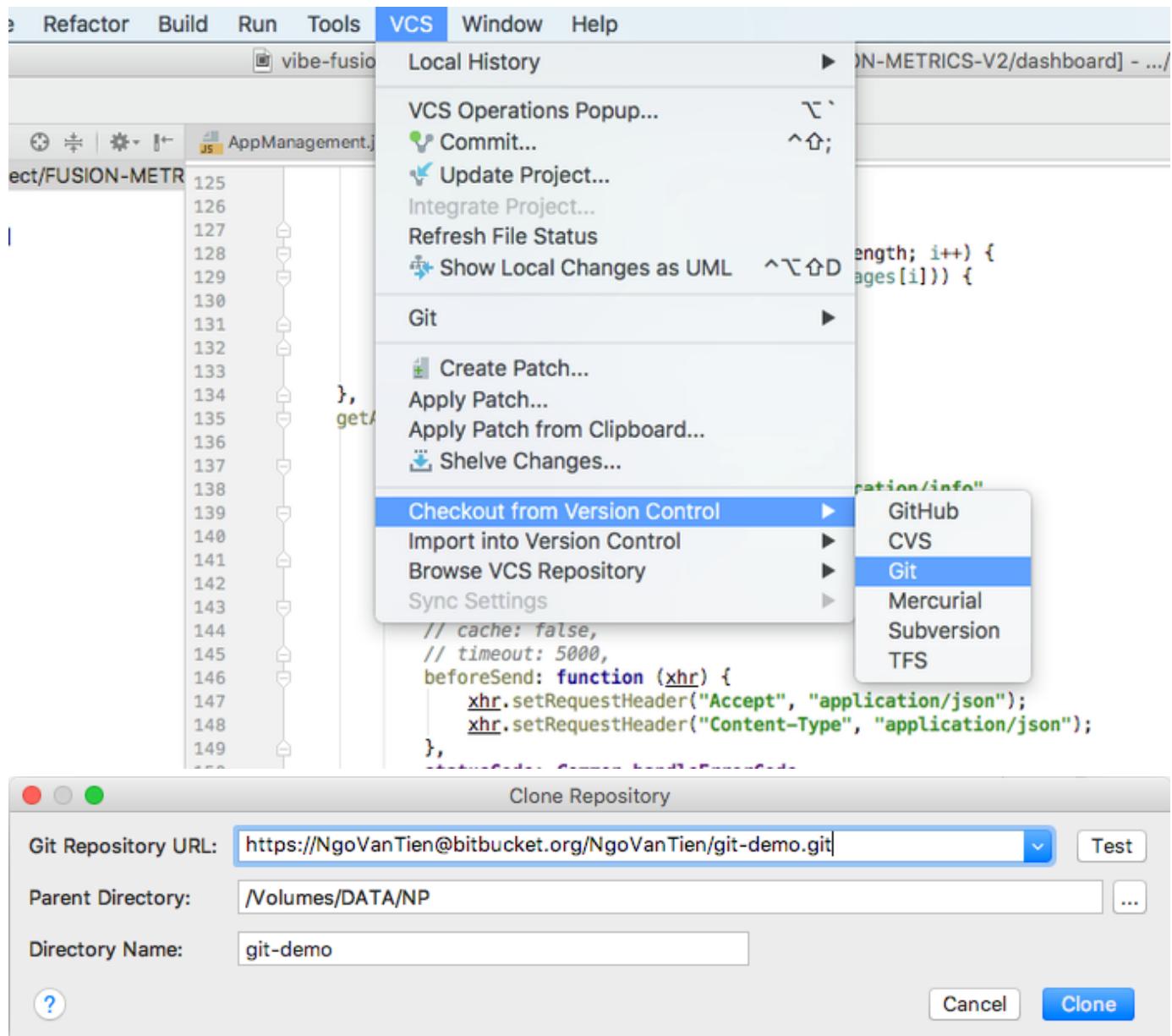


# IntelliJ

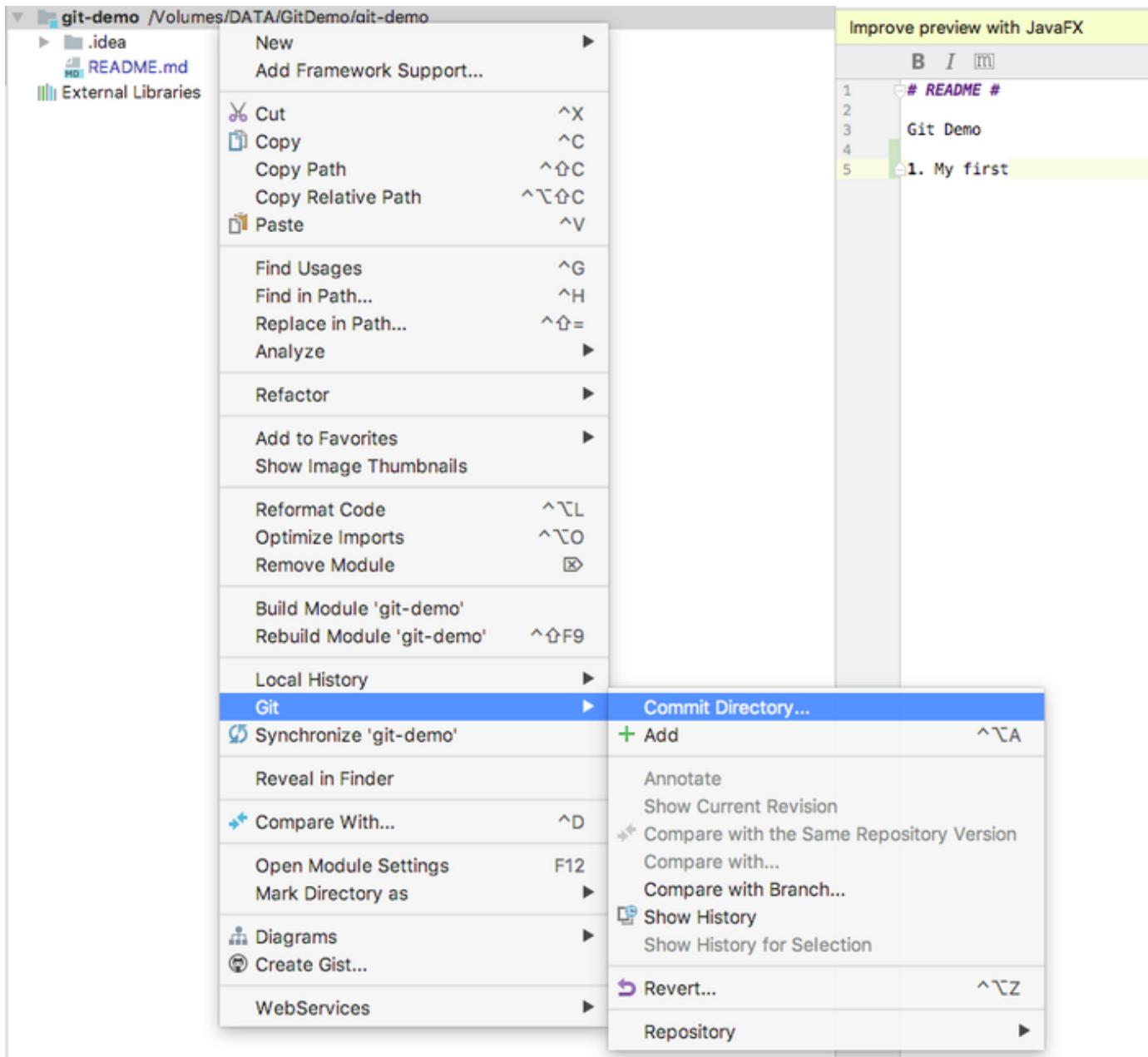
## Clone source code

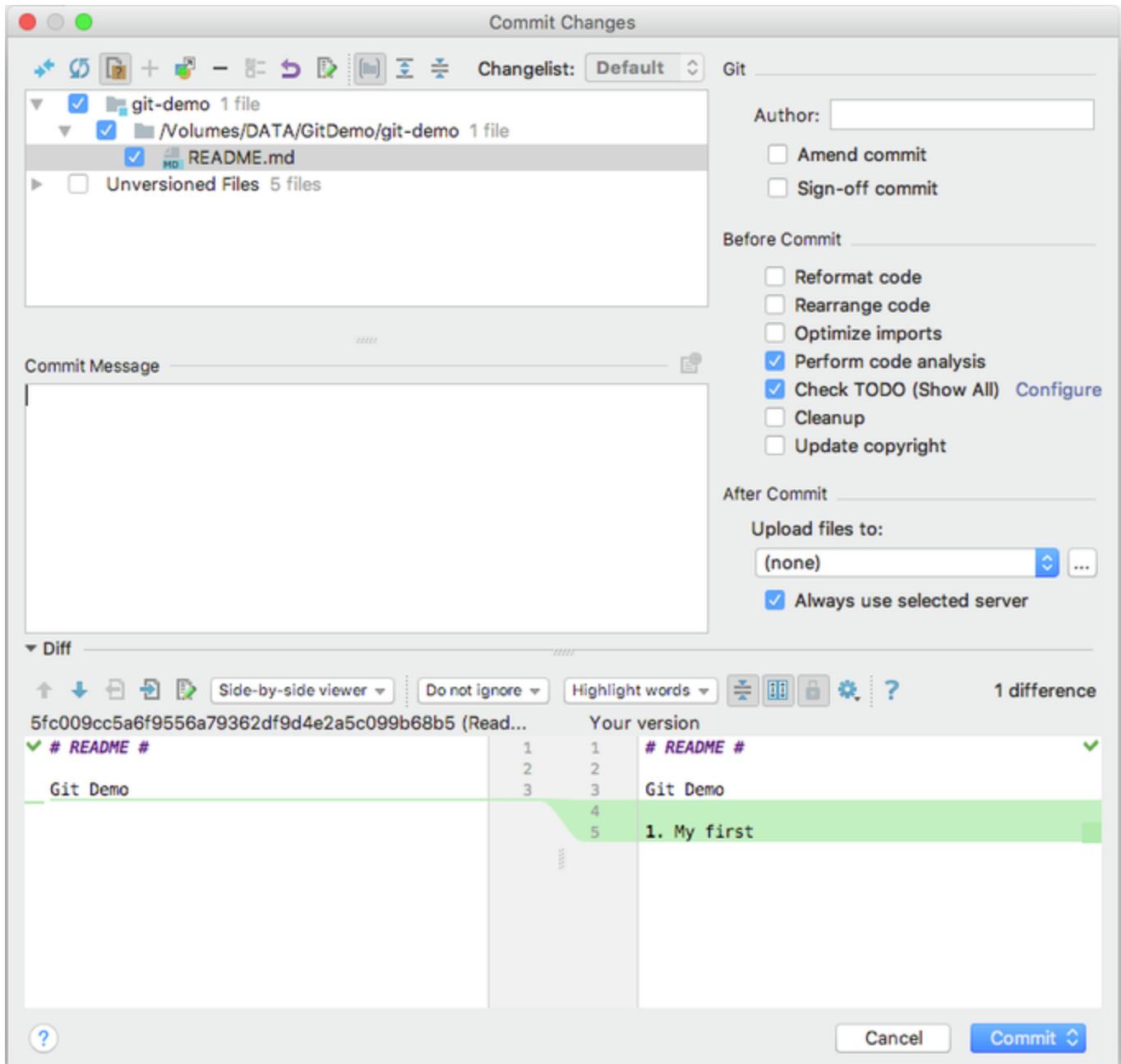
Create a new directory in home directory and get existing source code from git remote repository



## Commit code

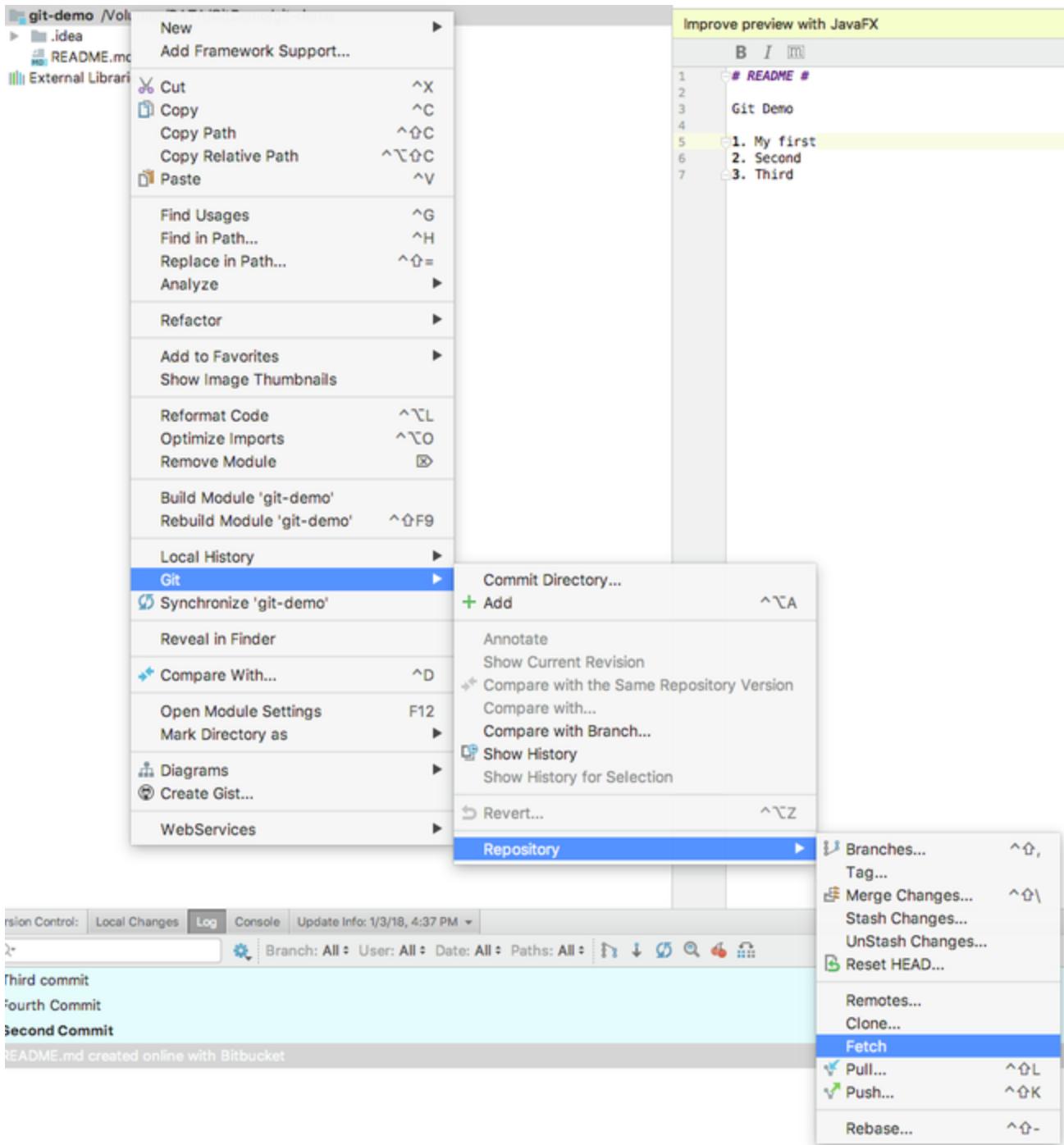
Stores the **current contents of the index** in a new commit along with a **log message** from the user describing the changes.





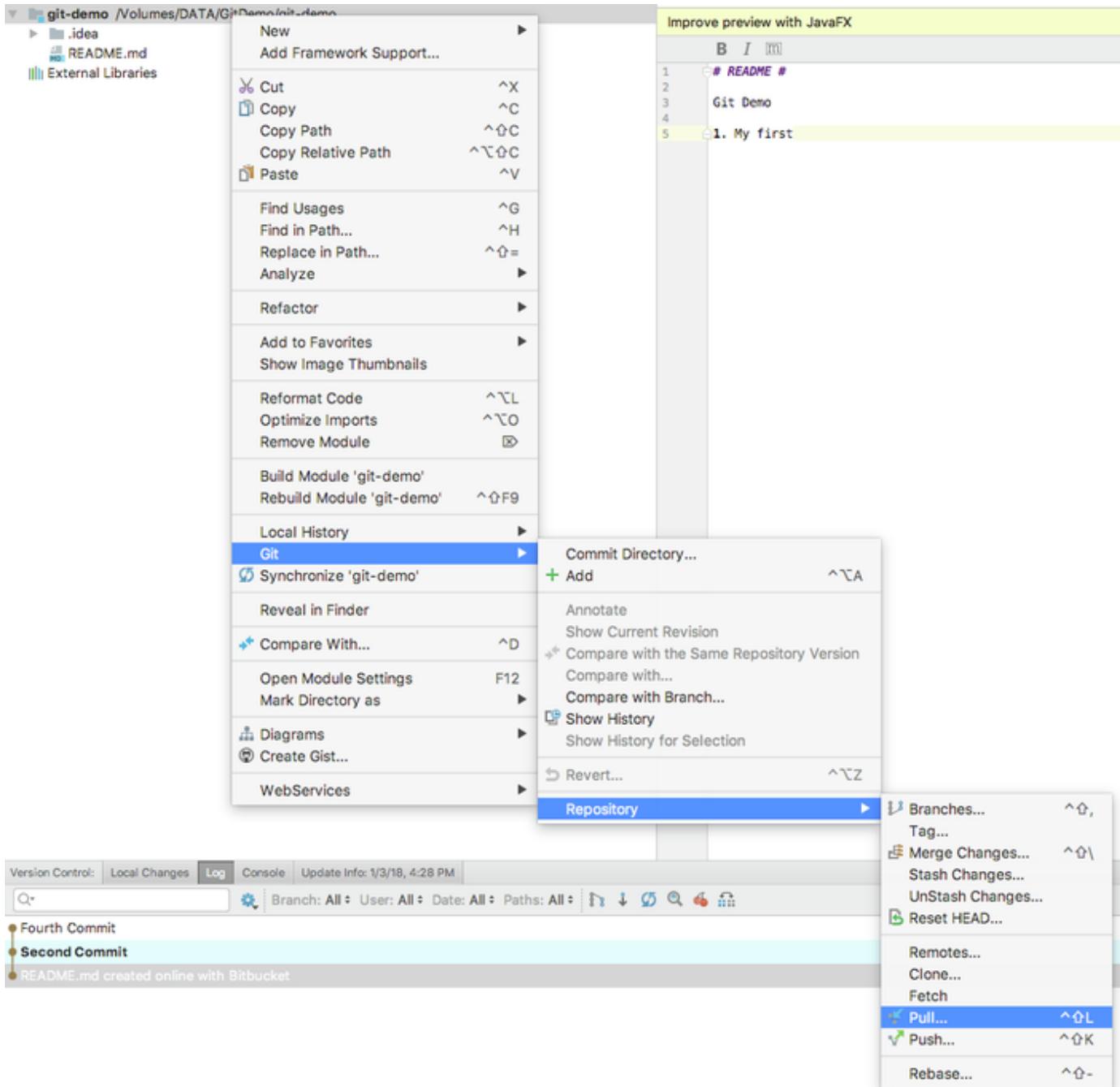
## Fetch

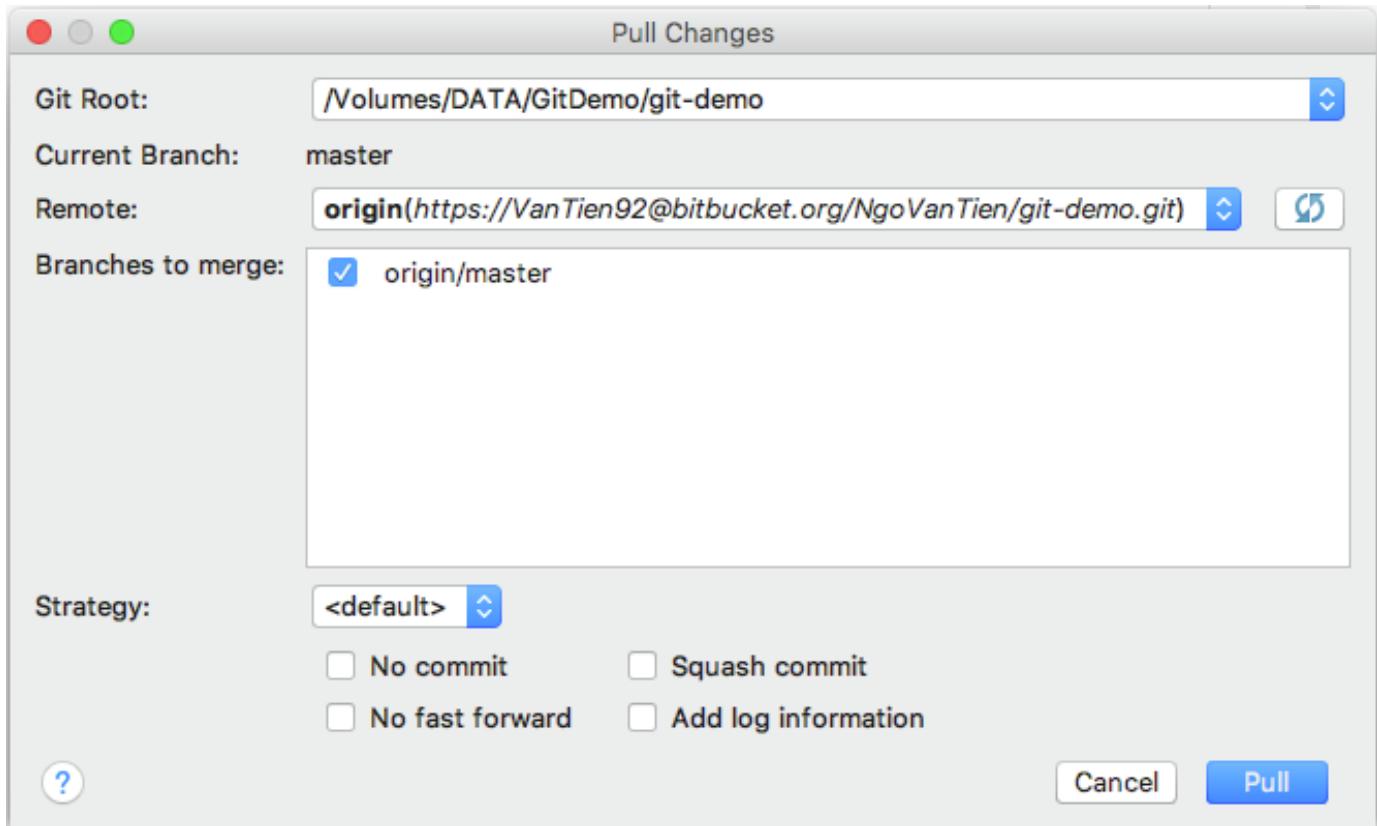
Fetches named heads or tags from one or more other repositories, along with the objects necessary to complete them.



## Pull (Update) code

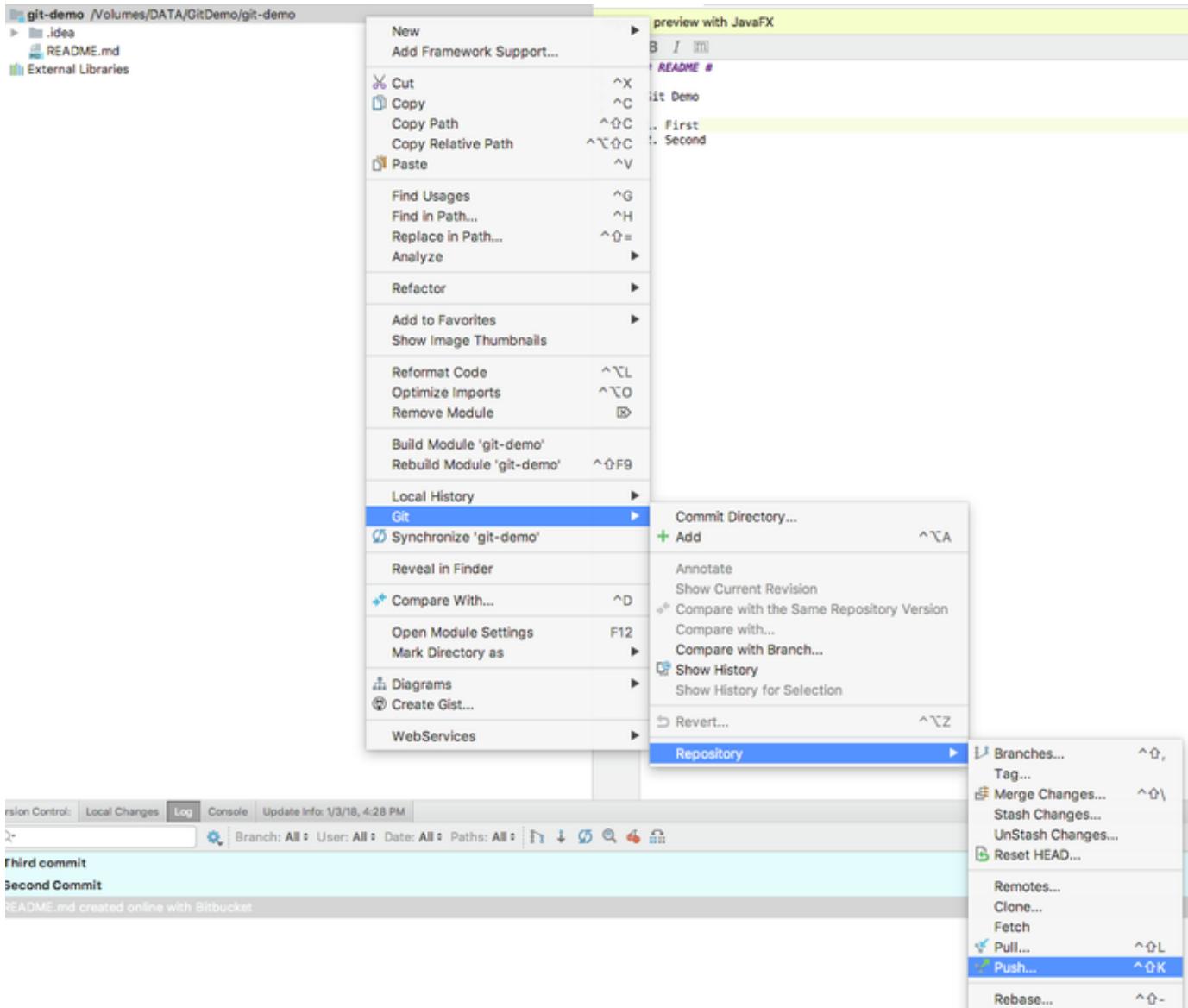
Incorporates changes from a remote repository into the current branch

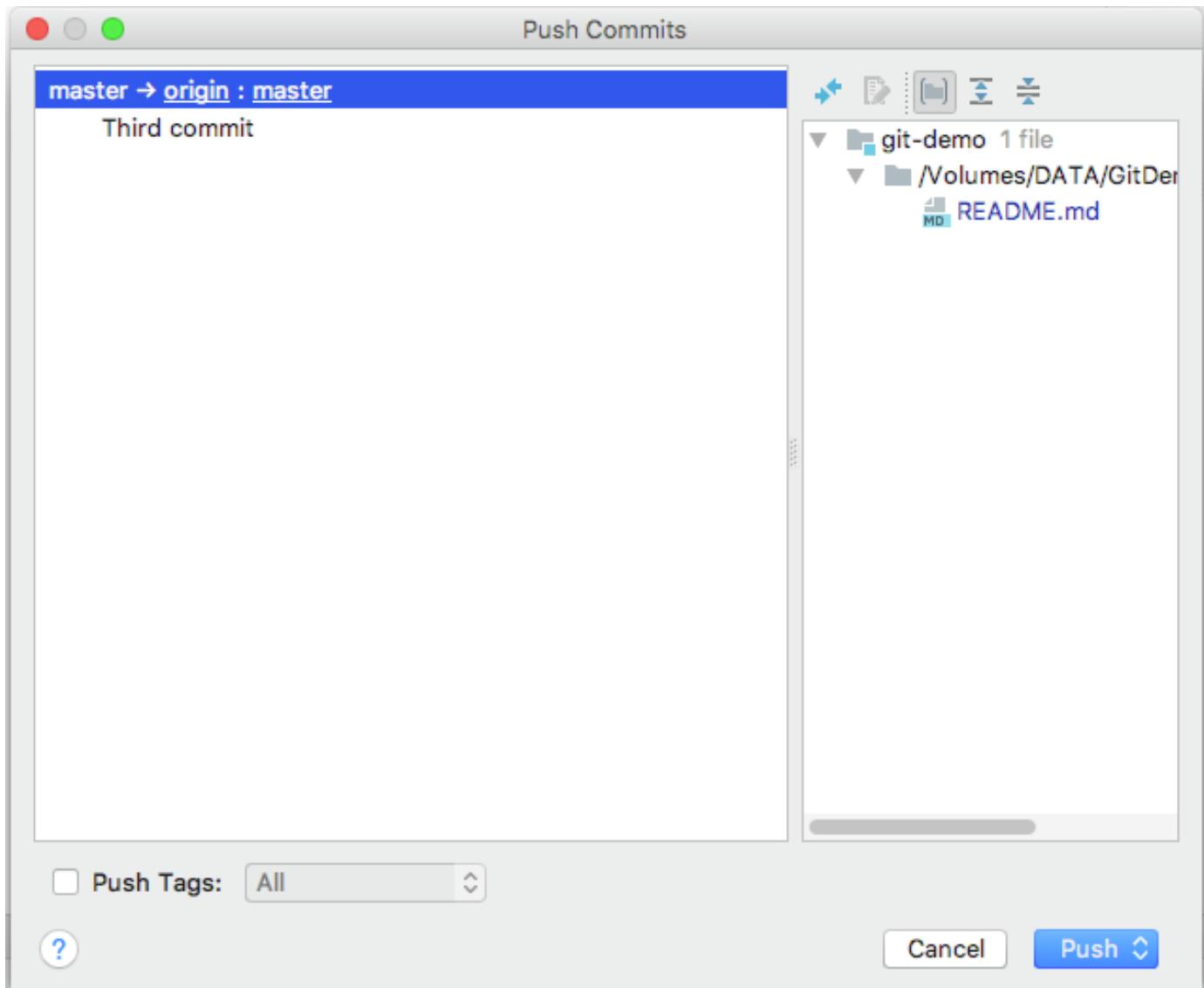




## Push code

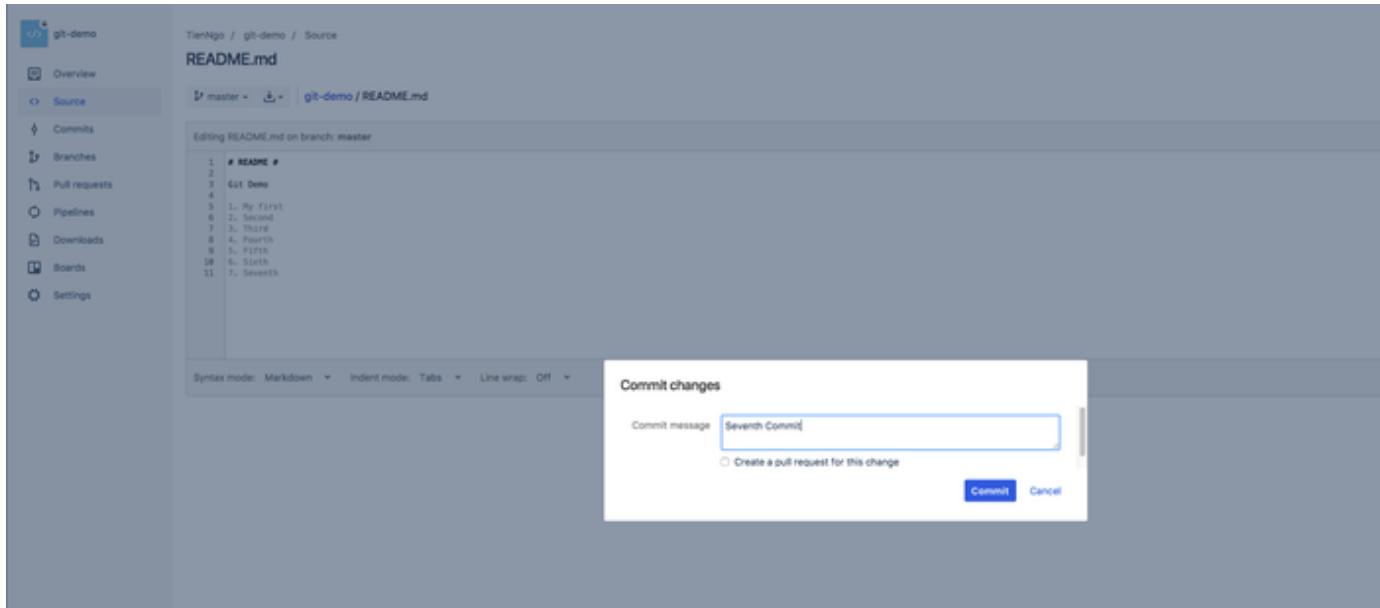
Updates remote refs using local refs, while sending objects necessary to complete the given refs



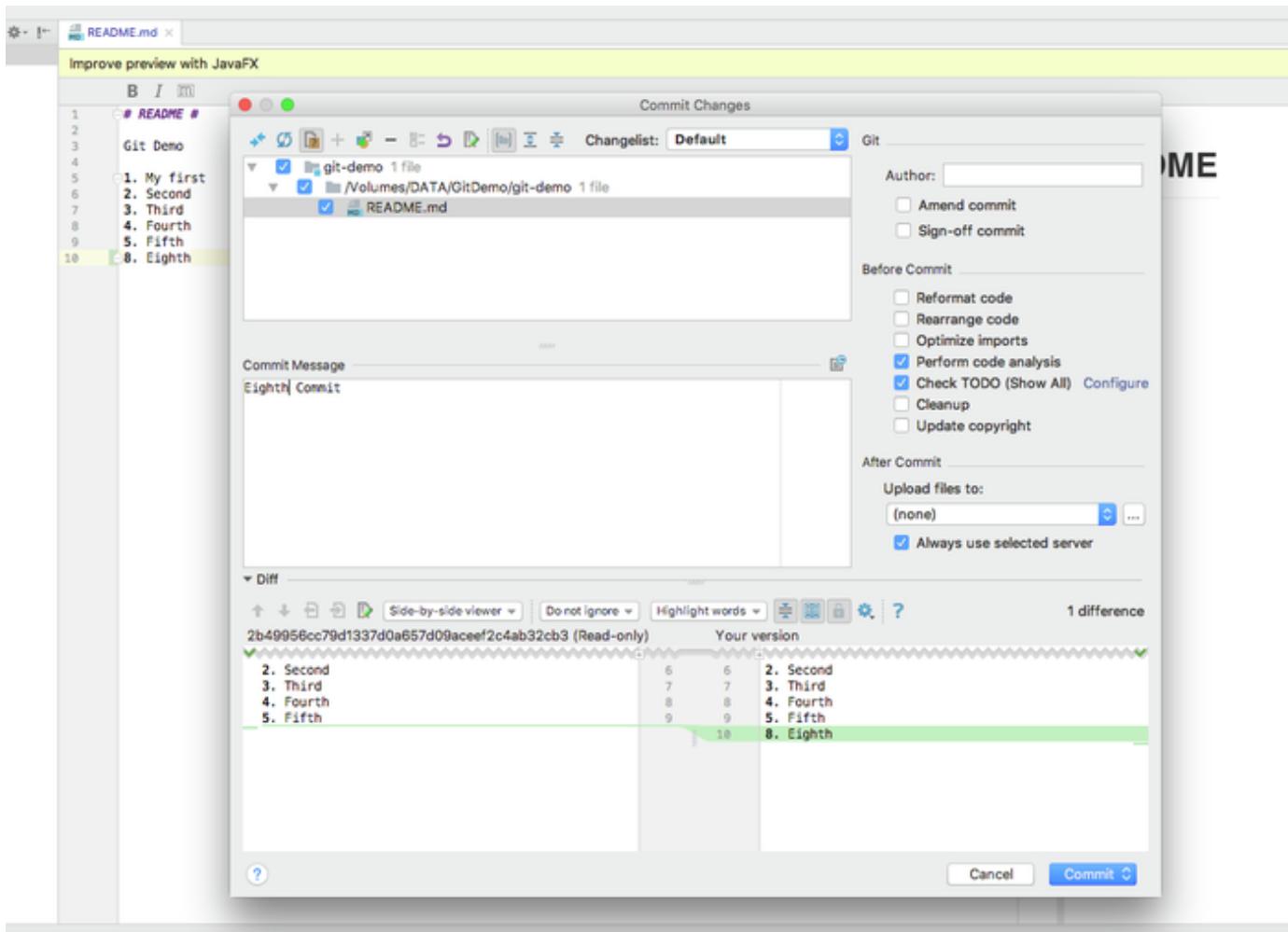


## Handling conflict

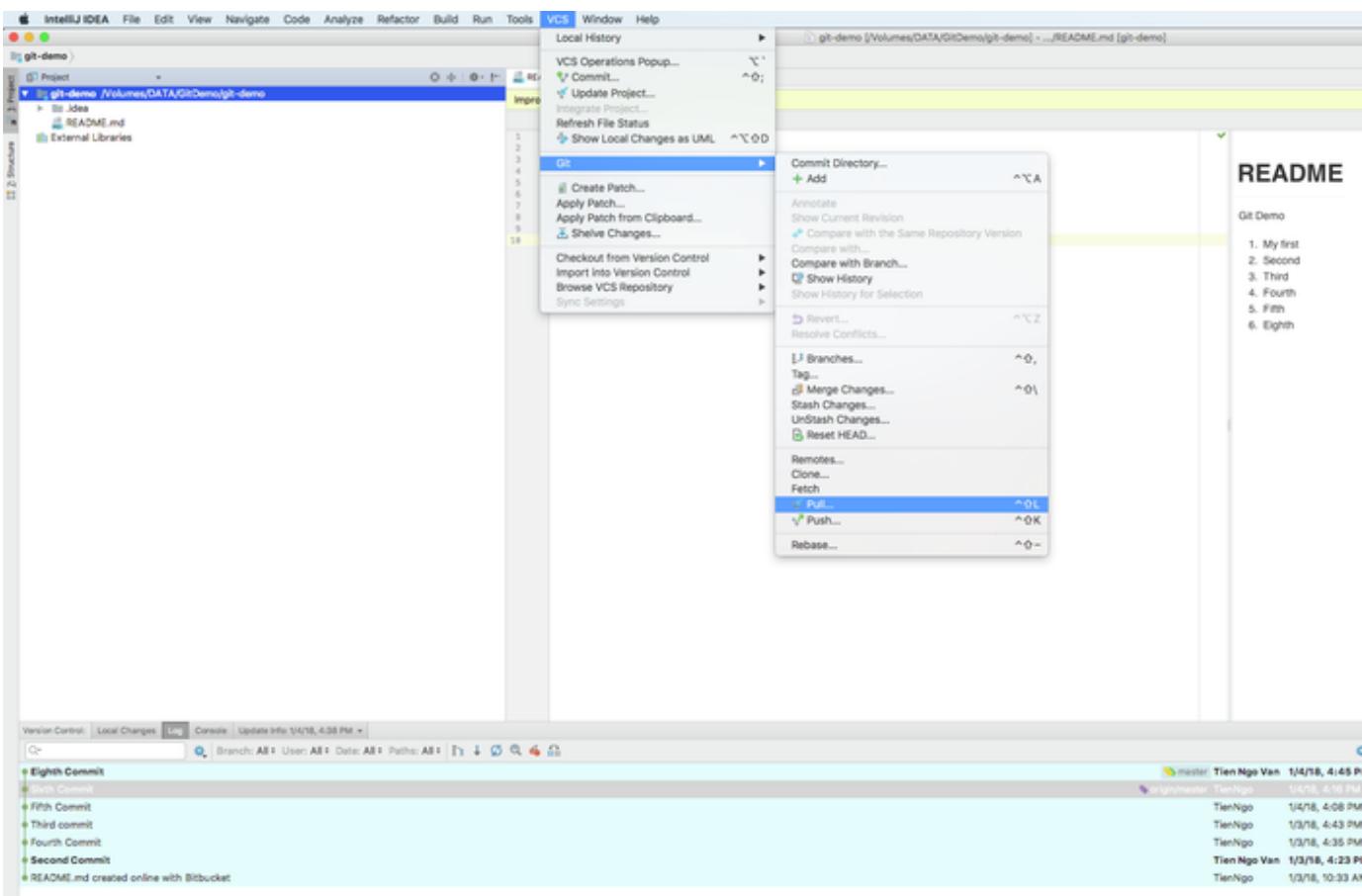
- User 1 commit 2 line (10 & 11) from Bitbucket server



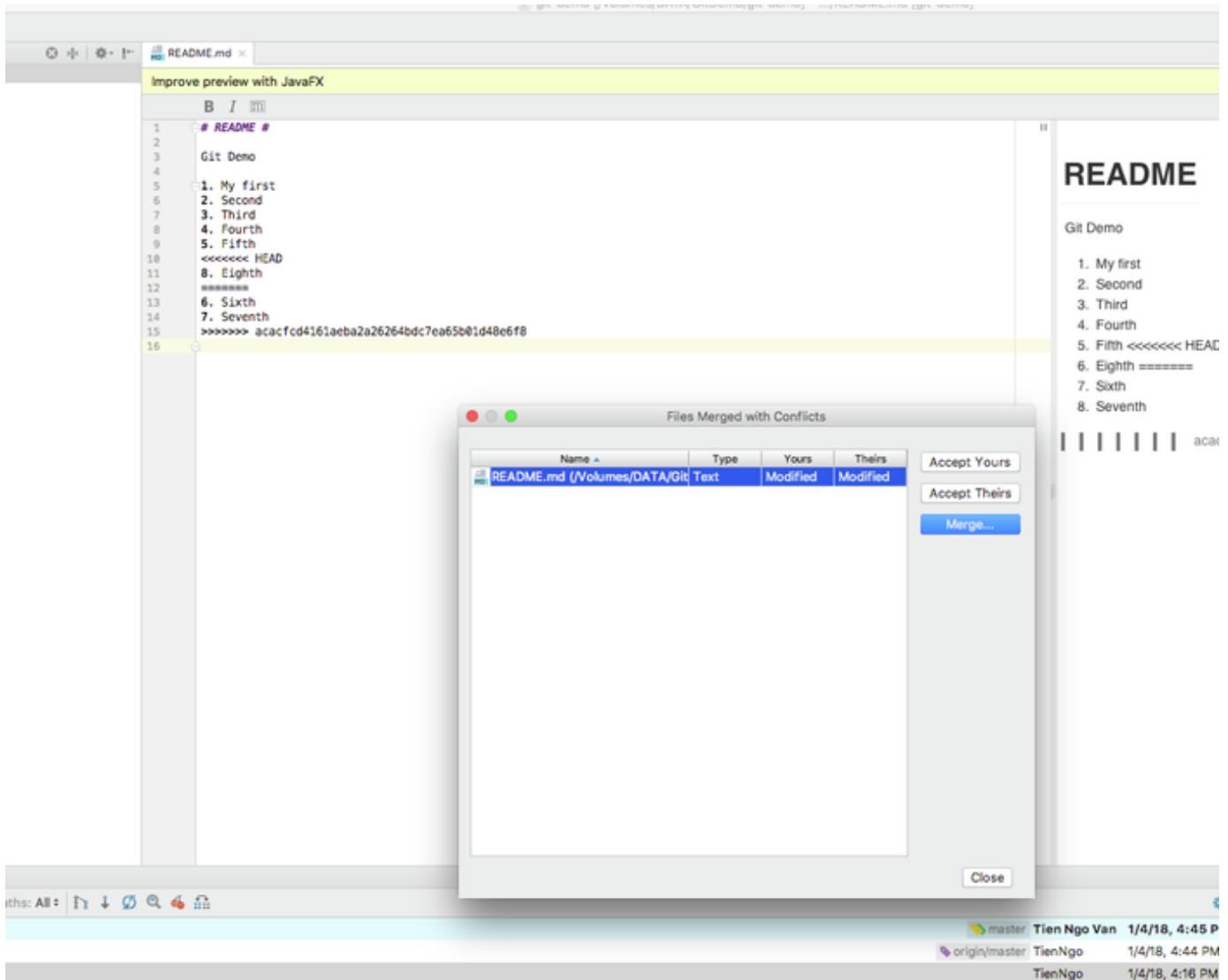
- User 2 commit 1 line (10) from other tool (IntelliJ)



- User 2 pull code from server



- Code will be conflict



- Click **Merge...**

Merge Revisions for /Volumes/DATA/GitDemo/gh-demo/README.md

No changes, 1 conflict

Local Changes (Read-only)

Changes from Server (revision acacfd4f167aeb2a2c6264bd7ea65b07d48e0f8) (Read-only)

Result:

```
1 1 # README #
2 2
3 3 GIt Demo
4 4
5 5 1. My First
6 6 2. Second
7 7 3. Third
8 8 4. Fourth
9 9 5. Fifth
10 10 6. Sixth
11 11 7. Seventh
```

Changes from Server (revision acacfd4f167aeb2a2c6264bd7ea65b07d48e0f8) (Read-only)

No changes, 1 conflict

Local Changes (Read-only)

Changes from Server (revision acacfd4f167aeb2a2c6264bd7ea65b07d48e0f8) (Read-only)

Result:

```
1 1 # README #
2 2
3 3 GIt Demo
4 4
5 5 1. My First
6 6 2. Second
7 7 3. Third
8 8 4. Fourth
9 9 5. Fifth
10 10 6. Sixth
11 11 7. Seventh
```

Accept Left | Accept Right | Abort | Merge

- Alert will be shown when all conflict resolved

Merge Revisions for /Volumes/DATA/GitDemo/gh-demo/README.md

All conflicts resolved

Local Changes (Read-only)

Changes from Server (revision acacfd4f167aeb2a2c6264bd7ea65b07d48e0f8) (Read-only)

Result:

```
1 1 # README #
2 2
3 3 GIt Demo
4 4
5 5 1. My First
6 6 2. Second
7 7 3. Third
8 8 4. Fourth
9 9 5. Fifth
10 10 6. Sixth
11 11 7. Seventh
12 12 8. Eighth
```

Changes from Server (revision acacfd4f167aeb2a2c6264bd7ea65b07d48e0f8) (Read-only)

All conflicts resolved

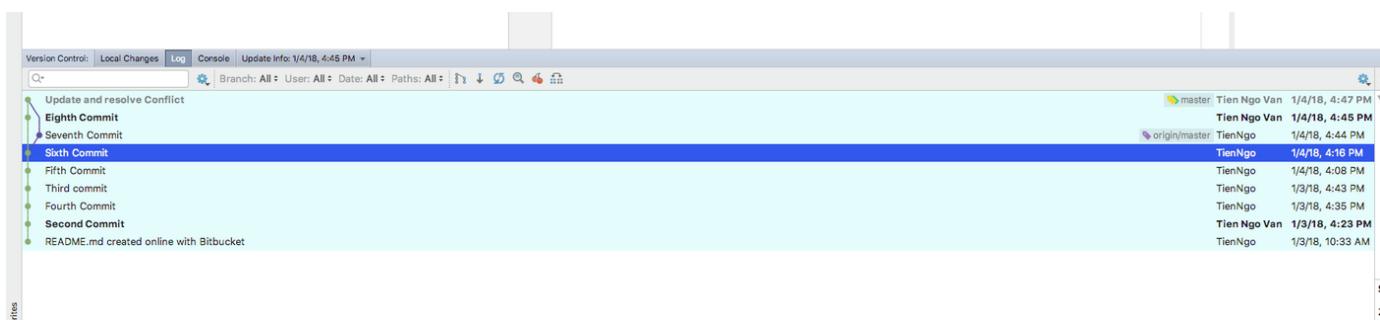
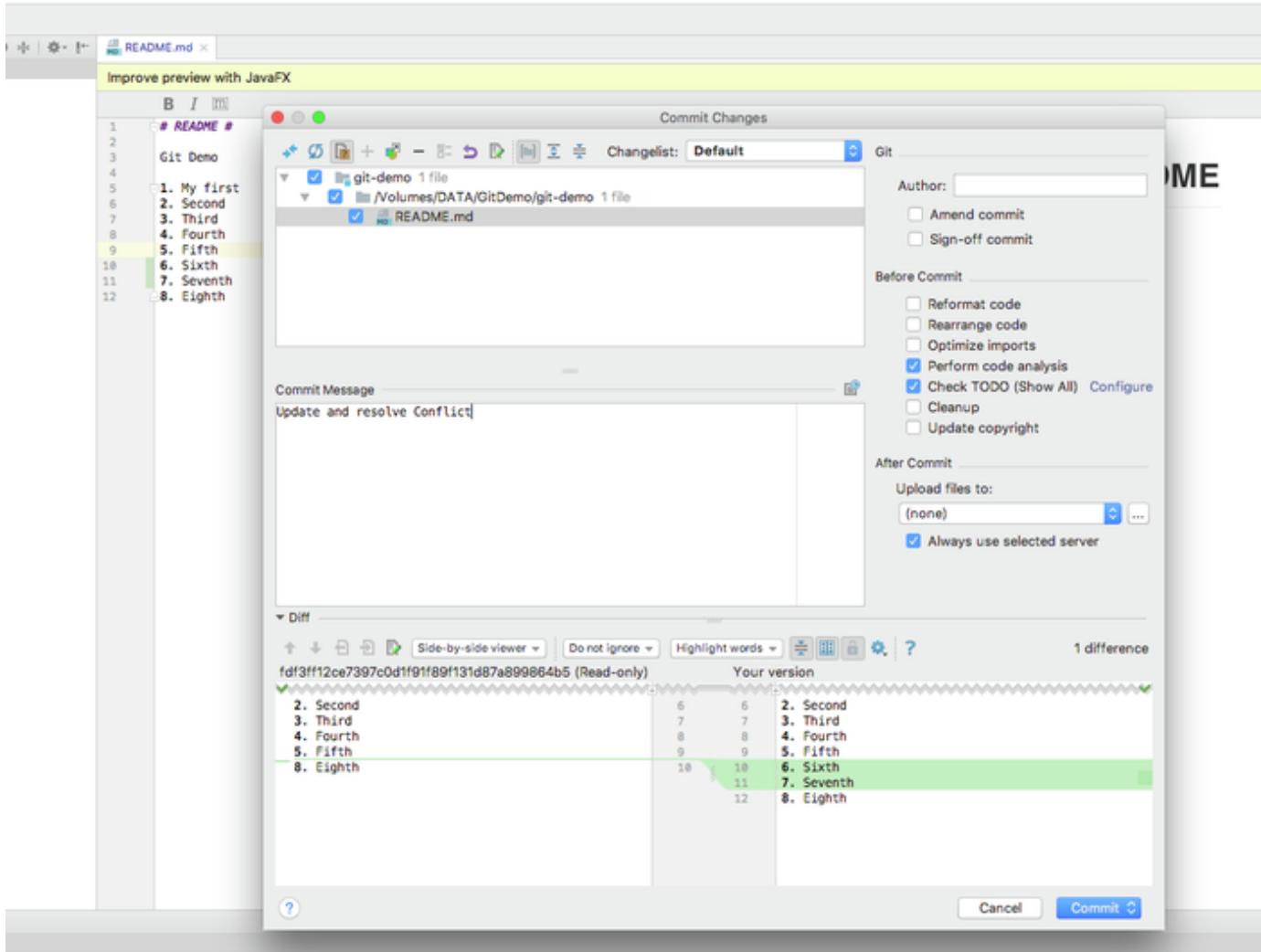
Local Changes (Read-only)

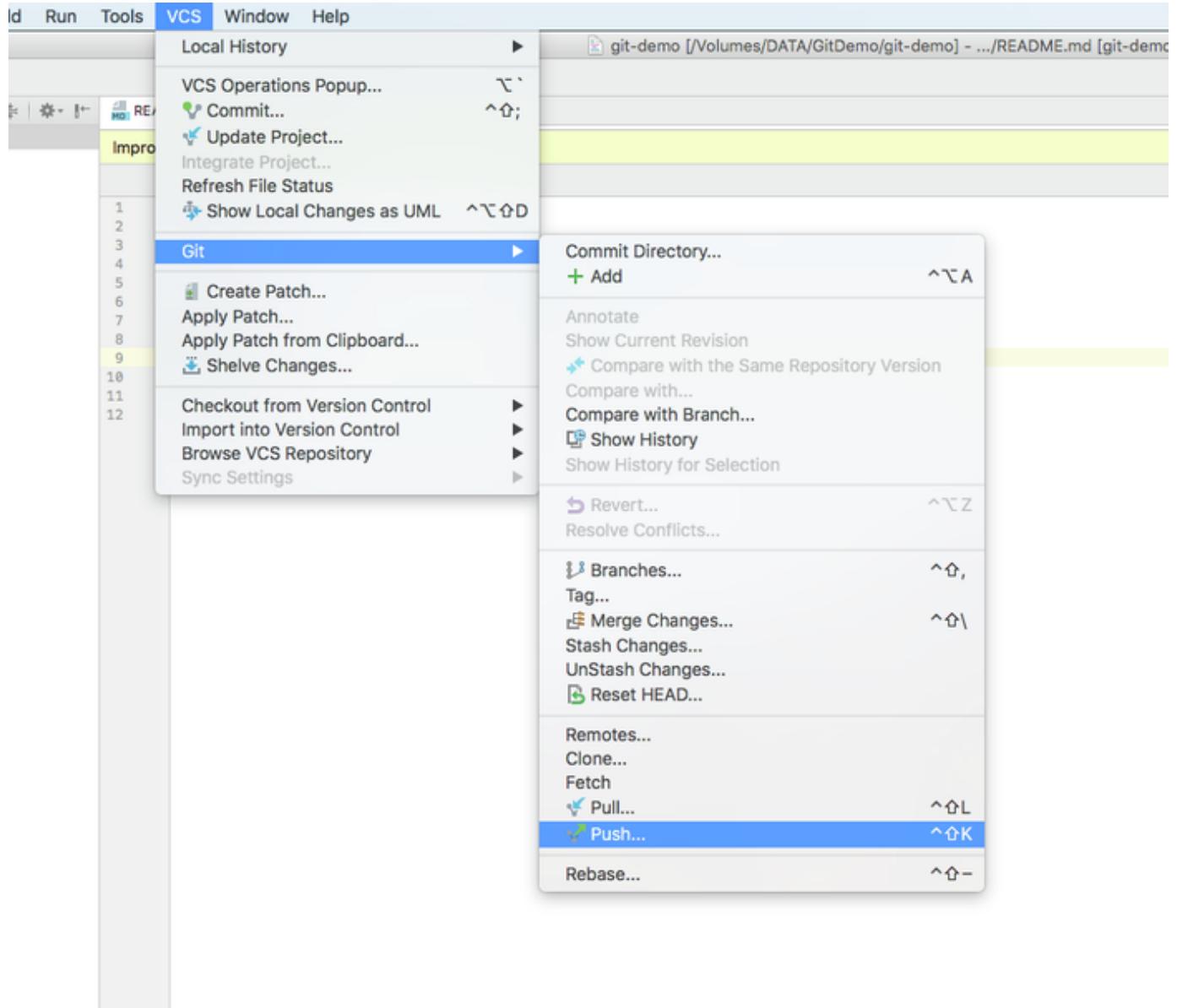
Changes from Server (revision acacfd4f167aeb2a2c6264bd7ea65b07d48e0f8) (Read-only)

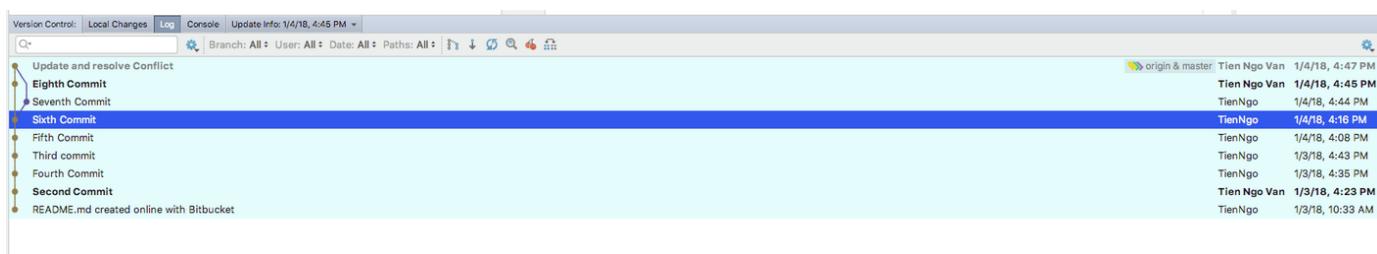
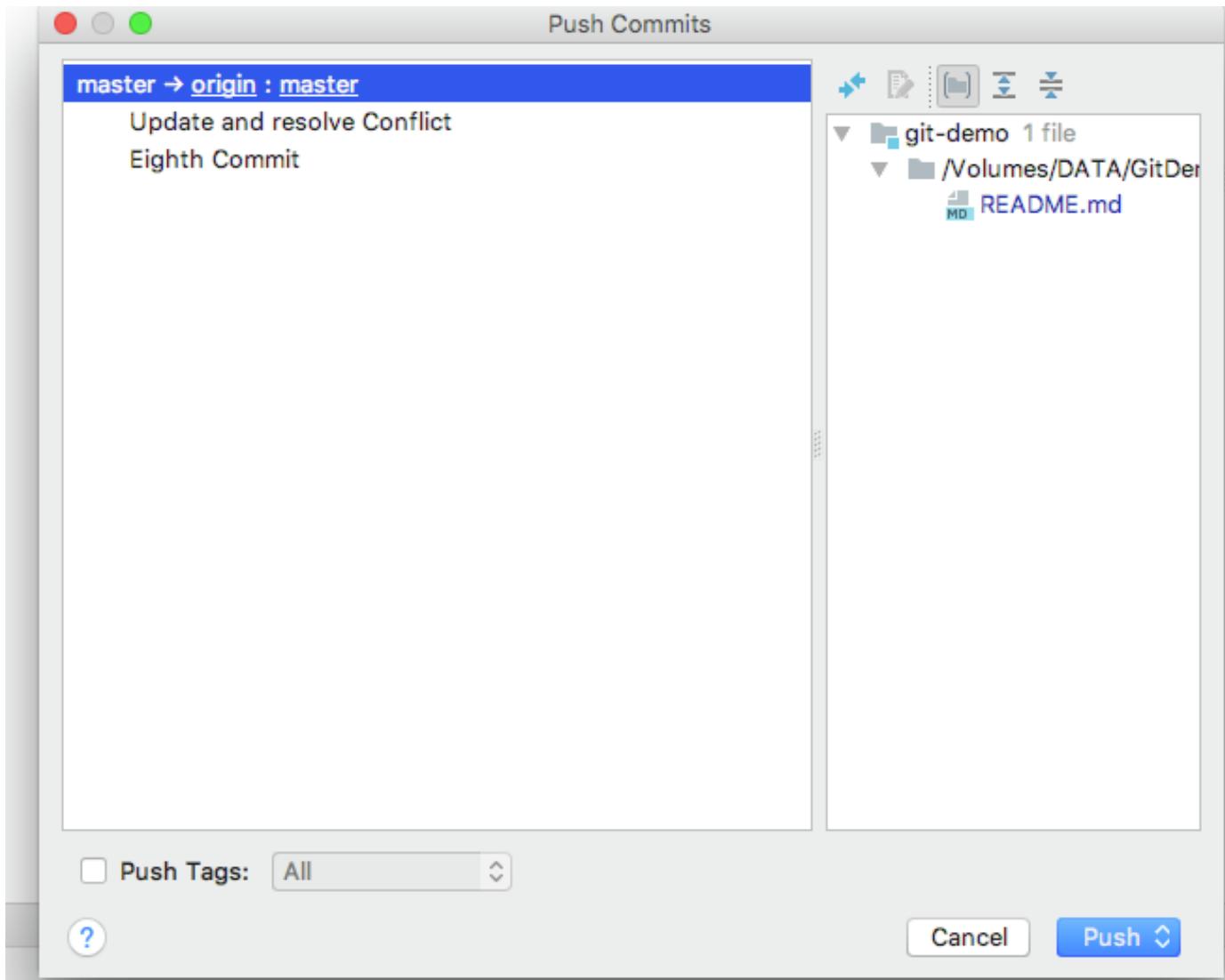
Result:

```
1 1 # README #
2 2
3 3 GIt Demo
4 4
5 5 1. My First
6 6 2. Second
7 7 3. Third
8 8 4. Fourth
9 9 5. Fifth
10 10 6. Sixth
11 11 7. Seventh
12 12 8. Eighth
```

Accept Left | Accept Right | Abort | Merge



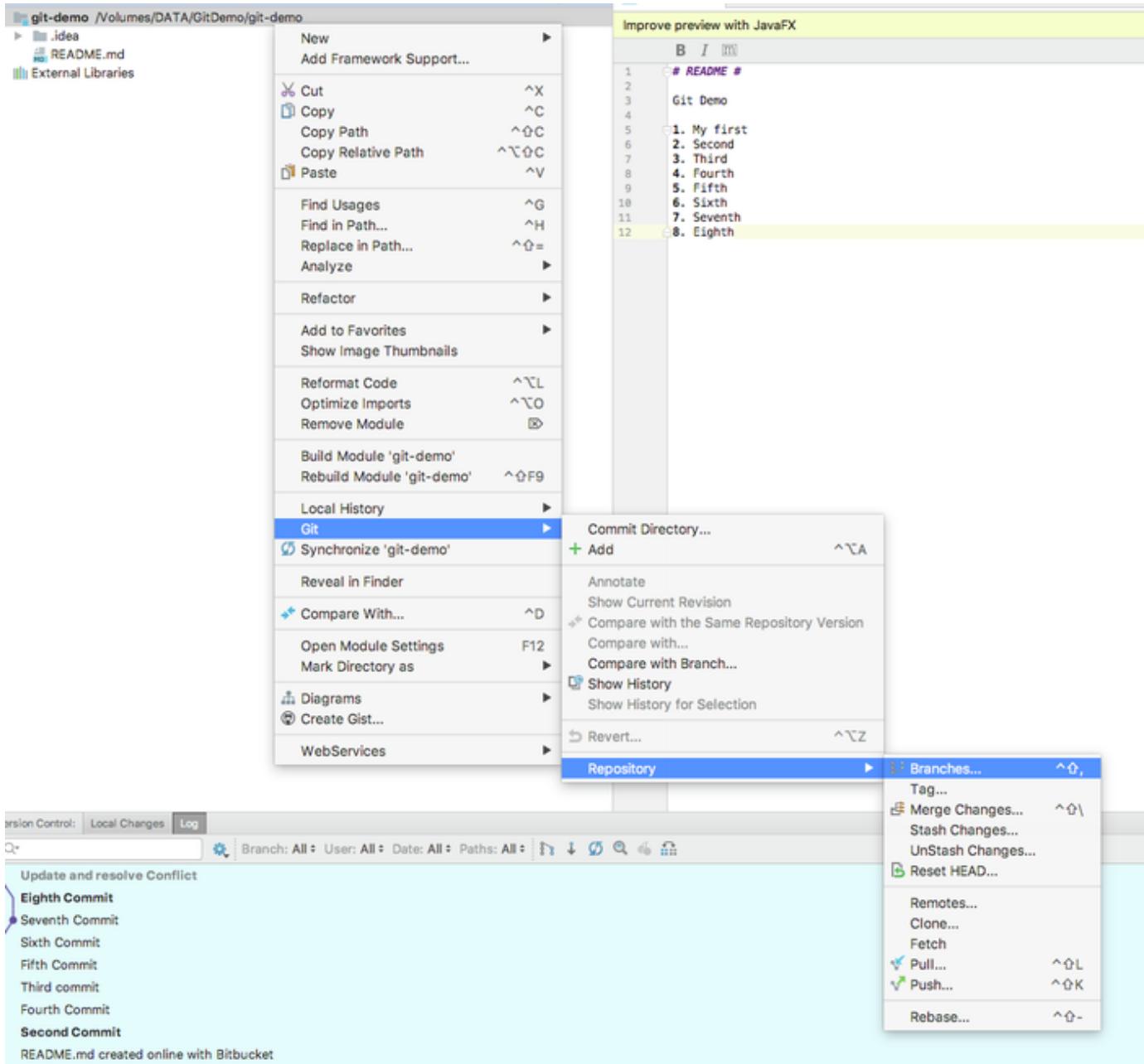


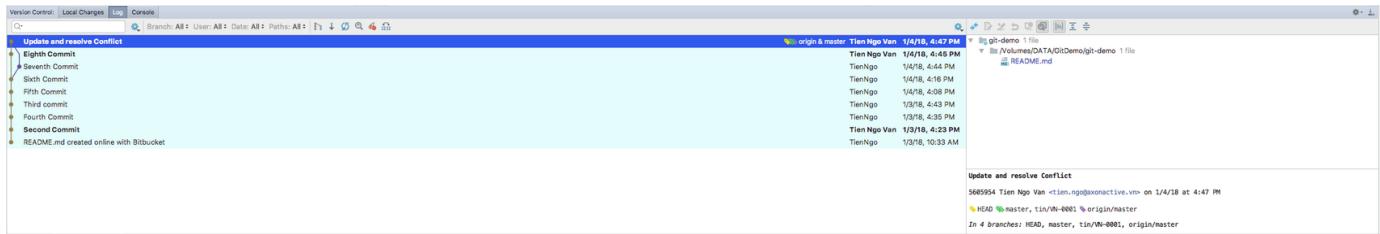
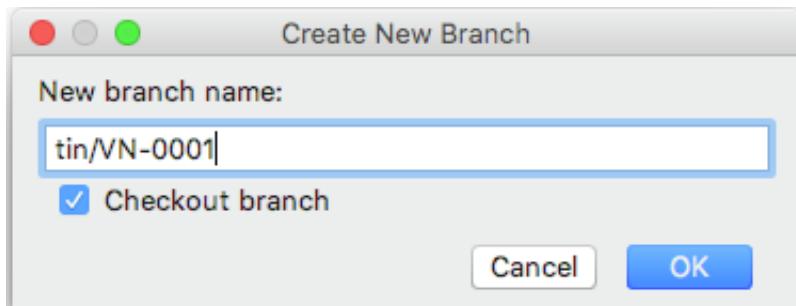
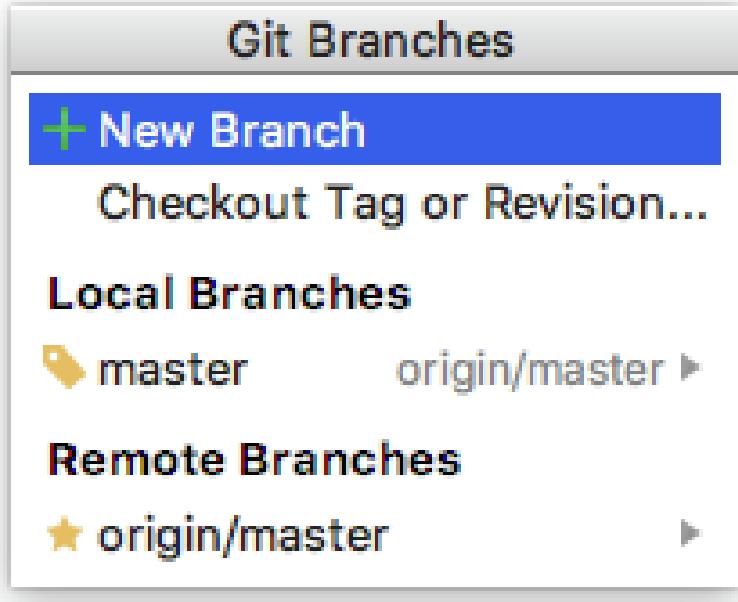


## Branch

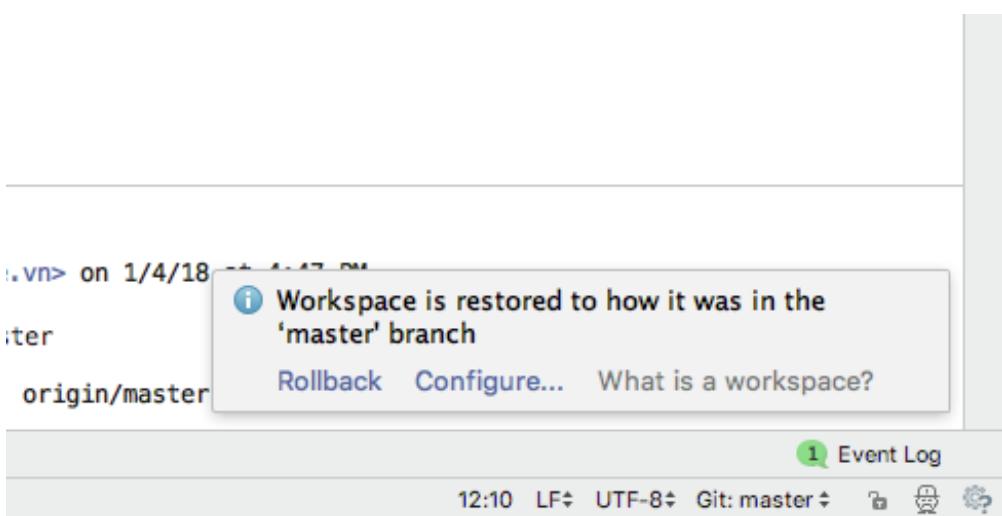
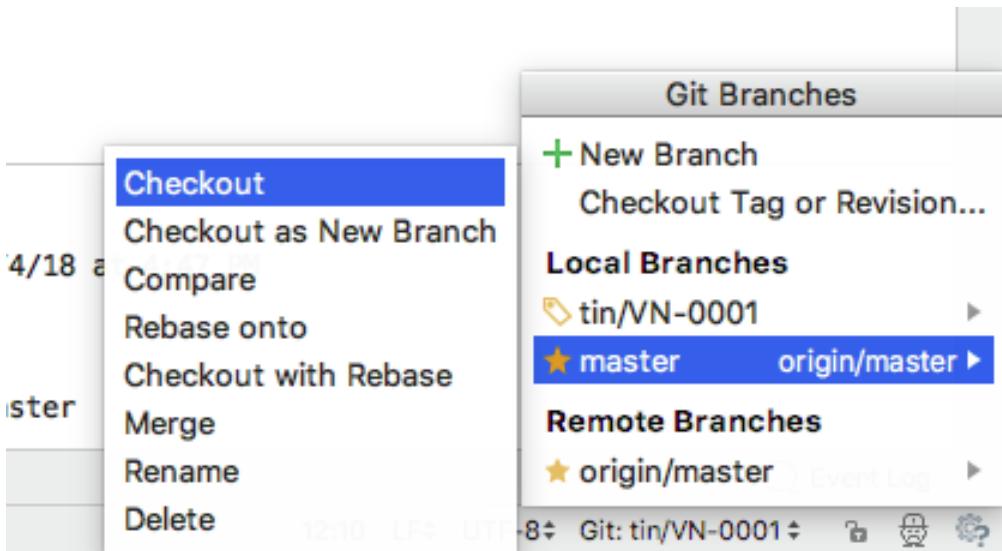
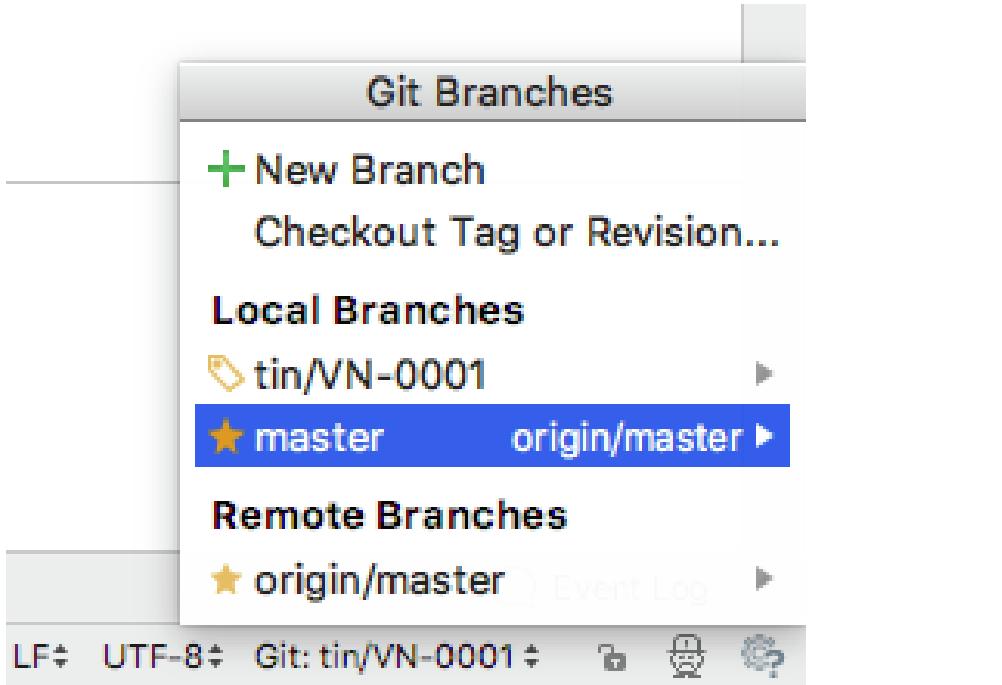
Branching is a feature available in most modern version control systems. Branching is a feature available in most modern version control systems

### Create a branch

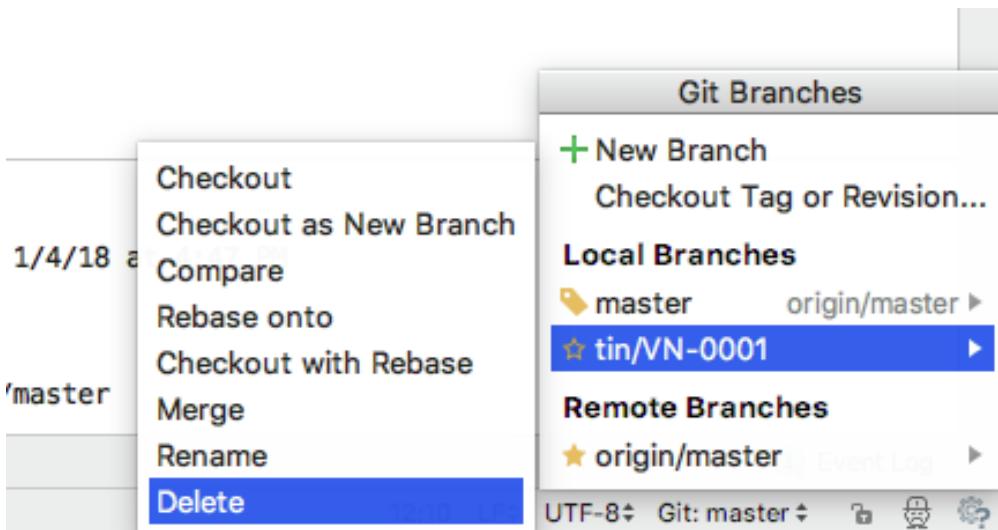




## Switch between branches



## Delete branch



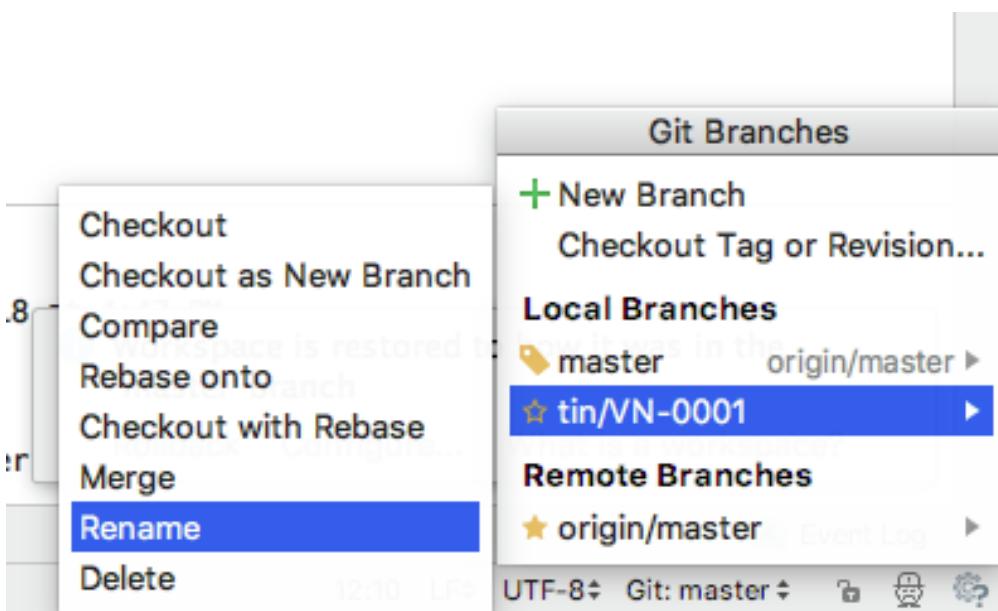
4/18 at 4:47 PM

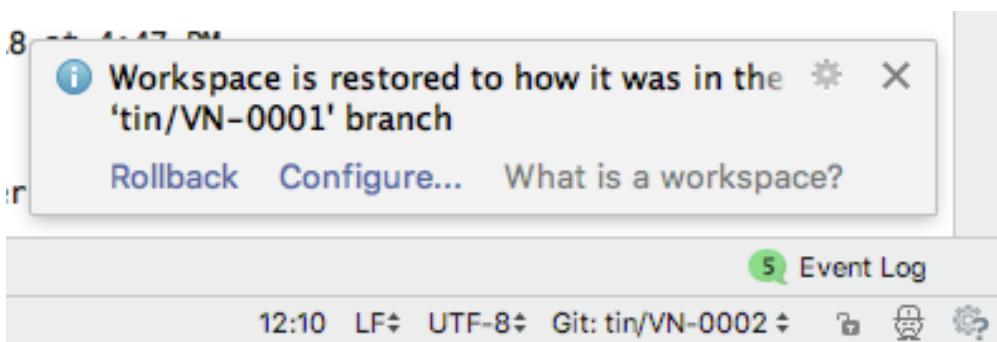
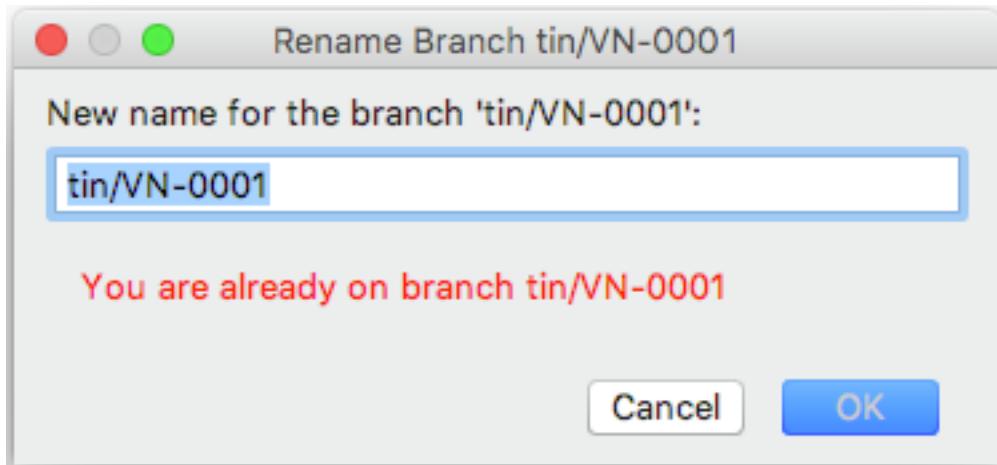
**Deleted Branch: tin/VN-0001**  
Restore

Event Log

12:10 LF<sup>+</sup> UTF-8<sup>+</sup> Git: master<sup>+</sup>

## Rename a branch





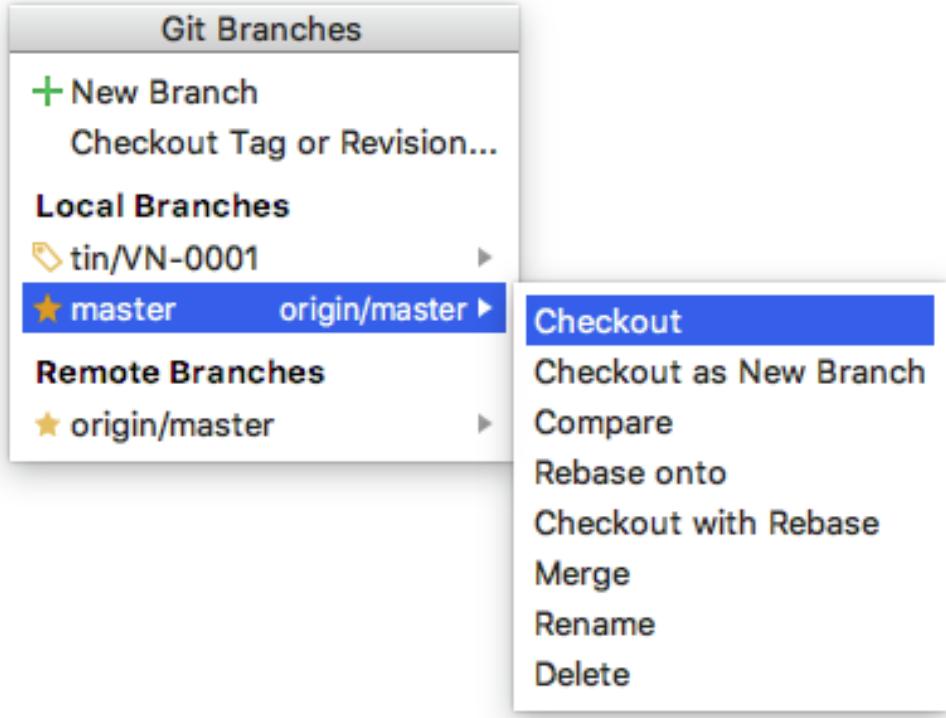
## Merge code

- User 1 create a new branch "tin/VN-0001"
- User 1 working and commit on it.

Commit	Author	Date
Ninth Commit	Tien Ngo Van	1/5/18, 10:43 AM
origin & master	Tien Ngo Van	1/4/18, 4:47 PM
Tien Ngo Van	Tien Ngo	1/4/18, 4:45 PM
Tien Ngo	Tien Ngo	1/4/18, 4:44 PM
Tien Ngo	Tien Ngo	1/4/18, 4:16 PM
Tien Ngo	Tien Ngo	1/4/18, 4:08 PM
Tien Ngo	Tien Ngo	1/3/18, 4:43 PM
Tien Ngo	Tien Ngo	1/3/18, 4:35 PM
Tien Ngo Van	Tien Ngo Van	1/3/18, 4:23 PM
Tien Ngo	Tien Ngo	1/3/18, 10:33 AM

1 file committed: Ninth Commit

- User 1 check out to a branch want to merge code into. Ex: master



- Notes: Yellow label

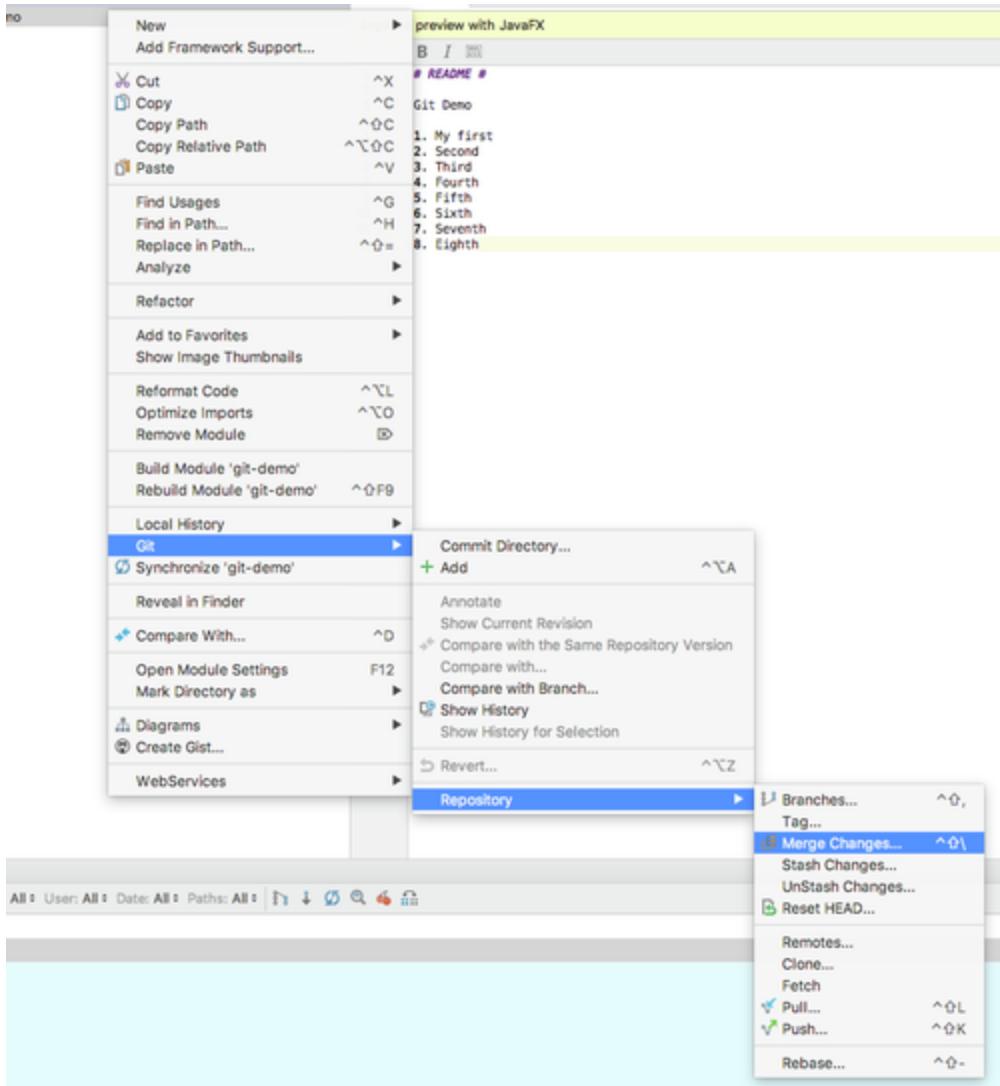
The screenshot shows the Bitbucket interface with the 'Log' tab selected. The commit history for the 'master' branch is displayed, showing the following commits:

- Ninth Commit
- Eighth Commit
- Seventh Commit
- Sixth Commit
- Fifth Commit
- Third commit
- Fourth Commit
- Second Commit
- README.md created online with Bitbucket

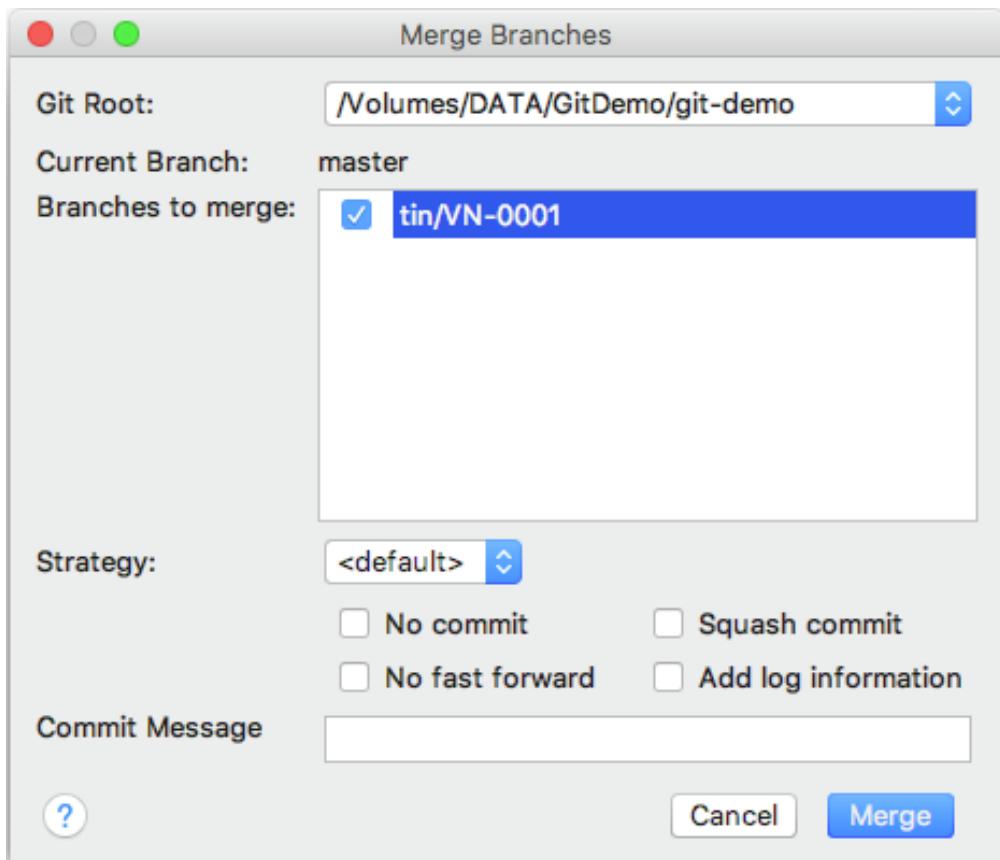
A tooltip 'Checked out master' is visible at the bottom left. The commit details for the 'Ninth Commit' are shown on the right:

Commit	Author	Date
tin/VN-0001	Tien Ngo Van	1/5/18, 10:43 AM
origin & master	Tien Ngo Van	1/4/18, 4:47 PM
	Tien Ngo Van	1/4/18, 4:45 PM
	Tien Ngo	1/4/18, 4:44 PM
	Tien Ngo	1/4/18, 4:16 PM
	Tien Ngo	1/4/18, 4:08 PM
	Tien Ngo	1/3/18, 4:43 PM
	Tien Ngo	1/3/18, 4:35 PM
	Tien Ngo Van	1/3/18, 4:23 PM
	Tien Ngo	1/3/18, 10:33 AM

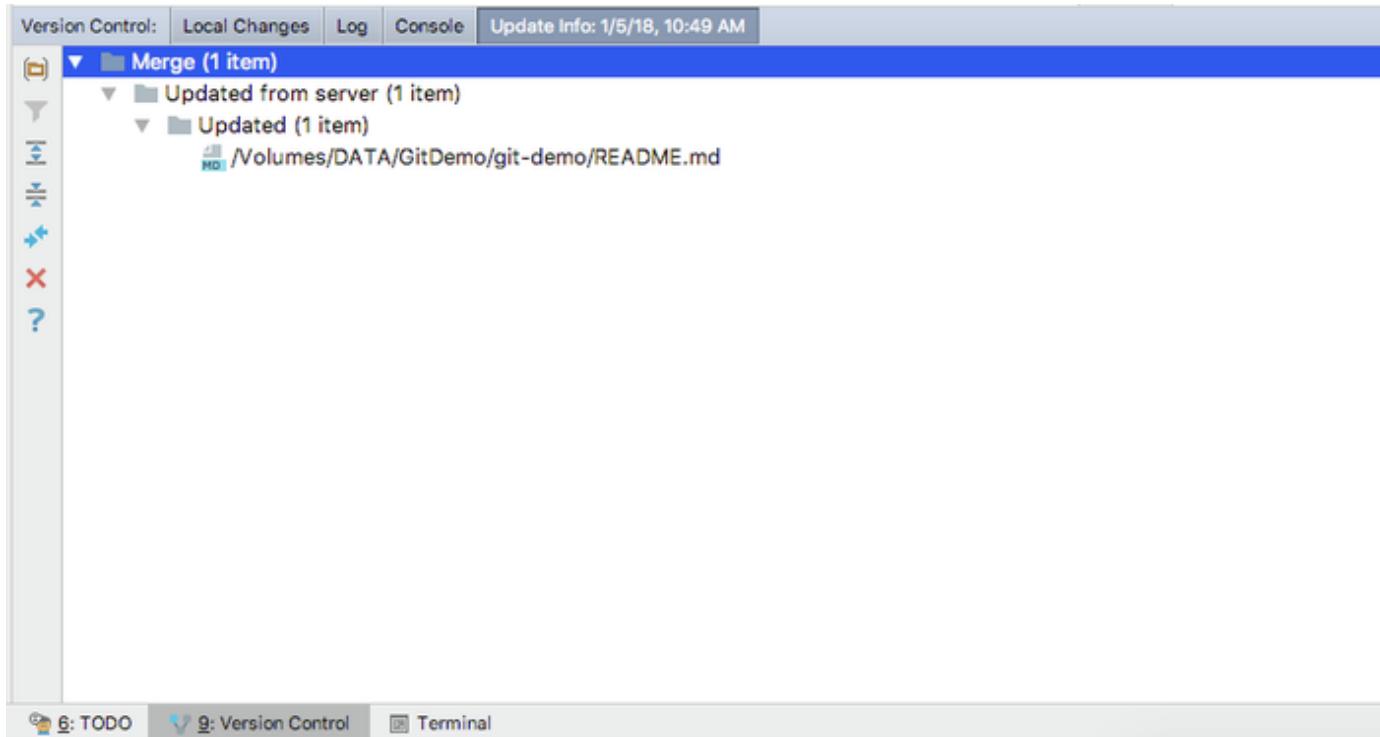
- Select Merge Changes...



- Select branch want to merge



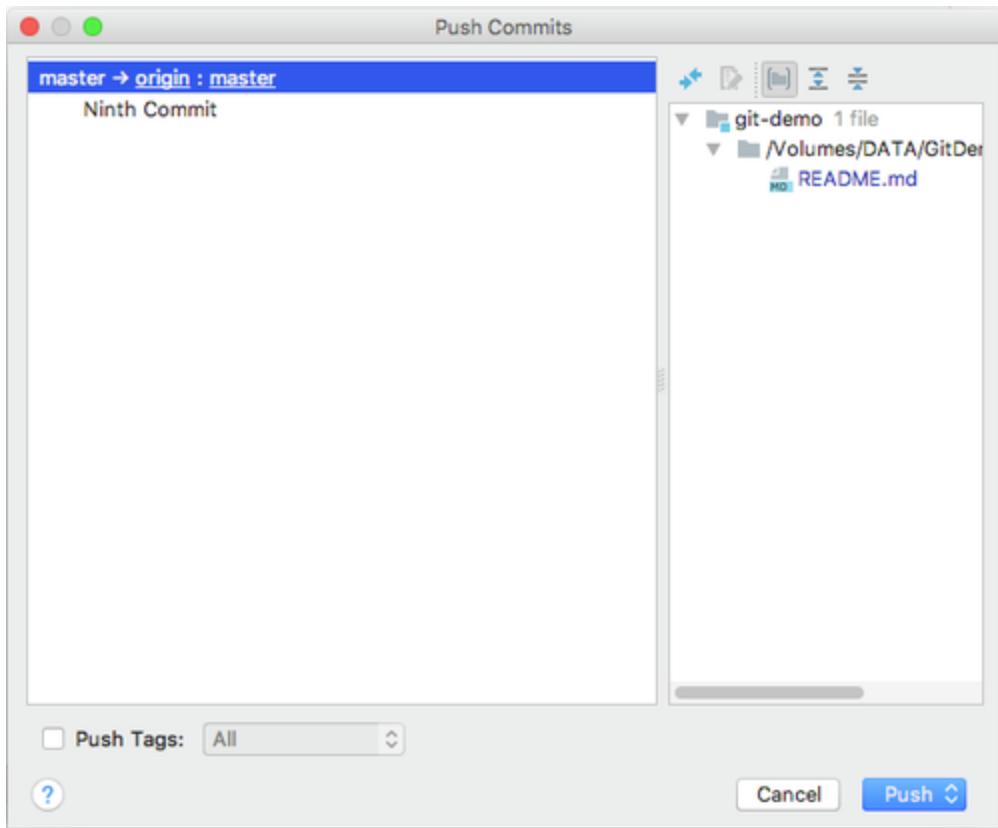
- Resolve conflict if this step has conflict.



- Code is merged from "tin/VN-0001" to "master"

- Push code to server

The screenshot shows the Android Studio interface with the 'Git' tool window open. The left sidebar contains navigation links like 'New', 'Add Framework Support...', 'Cut', 'Copy', 'Copy Path', 'Copy Relative Path', 'Paste', 'Find Usages', 'Find in Path...', 'Replace in Path...', 'Analyze', 'Refactor', 'Add to Favorites', 'Show Image Thumbnails', 'Reformat Code', 'Optimize Imports', 'Remove Module', 'Build Module 'git-demo'', 'Rebuild Module 'git-demo'', 'Local History', 'Git', 'Synchronize 'git-demo'', 'Reveal in Finder', 'Compare With...', 'Open Module Settings', 'Mark Directory as', 'Diagrams', 'Create Git...', and 'WebServices'. The main area displays a 'Git Demo' repository with a list of branches: 'My first', 'Second', 'Third', 'Fourth', 'Fifth', 'Sixth', 'Seventh', 'Eight', and 'Ninth'. A yellow bar highlights the 'Ninth' branch. On the right, there's a 'README' file with the same content. A detailed 'Git' context menu is open over the 'Ninth' branch, listing options such as 'Commit Directory...', 'Add', 'Annotate', 'Show Current Revision', 'Compare with...', 'Compare with Branch...', 'Show History', 'Revert...', 'Repository' (selected), 'Branches...', 'Tag...', 'Merge Changes...', 'Stash Changes...', 'Unstash Changes...', 'Reset HEAD...', 'Remotes...', 'Clone...', 'Fetch', 'Pull...' (selected), 'Push...', and 'Rebase...'. At the bottom, the status bar shows '1/5/18, 10:49 AM' and the footer includes 'Tien Ngo Van' and '1/5/18, 10:43 AM'.



## Rebase code

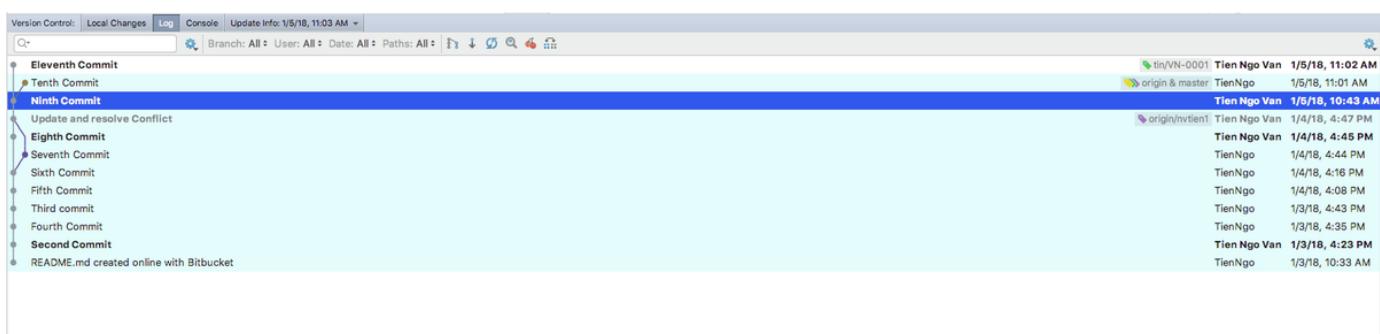
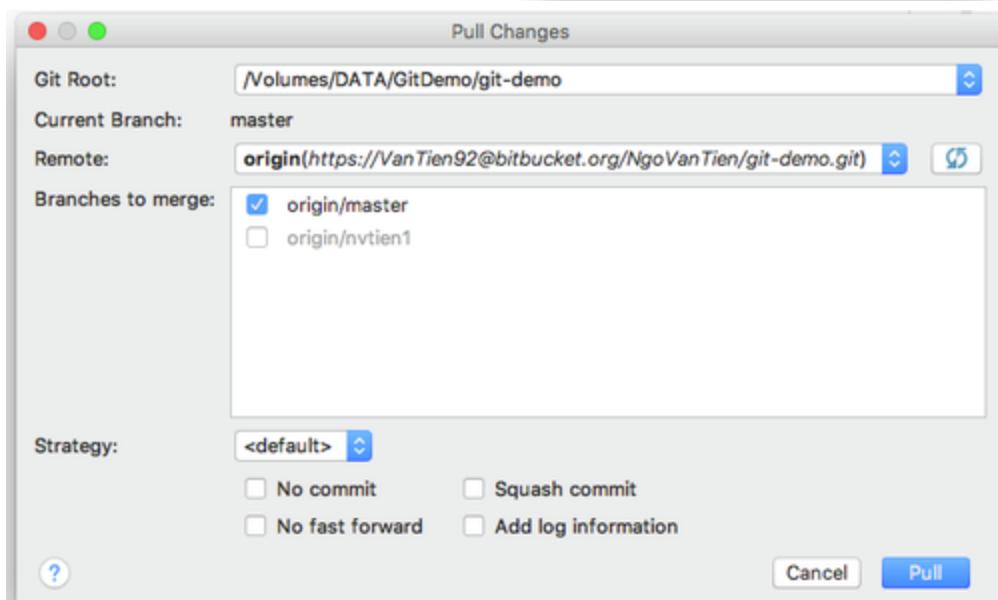
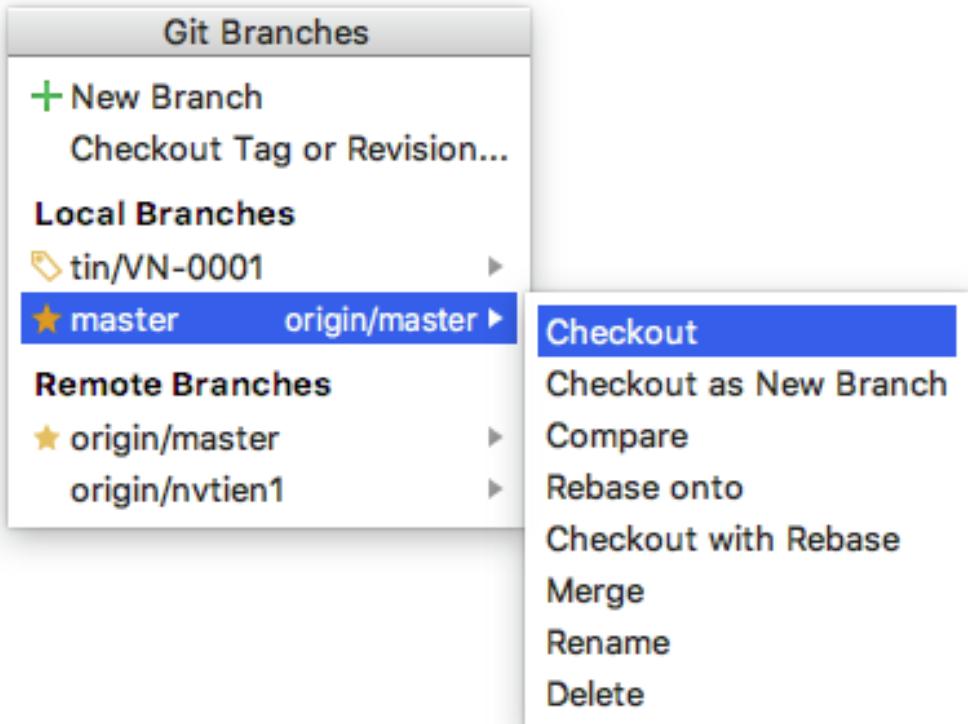
In Git, there are two main ways to integrate changes from one branch into another: the `merge` and the `rebase`. In this section you'll learn what rebasing is, how to do it, why it's a pretty amazing tool, and in what cases you won't want to use it.

- User 1 committed and pushed code to branch "master" while User 2 is working on branch "tin/VN-0001"
- User 2 commit everything to branch "tin/VN-0001"

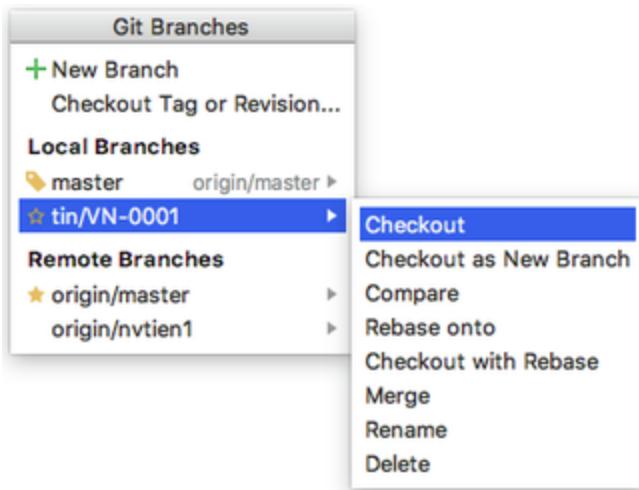
Commit	Author	Date
Eleventh Commit	Tien Ngo Van	1/5/18, 11:02 AM
Tenth Commit	origin/master	1/5/18, 11:01 AM
Ninth Commit	master	1/5/18, 10:43 AM
Update and resolve Conflict	origin/invlent	1/4/18, 4:47 PM
Eighth Commit	Tien Ngo Van	1/4/18, 4:45 PM
Seventh Commit	Tien Ngo	1/4/18, 4:44 PM
Sixth Commit	Tien Ngo	1/4/18, 4:16 PM
Fifth Commit	Tien Ngo	1/4/18, 4:08 PM
Third commit	Tien Ngo	1/3/18, 4:43 PM
Fourth Commit	Tien Ngo	1/3/18, 4:35 PM
Second Commit	Tien Ngo Van	1/3/18, 4:23 PM
README.md created online with Bitbucket	Tien Ngo	1/3/18, 10:33 AM

1 file committed: Eleventh Commit

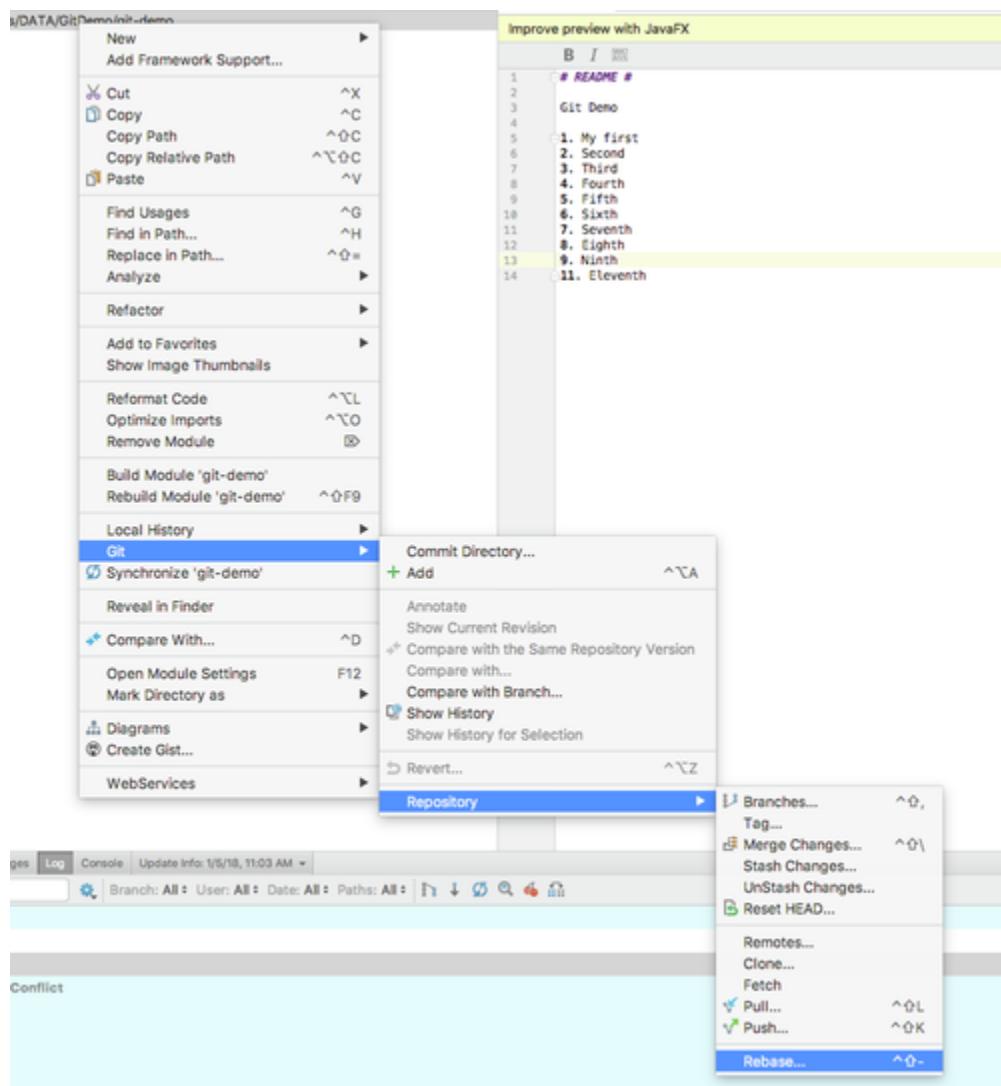
- User 2 checkout to "master" and pull latest source code



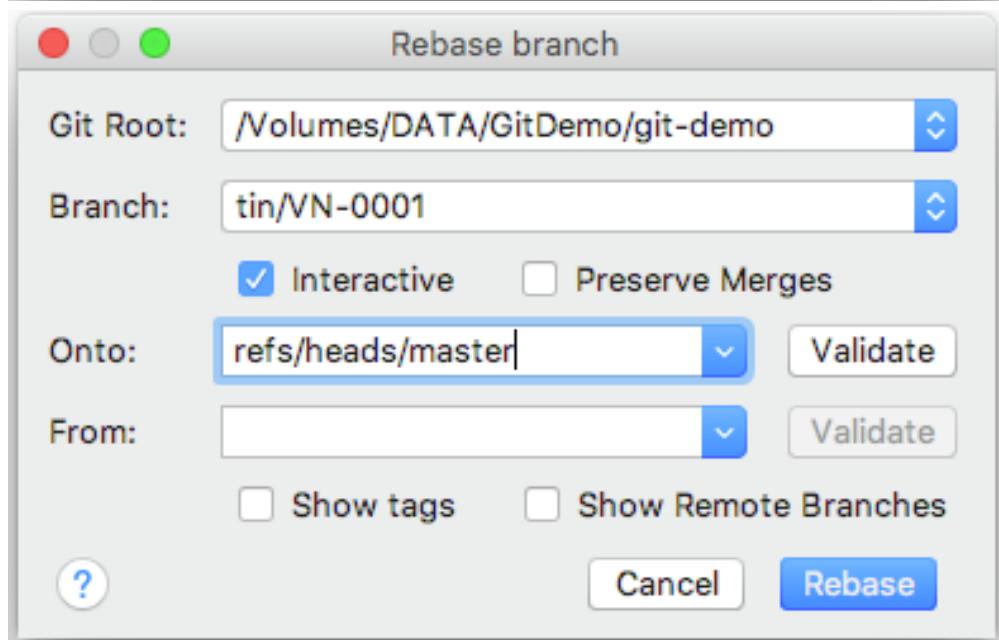
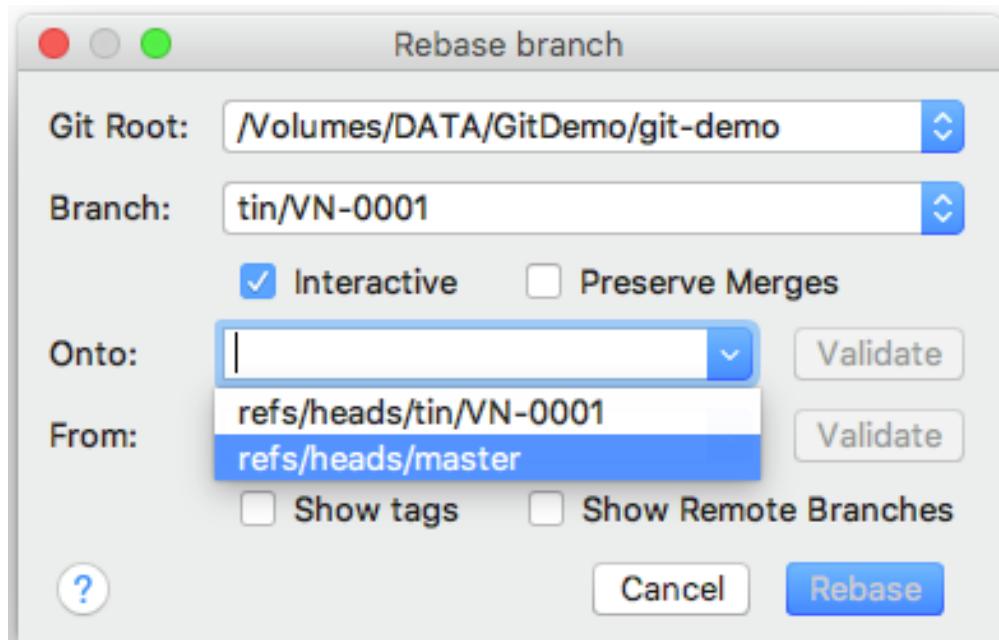
- User 2 checkout to "tin/VN-001" and begin rebase code

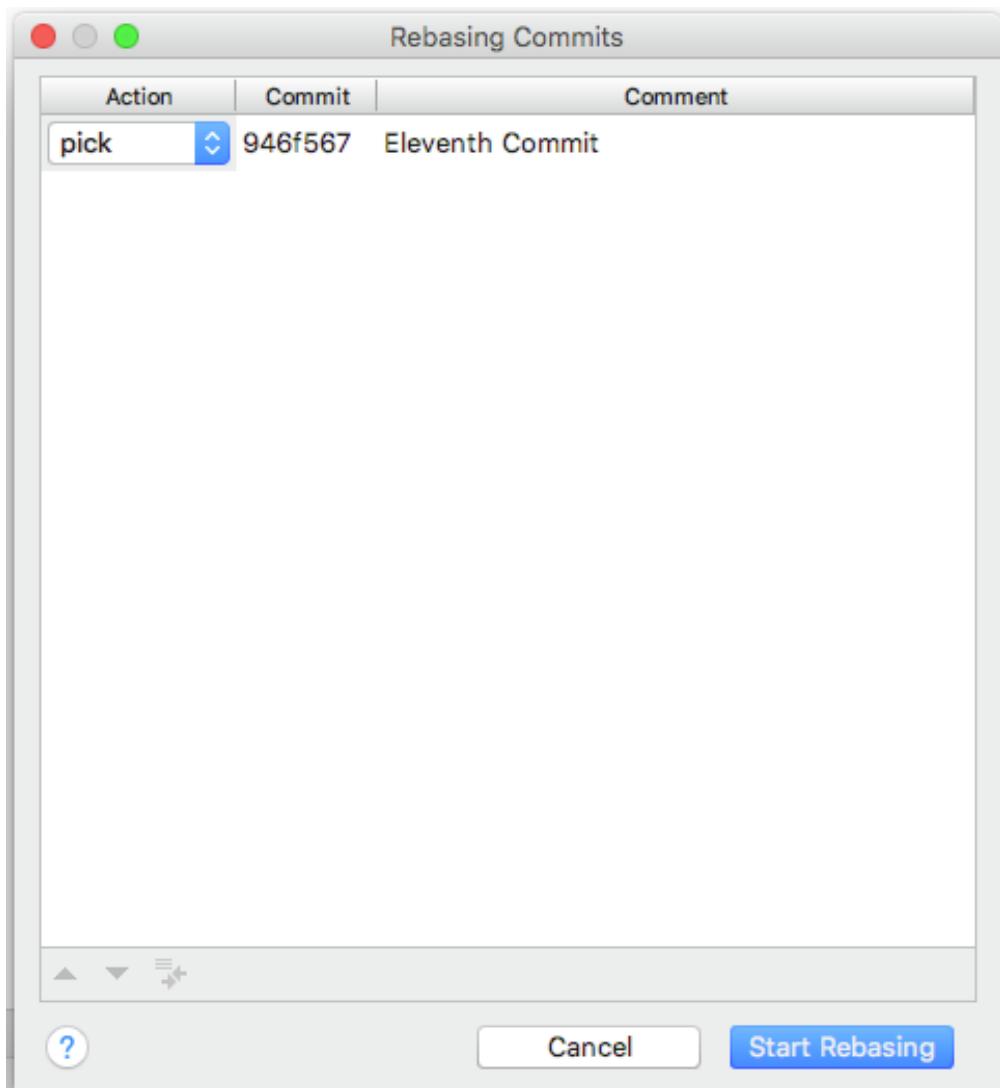


- Selecting Rebase...



- Select branch want to rebase





- Resolve conflict if this step has conflict

README.md

Improve preview with JavaFX

```

1 # README #
2
3 Git Demo
4
5 1. My first
6 2. Second
7 3. Third
8 4. Fourth
9 5. Fifth
10 6. Sixth
11 7. Seventh
12 8. Eighth
13 9. Ninth
14 <><><> HEAD
15 10. Tenth
16
17 11. Eleventh
18 >>>> 946f567... Eleventh Commit
19

```

Files Merged with Conflicts

Name	Type	Yours	Theirs
README.md (/Volumes/DATA/GitDemo/Text	Modified	Modified	

Accept Yours  
Accept Theirs  
Merge...

Close

tin/VN-0001 Tien Ngo Van 1/5/18,  
origin & master Tien Ngo 1/5/18,  
Tien Ngo Van 1/5/18,  
origin/invited Tien Ngo Van 1/4/18,  
Tien Ngo Van 1/4/18,

Merge Revisions for /Volumes/DATA/GitDemo/git-demo/README.md

No changes. 1 conflict

Changes from Server (revision 89feb78df57d21d266549a34f542ee524044cb74) (Read-only)

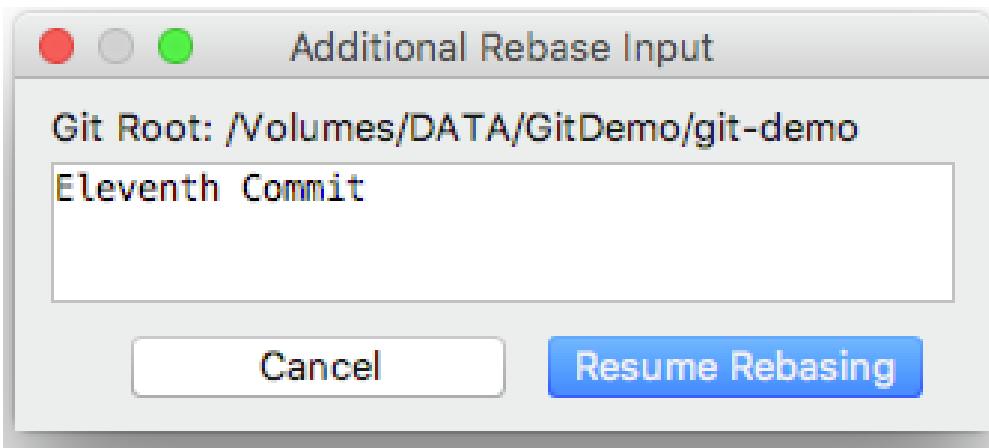
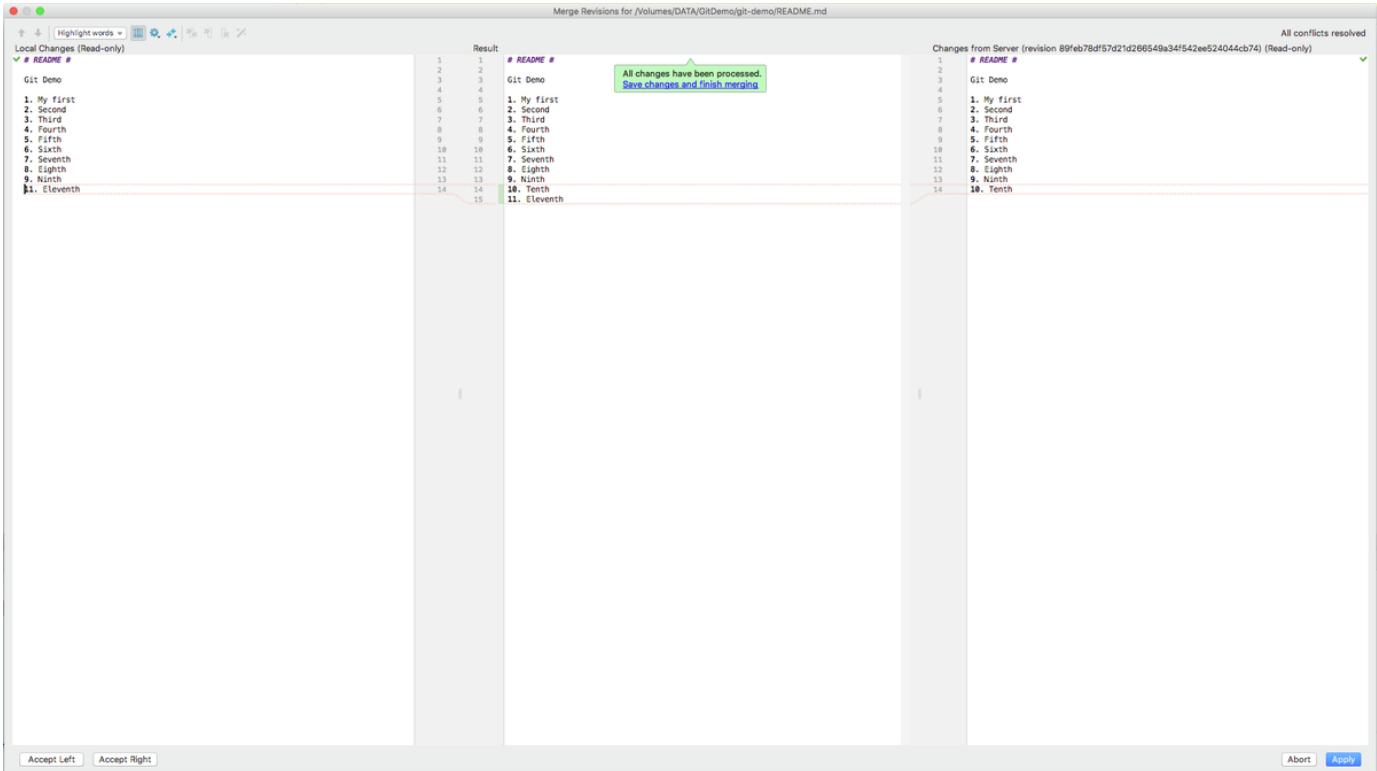
```

1 # README #
2
3 Git Demo
4
5 1. My first
6 2. Second
7 3. Third
8 4. Fourth
9 5. Fifth
10 6. Sixth
11 7. Seventh
12 8. Eighth
13 9. Ninth
14 <>>> 10. Tenth

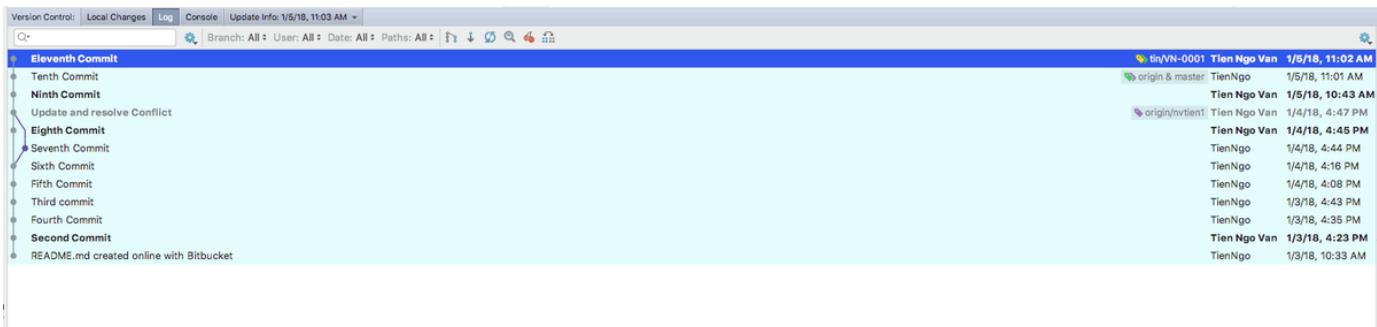
```

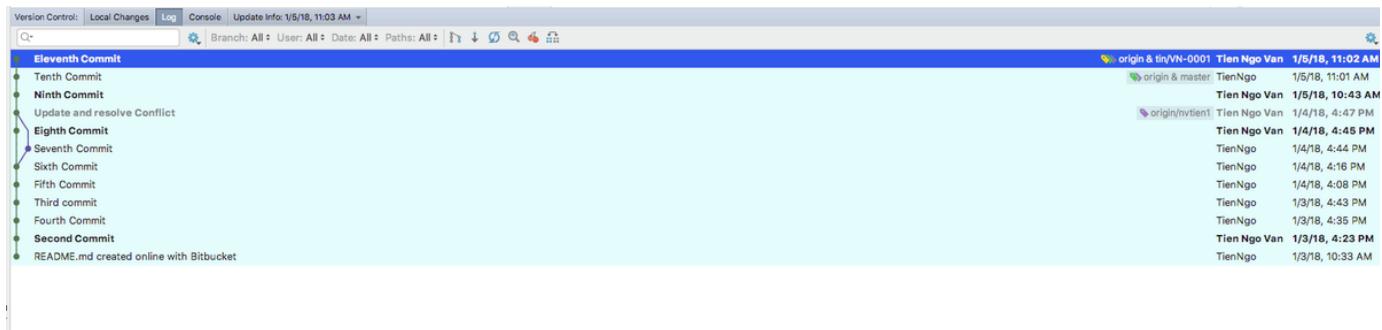
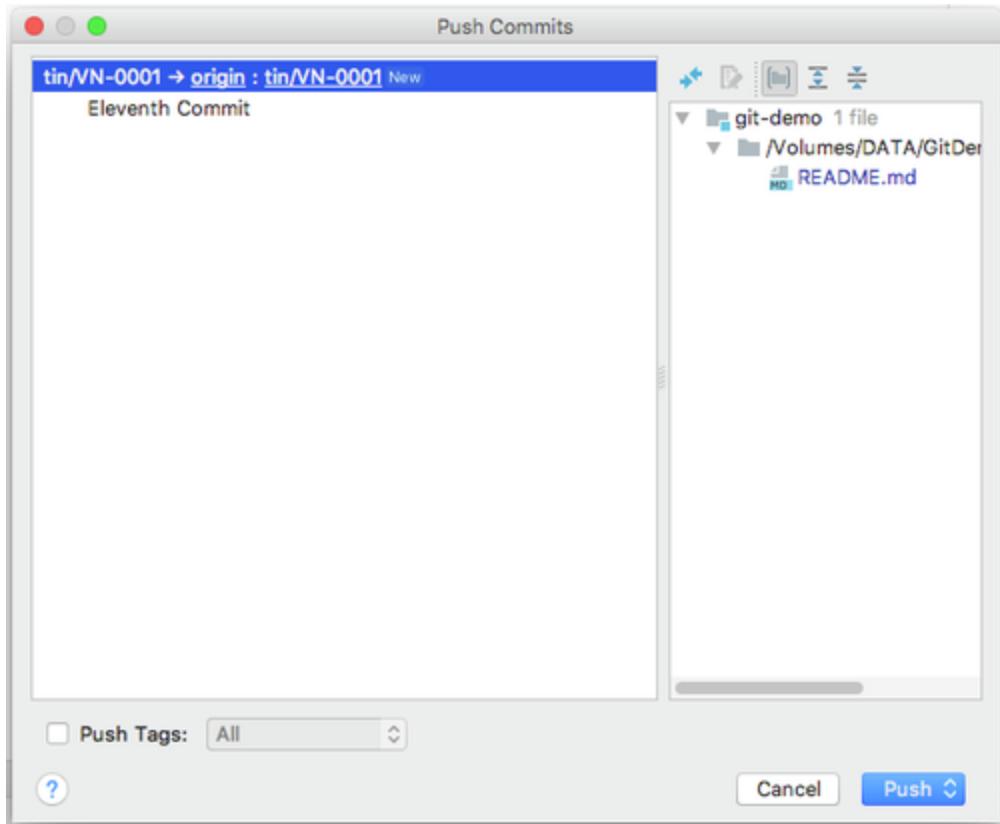
Accept  
On click to resolve conflict

Accept Left Accept Right Abort Apply



- Push code to branch "tin/VN-0001" and start make pull request





## Make Pull Request

- Go to Bitbucket website and select Repository and Pull Request tab

- Input pull request information

TienNgo / git-demo / Pull requests

### Create a pull request

**From** **To**

NgoVanTien / git-demo  
Created 2 days ago, updated 9 minutes ago

tin/VN-0001 → master

Title: **Added Eleventh Commit**

Description:

Reviewers: TienNgo **Add reviewers**

Close branch  Close tin/VN-0001 after the pull request is merged

**Create pull request**

**Diff** **Commits**

**Files changed (1)**

+2 -1 M README.md

README.md MODIFIED

```

11 11 7. Seventh
12 12 8. Eighth
13 13 9. Ninth
14 -10. Tenth
14 +10. Tenth
15 +11. Eleventh

```

- User 1 will receive notification about pull request and do approval or adding comment.

TienNgo / git-demo / Pull requests

### Added Eleventh Commit

#1 OPEN | tin/VN-0001 → master

**Overview** **Commits** **Activity**

Merge Edit Decline Unapprove Stop watching

Author: Tien Ngo

Reviewers:

Description: No description

Comments (0)

What do you want to say?

**Files changed (1)**

+2 -1 M README.md

README.md MODIFIED

```

11 11 7. Seventh
12 12 8. Eighth
13 13 9. Ninth
14 -10. Tenth
14 +10. Tenth
15 +11. Eleventh

```

Side-by-side diff View file Comment ...

Comment Cancel

- User 2 will merge this code from branch "tin/VN-0001" to "master" if User 1 approve this pull request

**Merge pull request**

Source: tin/VN-0001

Destination: master

Commit message:

```
Merged in tin/VN-0001 (pull request #1)
Added Eleventh Commit
```

Merge strategy: Merge commit

Close source branch

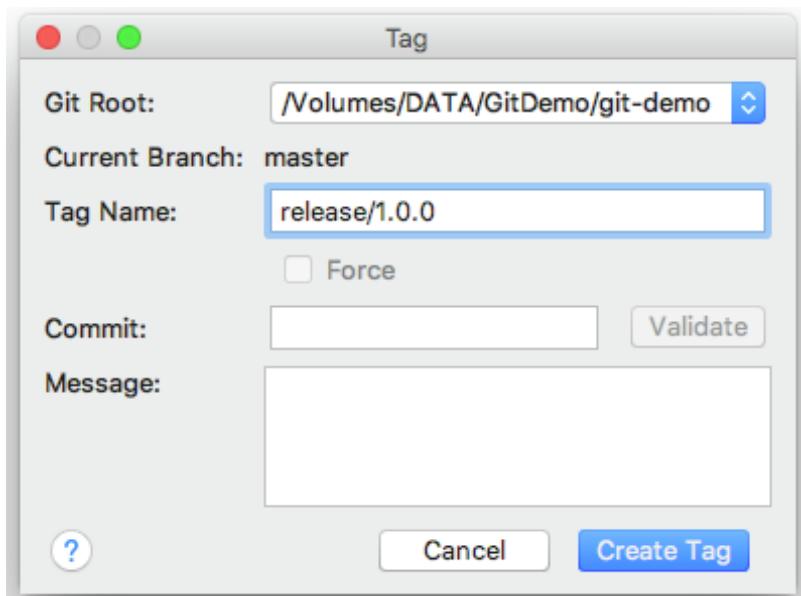
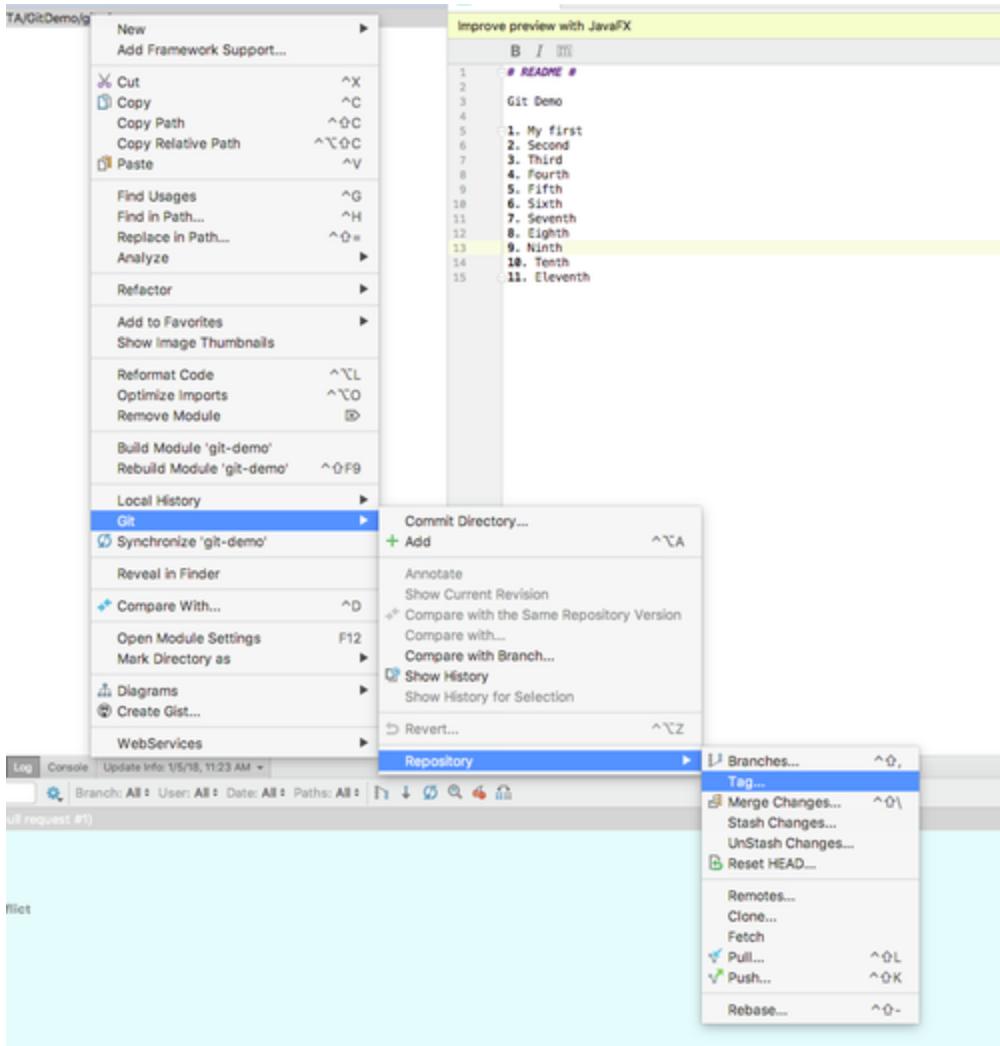
**Merge**   **Cancel**

#### ■ Recheck in Git Log

Author	Date
Tien Ngo Van	1/5/18, 11:02 AM
Tien Ngo Van	1/5/18, 11:01 AM
Tien Ngo Van	1/5/18, 10:43 AM
Tien Ngo Van	1/4/18, 4:47 PM
Tien Ngo Van	1/4/18, 4:44 PM
Tien Ngo Van	1/4/18, 4:16 PM
Tien Ngo Van	1/4/18, 4:08 PM
Tien Ngo Van	1/3/18, 4:43 PM
Tien Ngo Van	1/3/18, 4:35 PM
Tien Ngo Van	1/3/18, 4:23 PM
Tien Ngo	1/3/18, 10:33 AM

## Tag

Git has the ability to tag specific points in history as being important. Typically people use this functionality to mark release points (v1.0, and so on).

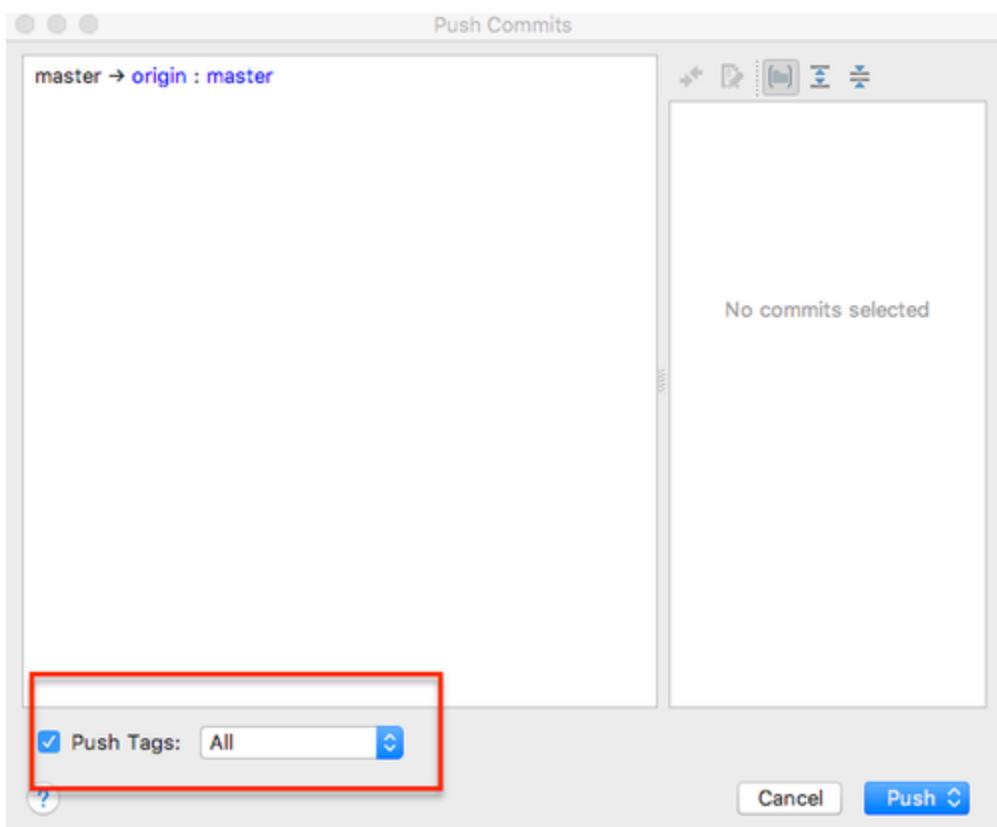


This screenshot shows a detailed view of a Git commit history. The commits are listed in chronological order from top to bottom:

- origin & master Tien Ngo 1/5/18, 11:23 AM
- origin & tin/VN-0001 Tien Ngo Van 1/5/18, 11:02 AM
- Tien Ngo 1/5/18, 11:01 AM
- Tien Ngo Van 1/5/18, 10:43 AM
- origin/nvtien1 Tien Ngo Van 1/4/18, 4:47 PM
- Tien Ngo Van 1/4/18, 4:45 PM
- Tien Ngo 1/4/18, 4:44 PM
- Tien Ngo 1/4/18, 4:16 PM
- Tien Ngo 1/4/18, 4:08 PM
- Tien Ngo 1/3/18, 4:43 PM
- Tien Ngo 1/3/18, 4:35 PM
- Tien Ngo Van 1/3/18, 4:23 PM
- Tien Ngo 1/3/18, 10:33 AM

On the right side of the interface, there are two buttons: "No merged conflicts." and "Show changes to parents". Below the commit list, there is a summary of the push operation:

- Approved-by: Tien Ngo <tien.ngo@axonactive.vn>
- 3534589 Tien Ngo <tien.ngo@axonactive.vn> on 1/5/18 at 11:23 AM
- HEAD origin/master
- release/1.0.0
- In 3 branches: HEAD, master, origin/master



origin & master Tien Ngo 1/5/18, 11:23 AM

origin & tin/VN-0001 Tien Ngo Van 1/5/18, 11:02 AM  
Tien Ngo 1/5/18, 11:01 AM  
Tien Ngo Van 1/5/18, 10:43 AM

origin/nvtien1 Tien Ngo Van 1/4/18, 4:47 PM  
Tien Ngo Van 1/4/18, 4:45 PM  
Tien Ngo 1/4/18, 4:44 PM  
Tien Ngo 1/4/18, 4:16 PM  
Tien Ngo 1/4/18, 4:08 PM  
Tien Ngo 1/3/18, 4:43 PM  
Tien Ngo 1/3/18, 4:35 PM  
Tien Ngo Van 1/3/18, 4:23 PM  
Tien Ngo 1/3/18, 10:33 AM

No merged conflicts.  
Show changes to parents

Approved-by: Tien Ngo <tien.ngo@axonactive.vn>

3534589 Tien Ngo <tien.ngo@axonactive.vn> on 1/5/18 at 11:23 AM

HEAD master origin/master

release/1.0.0

In 3 branches: HEAD, master, origin/master

Event Log

origin & master Tien Ngo 1/5/18, 11:23 AM

origin & tin/VN-0001 Tien Ngo Van 1/5/18, 11:02 AM  
Tien Ngo 1/5/18, 11:01 AM  
Tien Ngo Van 1/5/18, 10:43 AM

origin/nvtien1 Tien Ngo Van 1/4/18, 4:47 PM  
Tien Ngo Van 1/4/18, 4:45 PM  
Tien Ngo 1/4/18, 4:44 PM  
Tien Ngo 1/4/18, 4:16 PM  
Tien Ngo 1/4/18, 4:08 PM  
Tien Ngo 1/3/18, 4:43 PM  
Tien Ngo 1/3/18, 4:35 PM  
Tien Ngo Van 1/3/18, 4:23 PM  
Tien Ngo 1/3/18, 10:33 AM

Copy Revision Number  
Create Patch...  
Cherry-Pick  
Checkout Revision  
New Branch...  
**New Tag...**  
Reset Current Branch to Here...  
Revert  
Undo Commit...  
Reword...  
Interactively Rebase from Here...

Version Control: Local Changes Log Console Update Info: 1/5/18, 11:23 AM

Merged in tin/VN-0001 (pull request #1)

Eleventh Commit  
Tenth Commit  
Ninth Commit  
Update and resolve Conflict  
Eighth Commit  
Seventh Commit  
Sixth Commit  
Fifth Commit  
Third commit  
Fourth Commit  
Second Commit  
README.md created online with Bitbucket

## Stash

Often, when you've been working on part of your project, things are in a messy state and you want to switch branches for a bit to work on something else. The problem is, you don't want to do a commit of half-done work just so you can get back to this point later. The answer to this issue is the `git stash` command.

git-demo [Volumes/DATA/GitDemo/git-demo] - /README.md [git-demo]

External Libraries

```

1 # README #
2
3 Git Demo
4
5 1. My first
6 2. Second
7 3. Third
8 4. Fourth
9 5. Fifth
10 6. Sixth
11 7. Seventh
12 8. Eighth
13 9. Ninth
14 10. Tenth
15 11. Eleventh
16 12. Twelfth

```

## README

Git Demo

1. My first
2. Second
3. Third
4. Fourth
5. Fifth
6. Sixth
7. Seventh
8. Eighth
9. Ninth
10. Tenth
11. Eleventh
12. Twelfth

Version Control Local Changes Log Console Update Info 1/5/18, 11:23 AM

Merged in tinVN-0001 (pull request #1)

- Eleventh Commit
- Tenth Commit
- Ninth Commit
- Update and resolve Conflict
- Eighth Commit
- Sixth Commit
- Fifth Commit
- Third Commit
- Fourth Commit
- Second Commit
- README.md created online with Bitbucket

git origin & master: Tien Ngo 1/5/18, 11:23 AM  
 sn/VN-0001: Tien Ngo Van 1/5/18, 11:02 AM  
 Tien Ngo 1/5/18, 11:01 AM  
 Tien Ngo Van 1/5/18, 10:43 AM  
 origin/HEAD: Tien Ngo Van 1/4/18, 4:47 PM  
 Tien Ngo 1/4/18, 4:48 PM  
 Tien Ngo 1/4/18, 4:49 PM  
 Tien Ngo 1/4/18, 4:50 PM  
 Tien Ngo 1/4/18, 4:51 PM  
 Tien Ngo 1/4/18, 4:52 PM  
 Tien Ngo Van 1/3/18, 4:23 PM  
 Tien Ngo 1/3/18, 10:33 AM

Eleventh Commit  
 coded by Tien Ngo Van <tien.ngo@asianactive.vn> on 1/5/18 at 11:02 AM  
 Committed on 1/5/18 at 11:05 AM  
 HEAD → tin/VN-0001  
 In 4 branches: HEAD, master, tin/VN-0001, origin/master

12 LFS: UTF-8! Git: sn/VN-0001 Log

