Object-Oriented Language and Theory

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Release Flow Guidelines

These guidelines demonstrate how we can apply Release Flow into our repository.

1. Release Flow Characteristics

2. Demonstration

2.1. Hypothesis

We hypothesis that the Figure 1 shows the branches of our current remote repository.

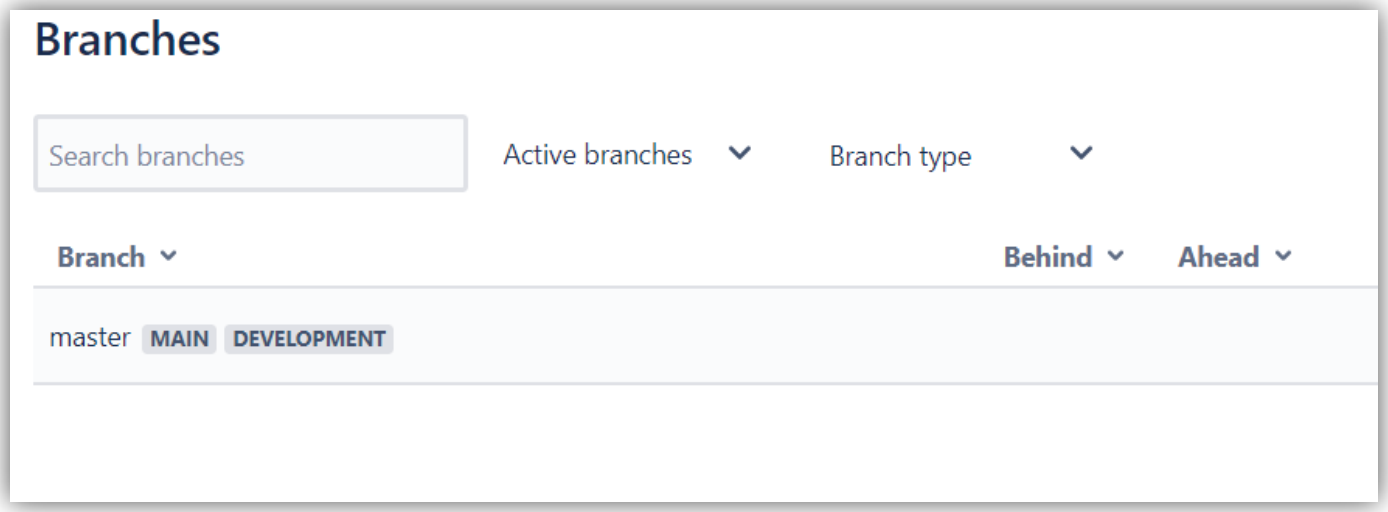

Figure 1 - Branches of Remote Repository

Now we add a new topic or a new feature to our application. The next section shows us how to apply Release Flow in this hypothesis.

2.2. Demonstration

Step 1. Update local repository.

Issue the following command and resolve conflicts if any.

```
(master) $ git pull
```

Step 2. Create and switch to a new branch in the local repository.

```
(master) $ git checkout -b feature/demonstrate-release-flow
```

Step 3. Make modification in the local repository.

Step 4. Commit the change in the local repository.

```
(feature/demonstrate-release-flow) $ git commit –m “Add a feature for demonstration”
```

Step 5. Create a new branch in the remote repository (bitbucket through GUI).

- Firstly, choose “Branches” on the panel in the left of the repository interface.

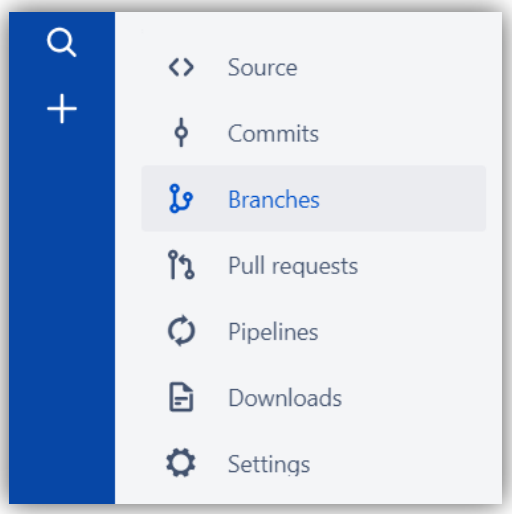

Figure 2- Branch Creation in Bitbucket GUI (1/4)

- Secondly, click the button “Create branch” in the top right corner of the interface.

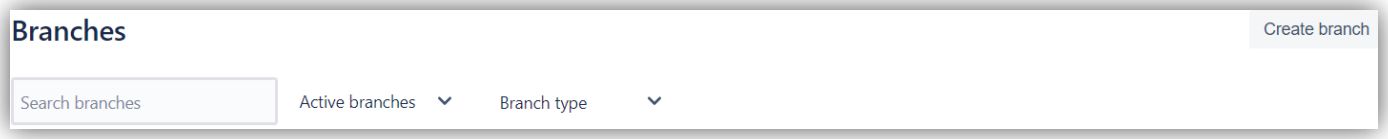

Figure 3 - Branch Creation in Bitbucket GUI (2/4)

- Lastly, change the branch “Type”, choose the origin branch in “From branch”, fill the branch name in the blank of the popup form, and click “Create” button.

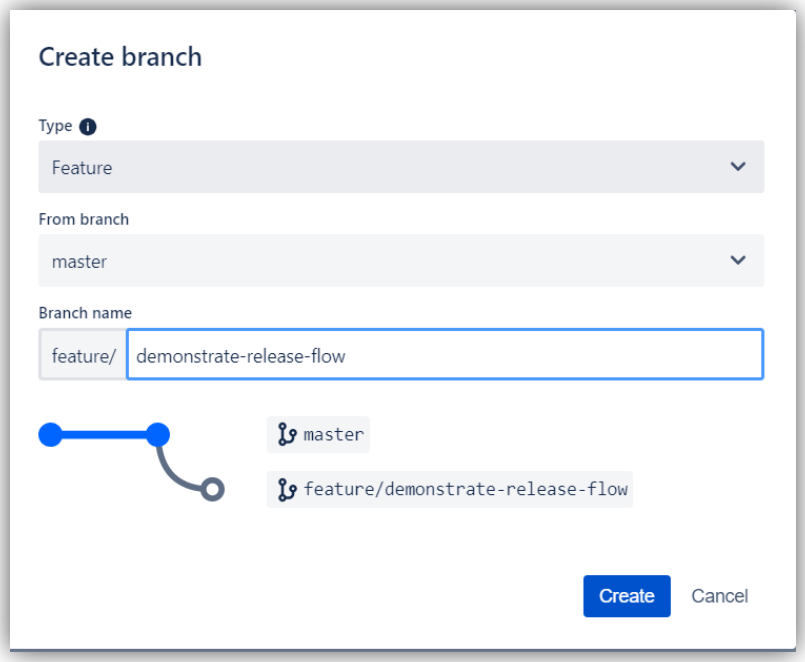

Figure 4 - Branch Creation in Bitbucket GUI (3/4)

- The following figure shows the result of our efforts in this step.

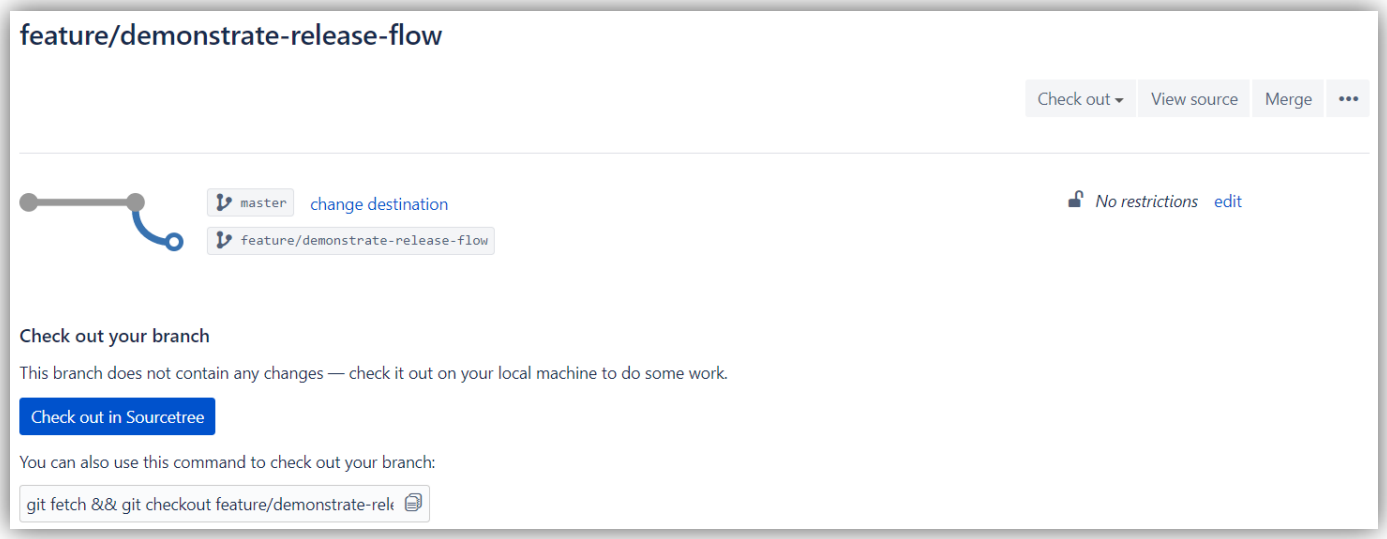

Figure 5 – Branch Creation in Bitbucket GUI (4/4)

Step 6. Push the local branch to the remote branch

```
(feature/demonstrate-release-flow) $ git push origin topic/demonstrate-release-flow
```

Step 7. Create a pull request in Bitbucket GUI (for working in a team only)

- Firstly, choose "Pull requests" on the panel in the left of the repository interface.

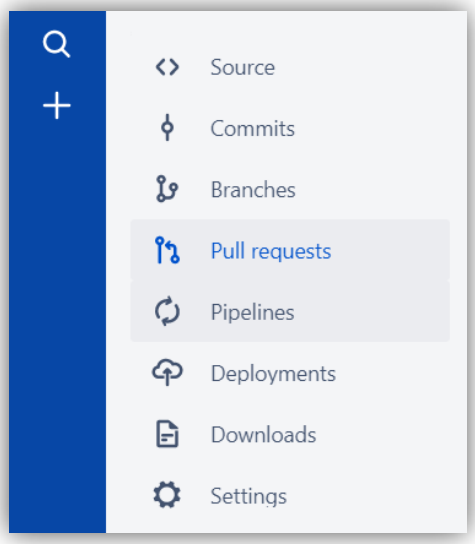

Figure 6 - Creation of a Pull Request in Bitbucket GUI (1/4)

- Secondly, click the button "Create pull request" in the top right corner of the interface.

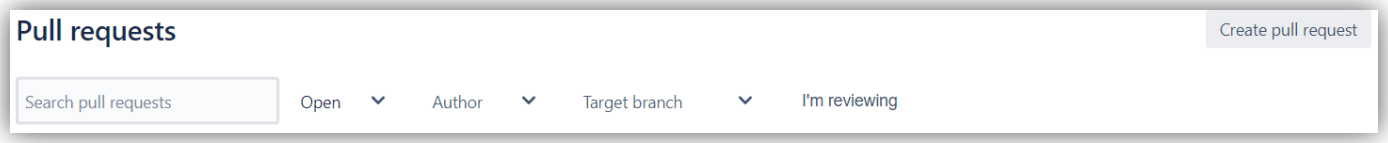

Figure 7 - Creation of a Pull Request in Bitbucket GUI (2/4)

- Lastly, fill the form. We can change everything as we desired. Besides, when choosing diff tag in the bottom of the interface, we can see the changes between current branch and the target branch.
  Note: the target branch will affect the destination branch which we want our branch merge to in the next step.

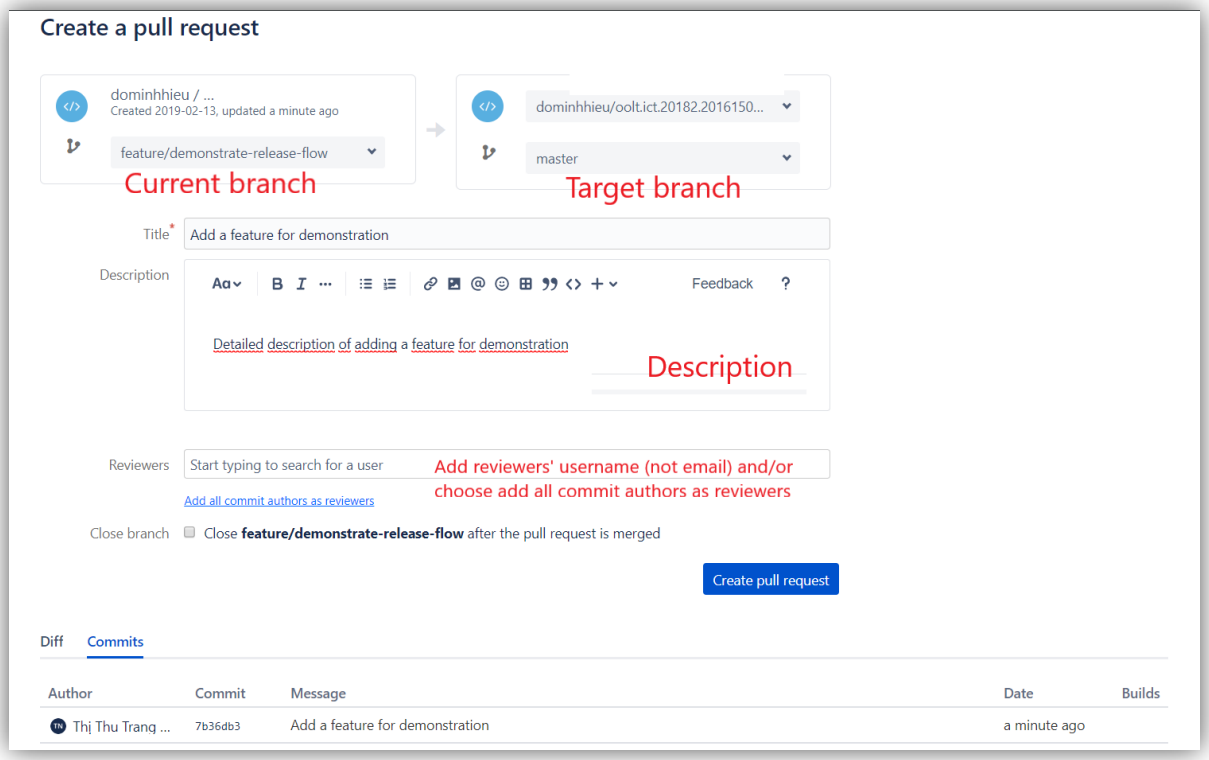

Figure 8 - Creation of a Pull Request in Bitbucket GUI (3/4)

- The following figure shows the result of our efforts in the dashboard of bitbucket. The added reviewers also can see the pull requests in their dashboard. When the changes are viewed, we can merge the branches.

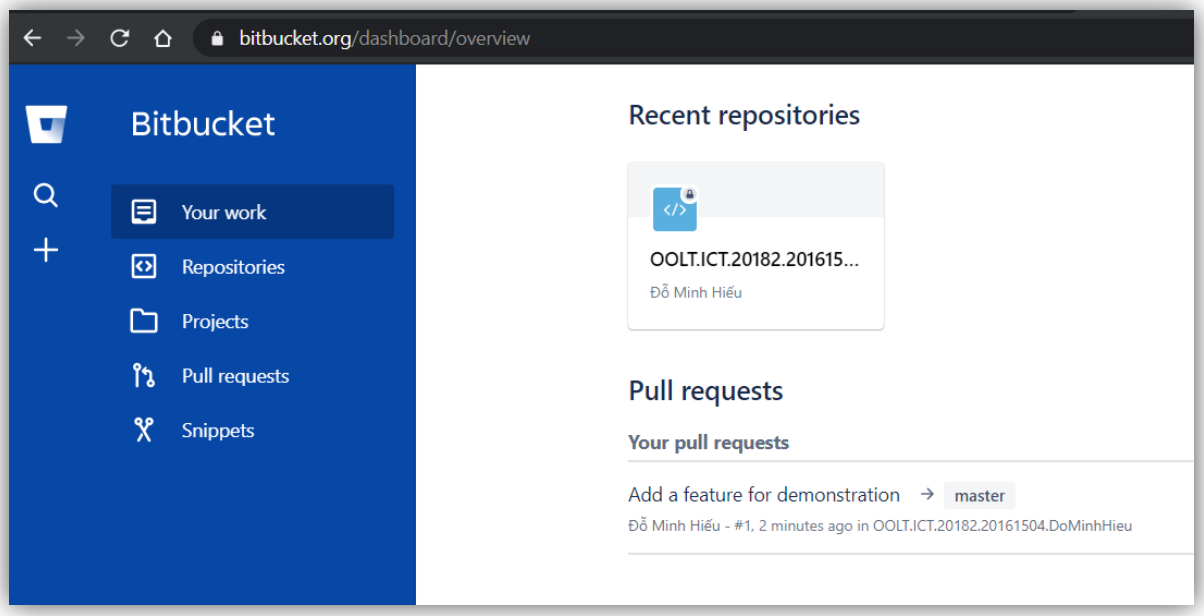

Figure 9 - Creation of a Pull Request in Bitbucket GUI (4/4)

Step 8. Merge the new remote branch to the master branch.

- Firstly, choose “Branches” on the panel in the left of the repository interface.
- Secondly, click the Button at the end of line and choose “Merge”.

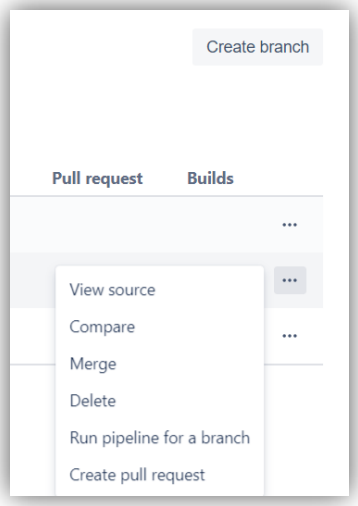

Figure 10 – Branch merging (1/3)

- Lastly, change the commit message and “Merge strategy” if need be. We cannot change the destination branch. However, we can merge the branches if we choose the “Compare” option (as shown in Figure 10)

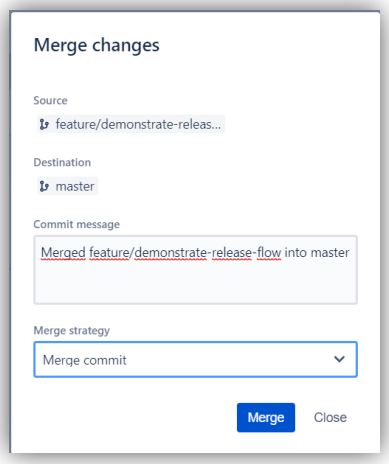

Figure 11 - Branch merging (2/3)

- The following figure shows the result of our efforts.

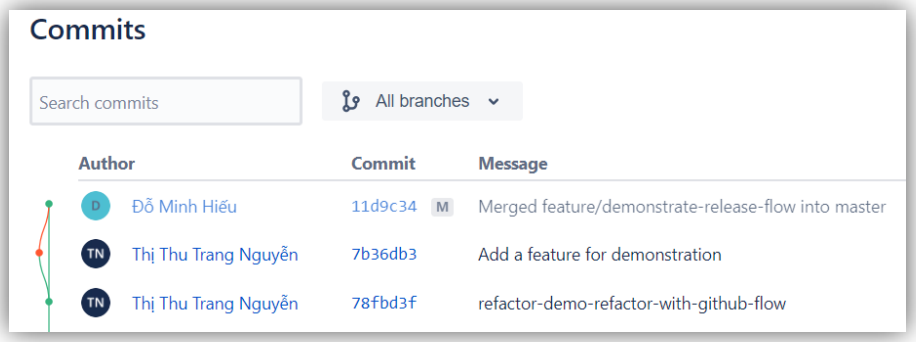

Figure 12 - Branch merging (3/3)