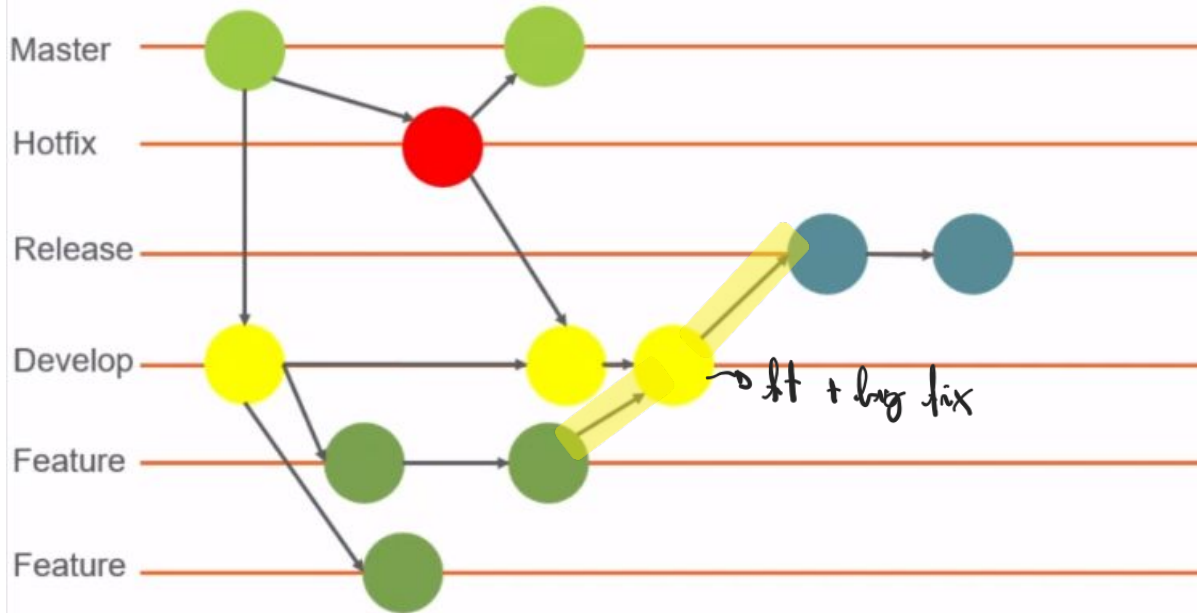
- More complicated than feature branch workflow
- Two branches record history of the project
 - master and develop
- Features reside in their own branches...
- ... as do **hotfixes** → *fix bug molto urgente*
- Release branches branch off develop

Gitflow Model

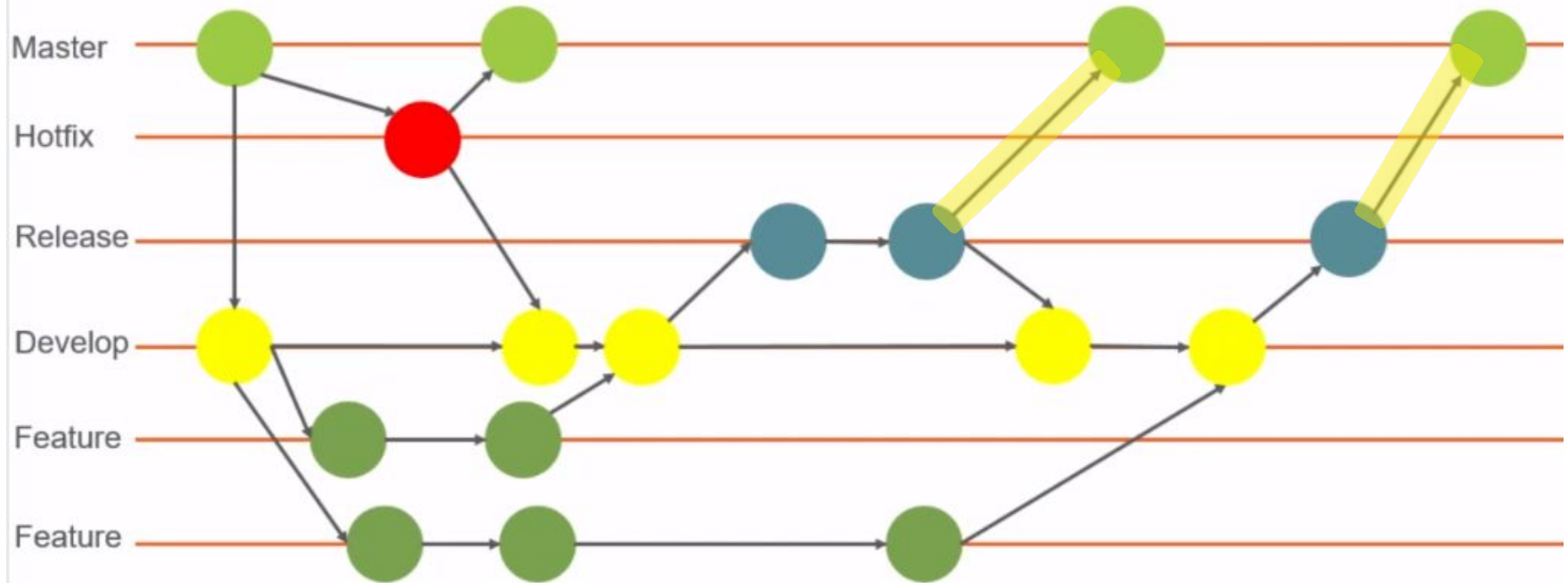


Release and feature branches

Gitflow Model



Gitflow Model



Install Git Flow

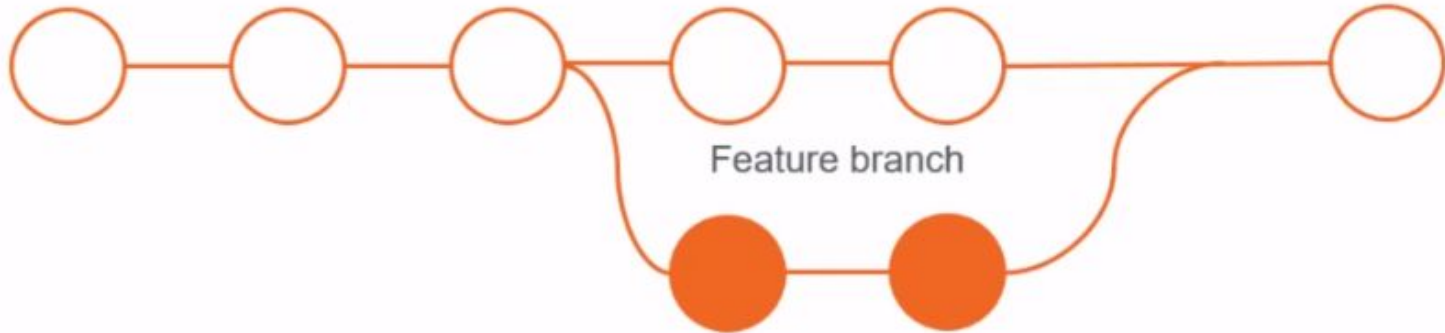
- Gitflow is a set of scripts that extend git
 - Can use standard git commands but scripts make it easier
- Has to be installed separately to git
 - <https://github.com/nvie/gitflow/wiki/Installation>
 - <https://github.com/nvie/gitflow/wiki/Mac-OS-X>
 - <https://github.com/nvie/gitflow/wiki/Windows>
 - <https://github.com/nvie/gitflow/wiki/Linux>

What is a Feature Branch?

- Place where work for a specific feature is done
- Don't want all work done on the main branch
 - Difficult to track
 - Difficult to manage merges
 - Difficult to back out
 - Difficult to experiment

Feature Branch Workflow

Central repository



git flow feature finish feature-name

The players

- Gio - the architect: creates branch release (0)
- Alf - the reviewer: reviews the feature before pushing this branch into development(2)
- Rachel - the developer: creates a feature branch (1)
- Marc - the build manager

Where Now?

- Feature is published to develop
- Now need to create a release

```
- [deleted] - release/sprint1-release  
Deleted branch release/sprint1-release (was b564f26).
```

Summary of actions:

Release branch 'release/sprint1-release' has been merged into 'master'

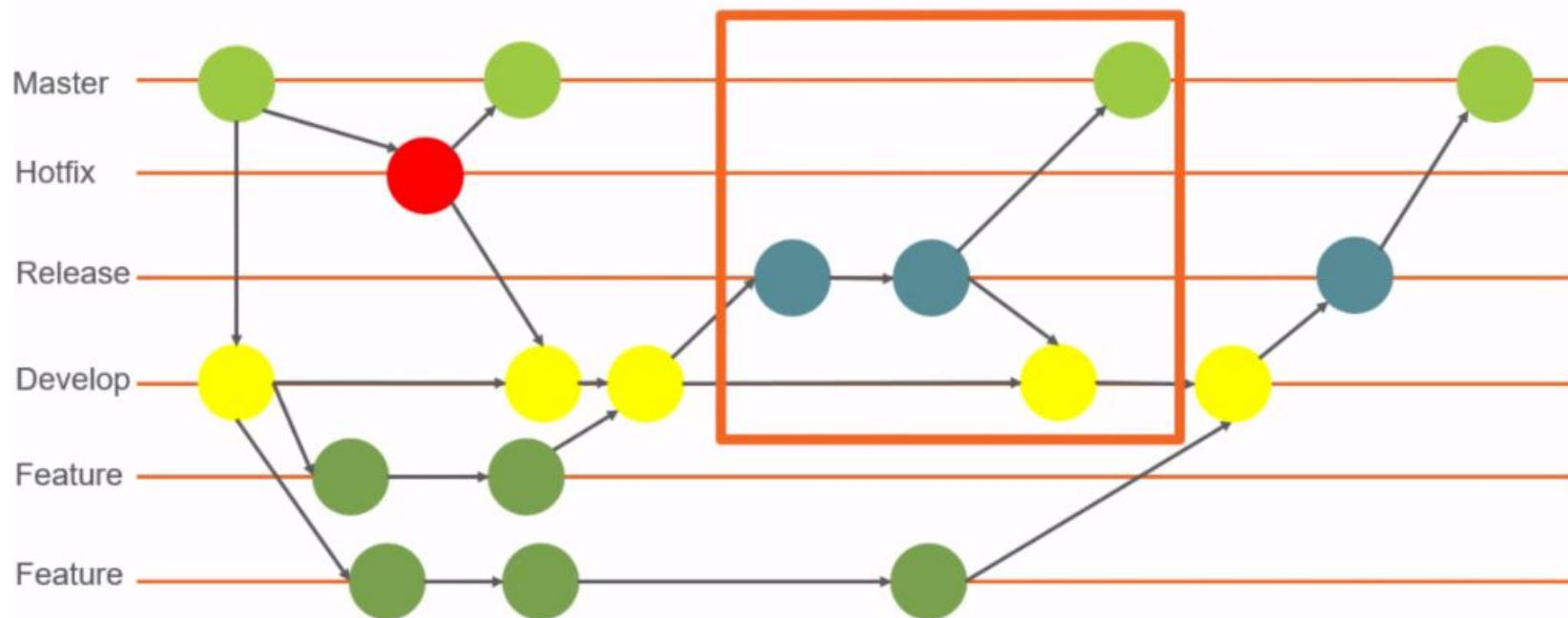
The release was tagged 'sprint1-release'

Release tag 'sprint1-release' has been back-merged into 'develop'

Release branch 'release/sprint1-release' has been locally deleted; it has been remotely deleted from 'origin'

You are now on branch 'develop'

Gitflow Model



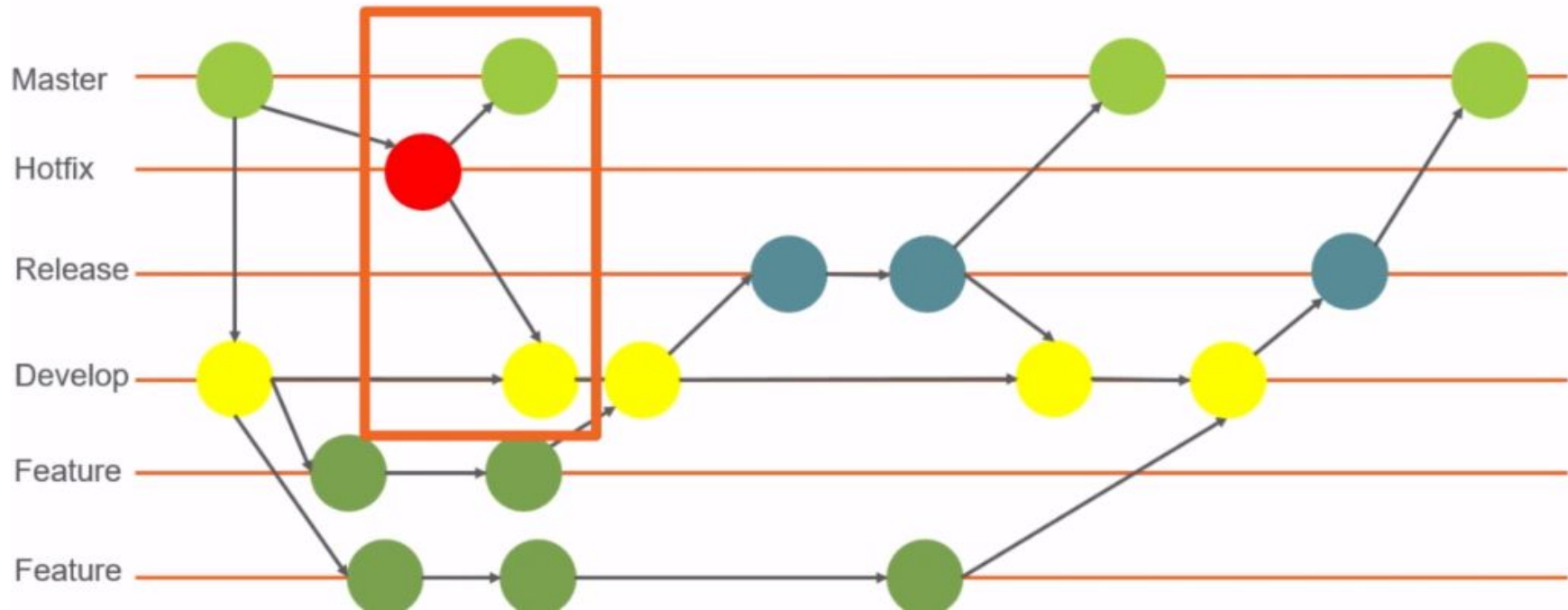
Why Hotfixes?

- Code is never perfect
 - Often spot bugs in production code
- Hotfix allows us to update the production branch

What is a Hotfix Branch?

- An emergency fix to the released code
- Branch of master to create the hot fix
- All fixes are merged into master and develop

Gitflow Model



Git Flow Hot Fix

- `git flow hotfix start <version>`
- `git flow hotfix finish <version>`
- `git flow hotfix publish <version>`
- `git flow hotfix track <version>`

Changes
back to
Master and
Develop

```
Merge made by the 'recursive' strategy.  
.../jacket/entry/data/models/Entry.java | 25 ++++++  
1 file changed, 16 insertions(+), 9 deletions(-)  
Deleted branch hotfix/hf1 (was b59c503).
```

Summary of actions:

- Hotfix branch 'hotfix/hf1' has been merged into 'master'
- The hotfix was tagged 'hf1'
- Hotfix tag 'hf1' has been back-merged into 'develop'
- Hotfix branch 'hotfix/hf1' has been locally deleted
- You are now on branch 'develop'

```
c:\demos\dan (develop)
```

```
λ
```


References

Using GitFlow, Kevin Jones