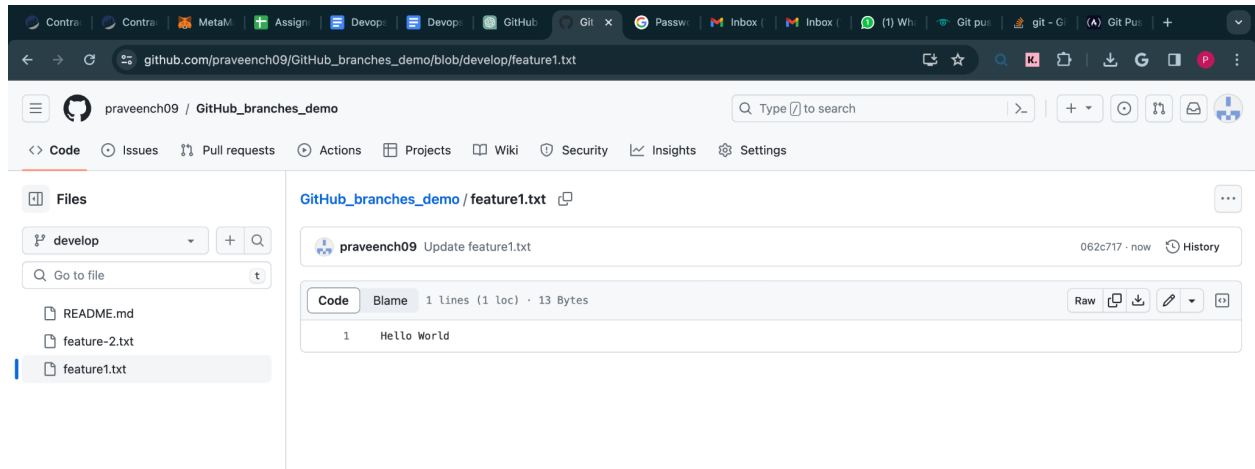


Devops Assignment- 11

Praveen Kumar Chukkapalli

1) Create Merge Conflict Scenario and resolve Merge Conflicts with 2 branches changed using same file

Modifying the feature-1.txt file content in the github app to arise the conflict when pushed other changes from the local repo of the previous version commit.



Modifying the same content in same file and pushing to global repo

```
GitHub_branches_demo --zsh -- 121x24

zsh: command not found: fit
praveenkumarchukkapalli@Praveens-MacBook-Pro GitHub_branches_demo % git status
On branch feature/1
Your branch is up to date with 'origin/feature/1'.

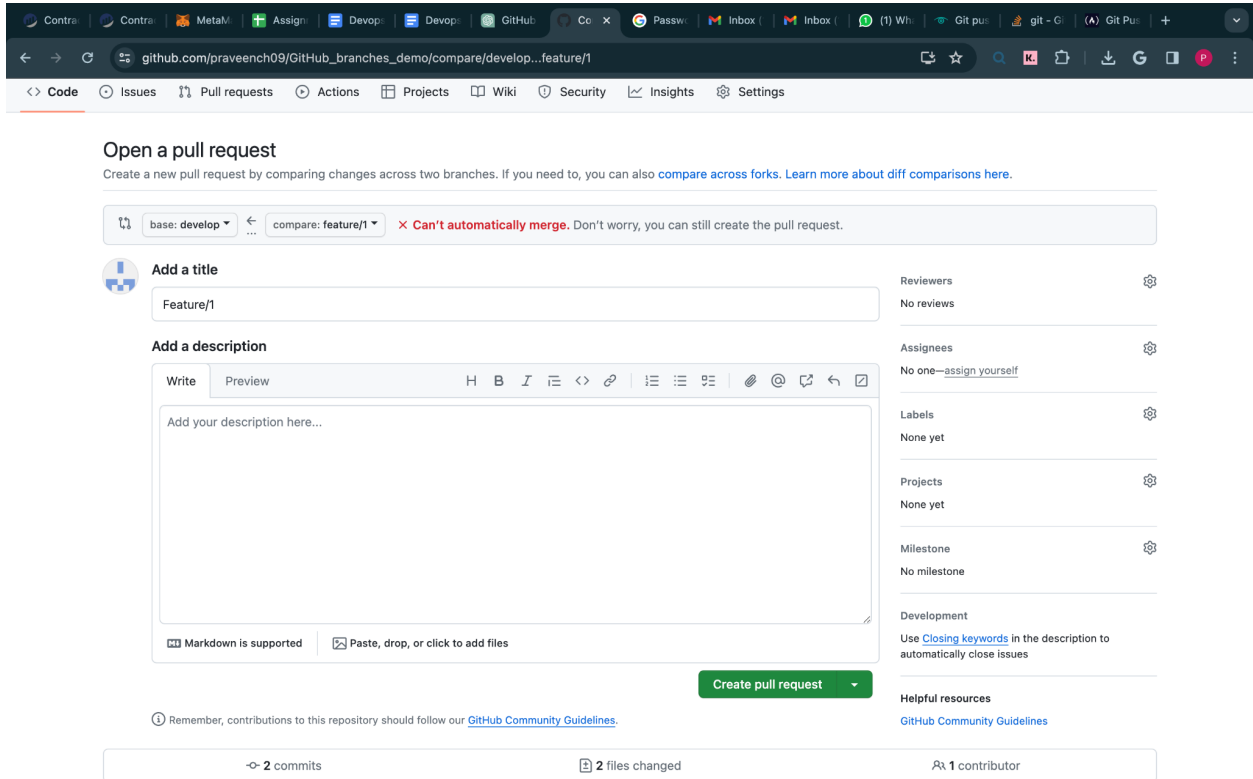
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   feature-1.txt

praveenkumarchukkapalli@Praveens-MacBook-Pro GitHub_branches_demo % git commit -m "Updated feature -1 "
[feature/1 1033eee] Updated feature -1
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 feature-1.txt
praveenkumarchukkapalli@Praveens-MacBook-Pro GitHub_branches_demo % git push -u origin feature/1
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 316 bytes | 316.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/praveench09/GitHub_branches_demo.git
 72dbc60..1033eee feature/1 -> feature/1
branch 'feature/1' set up to track 'origin/feature/1'.
praveenkumarchukkapalli@Praveens-MacBook-Pro GitHub_branches_demo %
```

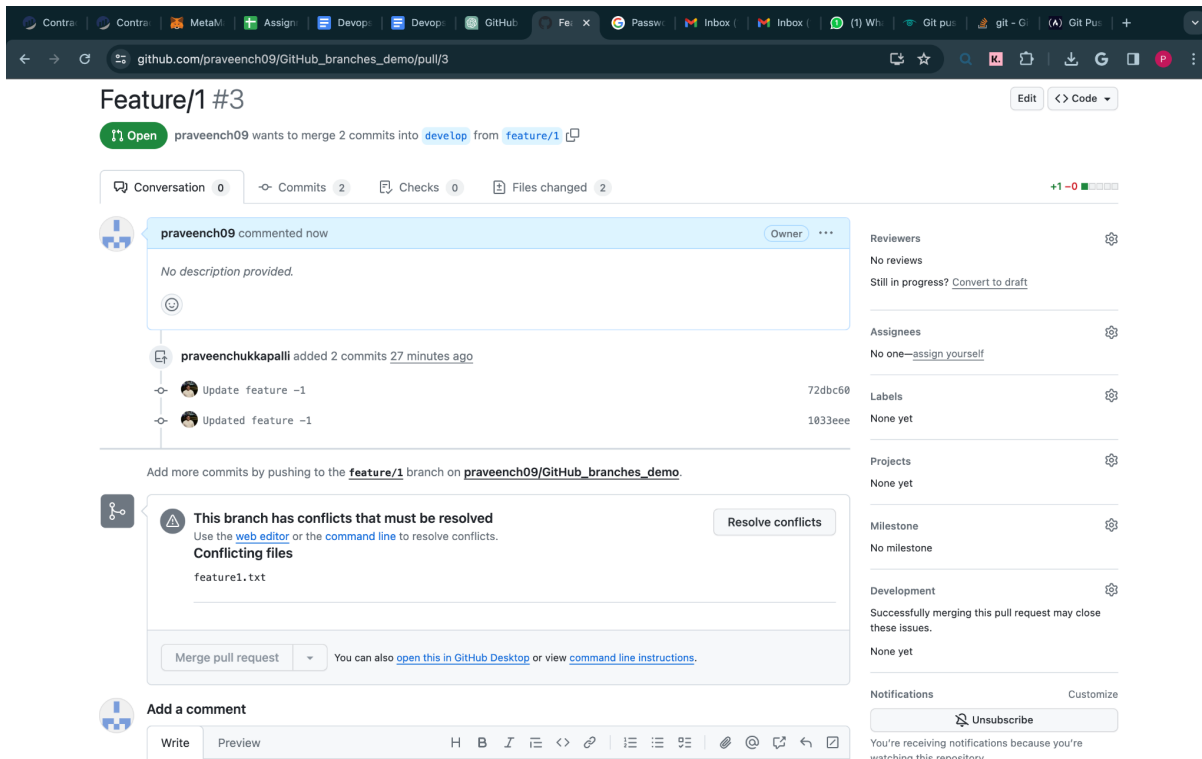
Devops Assignment- 11

Praveen Kumar Chukkapalli

It arises the conflict in github while merging PR



This screenshot shows the 'Open a pull request' interface on GitHub. The browser address bar indicates the URL is `github.com/praveench09/GitHub_branches_demo/compare/develop...feature/1`. The page title is 'Open a pull request'. Below the title, a message states: 'Create a new pull request by comparing changes across two branches. If you need to, you can also [compare across forks](#). [Learn more about diff comparisons here](#).' The 'base' is set to 'develop' and the 'compare' branch is 'feature/1'. A red error message says: 'X Can't automatically merge. Don't worry, you can still create the pull request.' The 'Add a title' section has a text input with 'Feature/1'. The 'Add a description' section has a rich text editor with the placeholder 'Add your description here...'. On the right, there are settings for Reviewers (No reviews), Assignees (No one—assign yourself), Labels (None yet), Projects (None yet), and Milestone (No milestone). At the bottom, there is a green 'Create pull request' button. Below the button, a reminder says: 'Remember, contributions to this repository should follow our [GitHub Community Guidelines](#).' At the very bottom, a summary bar shows '2 commits', '2 files changed', and '1 contributor'.



This screenshot shows the details of a pull request titled 'Feature/1 #3'. The browser address bar shows the URL `github.com/praveench09/GitHub_branches_demo/pull/3`. The pull request is owned by 'praveench09' and is intended to merge 2 commits from the 'feature/1' branch into the 'develop' branch. The status bar shows 'Open', '2 commits', '0 checks', and '2 files changed'. The conversation section shows a comment from 'praveench09' stating 'No description provided.' and a commit from 'praveenchukkapalli' added 27 minutes ago. The commit details show two updates to 'feature -1' with commit hashes '72dbc68' and '1033eee'. A warning message states: 'This branch has conflicts that must be resolved'. It suggests using the 'web editor' or 'command line' to resolve conflicts. The conflicting file is 'feature1.txt'. At the bottom, there is a 'Merge pull request' button and a link to 'command line instructions'. The right sidebar shows settings for Reviewers, Assignees, Labels, Projects, Milestone, and Development. At the bottom, there is a section for 'Add a comment' and a 'Notifications' section with an 'Unsubscribe' button.

Devops Assignment- 11

Praveen Kumar Chukkapalli

Resolving the conflicts

The screenshot shows the GitHub pull request interface for 'praveench09 / GitHub_branches_demo'. The pull request is titled 'Feature/1 #3' and is resolving conflicts between 'feature/1' and 'develop'. The interface shows a list of conflicting files, with 'feature1.txt' selected. The conflict is highlighted in yellow, showing the following content:

```
1 <<<<<< feature/1
2 World Hello
3 =====
4 Hello World
5 >>>>>> develop
6
```

The interface also includes a 'Mark as resolved' button and navigation links for 'Prev' and 'Next'.

The screenshot shows the same GitHub pull request interface, but the conflict has been resolved. The 'feature1.txt' file now contains the following content:

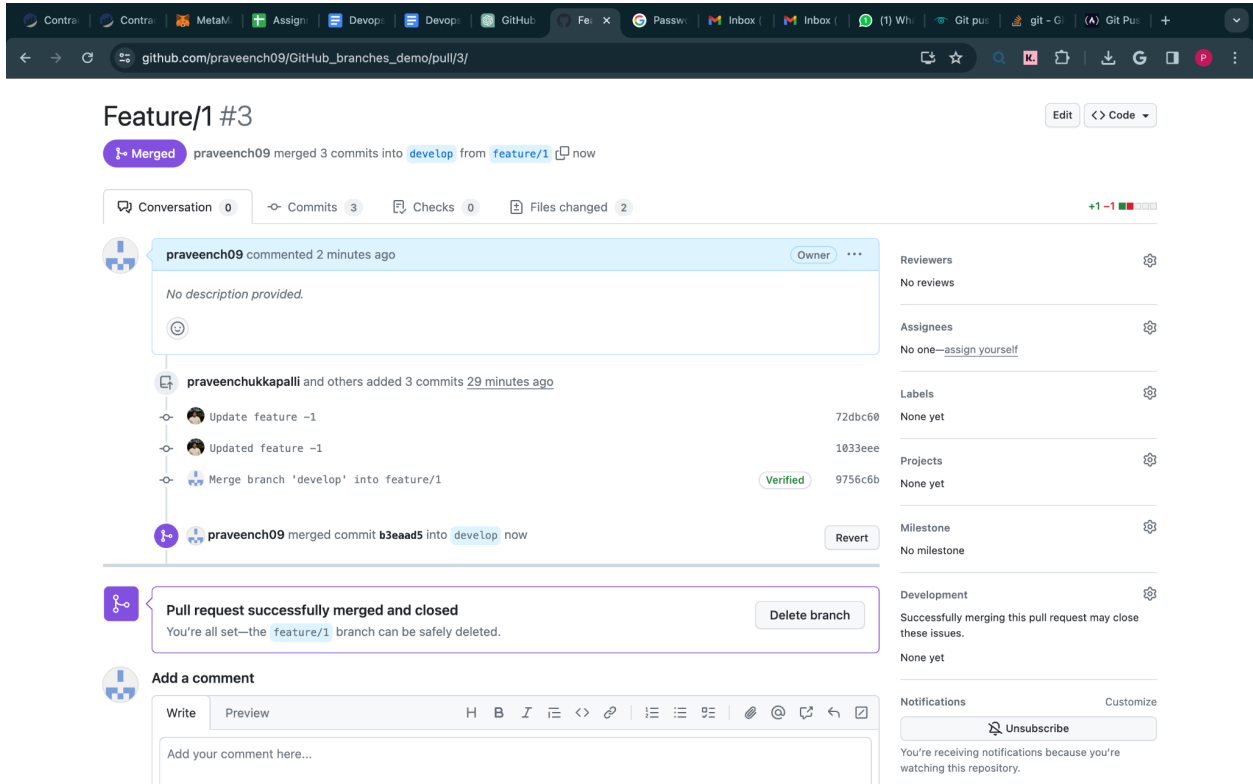
```
1 Hello World
2
```

The interface also includes a 'Mark as resolved' button and navigation links for 'Prev' and 'Next'.

Devops Assignment- 11

Praveen Kumar Chukkapalli

And able to merge after resolving the conflicts in feature-1 file :



Feature/1 #3

praveench09 merged 3 commits into develop from feature/1 now

Conversation 0 Commits 3 Checks 0 Files changed 2

praveench09 commented 2 minutes ago

No description provided.

praveenchukkapalli and others added 3 commits 29 minutes ago

- Update feature -1 72dbc60
- Updated feature -1 1033eee
- Merge branch 'develop' into feature/1 Verified 9756c6b

praveench09 merged commit b3eaa5 into develop now

Pull request successfully merged and closed

You're all set—the feature/1 branch can be safely deleted.

Add a comment

Write Preview

Add your comment here...

2) Merge vs rebase (observer commit log)

Git merge merges to branches by raising a new commit

```
GitHub_branches_demo --zsh -- 121x24
praveenkumarchukkapalli@Praveens-MacBook-Pro GitHub_branches_demo % git commit -m "Updated feature -1 "
[feature/1 1033eee] Updated feature -1
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 feature-1.txt
praveenkumarchukkapalli@Praveens-MacBook-Pro GitHub_branches_demo % git push -u origin feature/1
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 316 bytes | 316.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/praveench09/GitHub_branches_demo.git
72dbc60..1033eee feature/1 -> feature/1
branch 'feature/1' set up to track 'origin/feature/1'.
praveenkumarchukkapalli@Praveens-MacBook-Pro GitHub_branches_demo % git branch
* feature/1
feature/2
main
praveenkumarchukkapalli@Praveens-MacBook-Pro GitHub_branches_demo % git merge feature/1 feature/2
Merge made by the 'ort' strategy.
feature-2.txt | 0
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 feature-2.txt
praveenkumarchukkapalli@Praveens-MacBook-Pro GitHub_branches_demo %
```

Devops Assignment- 11

Praveen Kumar Chukkapalli

Git rebase replaces the commit history of branch onto another by creating a linear history

```
GitHub_branches_demo -- zsh -- 121x24

1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 feature-1.txt
praveenkumarchukkapalli@Praveens-MacBook-Pro GitHub_branches_demo % git push -u origin feature/1
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 316 bytes | 316.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/praveench09/GitHub_branches_demo.git
  72dbc60..1033eee feature/1 -> feature/1
branch 'feature/1' set up to track 'origin/feature/1'.
praveenkumarchukkapalli@Praveens-MacBook-Pro GitHub_branches_demo % git branch
* feature/1
  feature/2
  main
praveenkumarchukkapalli@Praveens-MacBook-Pro GitHub_branches_demo % git merge feature/1 feature/2
Merge made by the 'ort' strategy.
 feature-2.txt | 0
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 feature-2.txt
praveenkumarchukkapalli@Praveens-MacBook-Pro GitHub_branches_demo % git rebase main feature/1
Successfully rebased and updated refs/heads/feature/1.
praveenkumarchukkapalli@Praveens-MacBook-Pro GitHub_branches_demo %
```

3) git pull vs fetch

Git fetch fetches the local commit history and allows you to retrieve the changes

```
GitHub_branches_demo -- zsh -- 121x24

praveenkumarchukkapalli@Praveens-MacBook-Pro GitHub_branches_demo % git fetch
remote: Enumerating objects: 10, done.
remote: Counting objects: 100% (10/10), done.
remote: Compressing objects: 100% (5/5), done.
remote: Total 6 (delta 2), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (6/6), 2.64 KiB | 337.00 KiB/s, done.
From https://github.com/praveench09/GitHub_branches_demo
  1033eee..9756c6b feature/1 -> origin/feature/1
  062c717..be17c97 develop -> origin/develop
praveenkumarchukkapalli@Praveens-MacBook-Pro GitHub_branches_demo %
```

Git pull retrieves the commit history and merges them if there are no conflicts

Devops Assignment- 11

Praveen Kumar Chukkapalli

```
GitHub_branches_demo --zsh -- 121x24
praveenkumarchukkapalli@Praveens-MacBook-Pro GitHub_branches_demo % git pull
fatal: Not possible to fast-forward, aborting.
praveenkumarchukkapalli@Praveens-MacBook-Pro GitHub_branches_demo % ls
README.md      feature-1.txt  feature-2.txt  feature1.txt
praveenkumarchukkapalli@Praveens-MacBook-Pro GitHub_branches_demo % git pull
fatal: Not possible to fast-forward, aborting.
praveenkumarchukkapalli@Praveens-MacBook-Pro GitHub_branches_demo % git pull develop --rebase
fatal: 'develop' does not appear to be a git repository
fatal: Could not read from remote repository.

Please make sure you have the correct access rights
and the repository exists.
praveenkumarchukkapalli@Praveens-MacBook-Pro GitHub_branches_demo % git pull --rebase
warning: skipped previously applied commit b5e59ed
hint: use --reapply-cherry-picks to include skipped commits
hint: Disable this message with "git config advice.skippedCherryPicks false"
Successfully rebased and updated refs/heads/feature/1.
praveenkumarchukkapalli@Praveens-MacBook-Pro GitHub_branches_demo %
```

