Git Practical

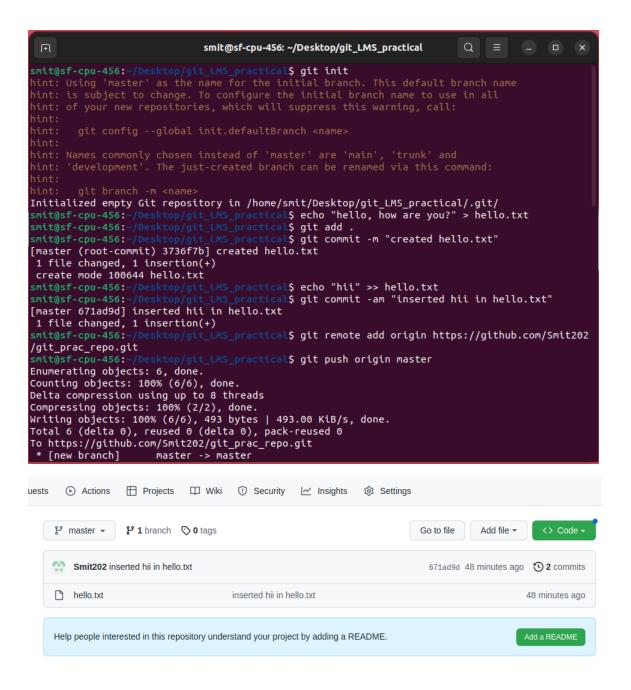
Create one repository for practical and provide the link of it for review.

Work on below points:

- 1. Pull and Merge difference
- Make example of pull request and two branch merge event.
- 2. Rebase
- Try to rebase feature branch with master branch
- 3. Change commit message
- Commit push on commit in feature branch and then change commit message
- 4. cherry pick
- Pick some commits from feature branch to master branch
- 5. Drop commit
- Remove some commit from feature branch.

Initial setup

• I have initialized one repository in git_LMS_practical folder and made one file hello.txt and made some changes and then committed. Meanwhile I have created one repository named git_prac_repo in github. Then added its remote to the local repository and pushed all changes in github repo.



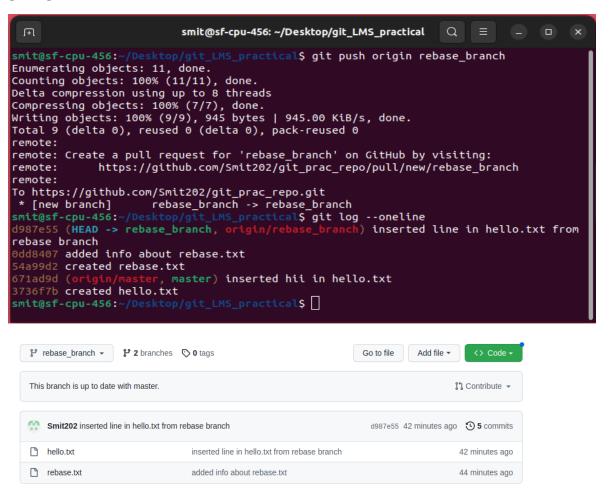
2. Rebase

- Try to rebase feature branch with master branch
 - 1. Create one branch named rebase_branch in local repo using git branch command. Switch to this branch using git checkout command.

2. Add file named rebase.txt make some changes and commit. Then insert one line in hello.txt and commit.

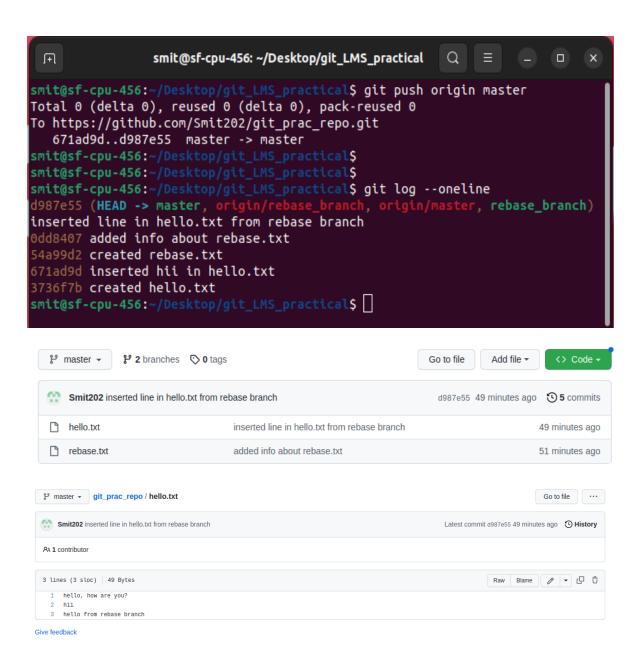
```
smit@sf-cpu-456: ~/Desktop/git_LMS_practical
smit@sf-cpu-456:~/Desktop/git_LMS_practical$ echo "this is file for the rebase" > rebase.txt
smit@sf-cpu-456:~/Desktop/git_LMS_practical$ git add .
smit@sf-cpu-456:~/Desktop/git_LMS_practical$ git commit -m "created rebase.txt"
[rebase branch 54a99d2] created rebase.txt
1 file changed, 1 insertion(+)
create mode 100644 rebase.txt
smit@sf-cpu-456:~/Desktop/git_LMS_practical$ echo "this file will be rebased with master branch"
>> rebase.txt
smit@sf-cpu-456:~/Desktop/git_LMS_practical$ git commit -am "added info about rebase.txt"
[rebase_branch 0dd8407] added info about rebase.txt
1 file changed, 1 insertion(+)
smit@sf-cpu-456:~/Desktop/git_LMS_practical$ echo "hello from rebase branch">> hello.txt
smit@sf-cpu-456:~/Desktop/git_LMS_practical$ git commit -am "inserted line in hello.txt from reba
se branch"
[rebase_branch d987e55] inserted line in hello.txt from rebase branch
1 file changed, 1 insertion(+)
smit@sf-cpu-456:~/Desktop/git_LMS_practical$
```

3. Now push this changes into remote repo and see commit history till now by git log command.



4. To rebase rebase_branch onto master first checkout to master branch and then run git rebase command.

5. Now push this changes into remote repo.



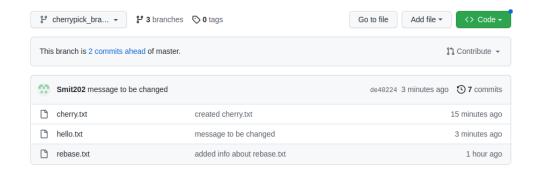
6. Here we can see that by rebasing feature branch onto master all the commits of feature branch are put on the tip of master branch commits.

3. Change commit message

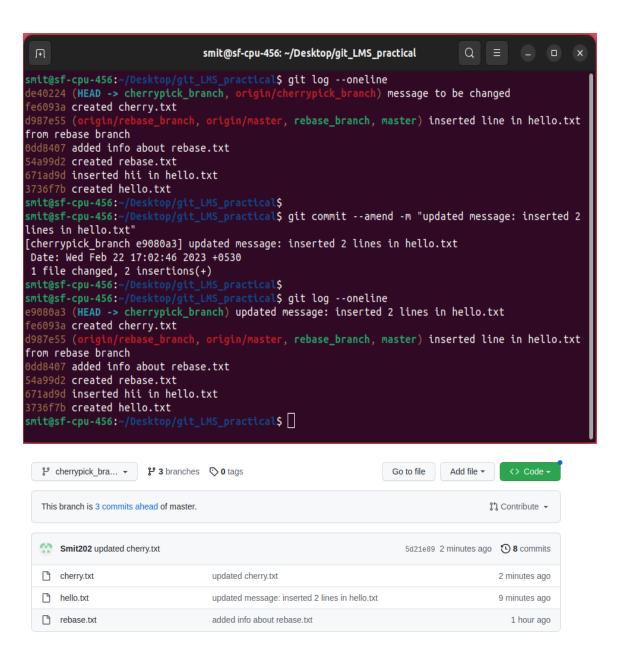
- Commit push on commit in feature branch and then change commit message
 - 1. First create branch named cherrypick_branch and then checkout to that branch. Here create one file named cherry.txt and commit.

2. Now insert one line in hello.txt file inside cherrypick_branch, commit and push into remote repository.

```
smit@sf-cpu-456: ~/Desktop/git_LMS_practical
smit@sf-cpu-456:~/Desktop/git_LMS_practical$ echo "hii from cherrypick branch" >> hello.txt
smit@sf-cpu-456:~/Desktop/git_LMS_practical$ echo "this is demo for changing commit message and
cherry pick command" >> hello.txt
                                               _practical$ git commit -am "message to be changed"
[cherrypick_branch de40224] message to be changed
 1 file changed, 2 insertions(+)
                                            IS_practical$ git push origin cherrypick_branch
Enumerating objects: 8, done.
Counting objects: 100% (8/8), done.
Delta compression using up to 8 threads
Compressing objects: 100% (5/5), done.
Writing objects: 100% (6/6), 724 bytes | 724.00 KiB/s, done.
Total 6 (delta 0), reused 0 (delta 0), pack-reused 0
remote:
remote: Create a pull request for 'cherrypick_branch' on GitHub by visiting: remote: https://github.com/Smit202/git_prac_repo/pull/new/cherrypick_branch
remote:
To https://github.com/Smit202/git_prac_repo.git
                              cherrypick_branch -> cherrypick_branch
    [new branch]
                                                 oractical$ git log --oneline
```



3. Now change last commit message using git commit --amend command. We can see in log that commit message is changed.

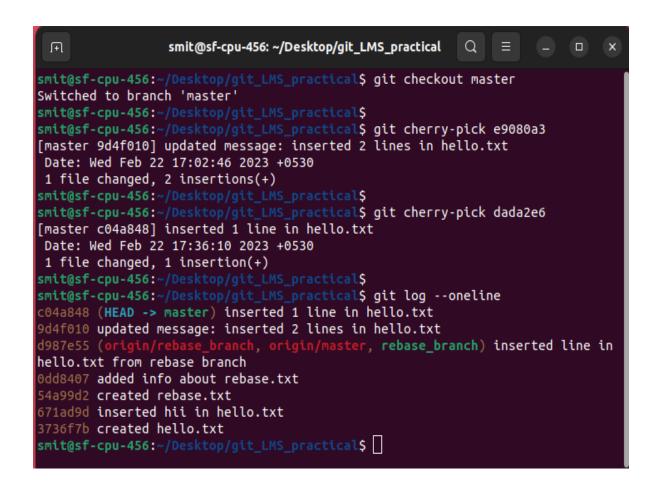


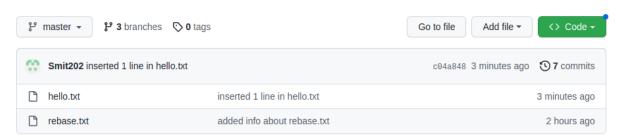
4. cherry pick

- Pick some commits from feature branch to master branch
 - 1. Insert one line into hello.txt and commit and view logs.

```
smit@sf-cpu-456: ~/Desktop/git_LMS_practical
                                                                           Q = - 0
smit@sf-cpu-456:~/Desktop/git_LMS_practical$ echo "will cherry pick commit into master" >> hello|
smit@sf-cpu-456:~/Desktop/git_LMS_practical$ git commit -am "inserted 1 line in hello.txt"
[cherrypick branch dada2e6] inserted 1 line in hello.txt
1 file changed, 1 insertion(+)
smit@sf-cpu-456:~/Desktop/git_LMS_practical$ git log --oneline
dada2e6 (HEAD -> cherrypick_branch) inserted 1 line in hello.txt
                                 ) updated cherry.txt
e9080a3 updated message: inserted 2 lines in hello.txt
fe6093a created cherry.txt
                             n, origin/master, rebase_branch, master) inserted line in hello.txt
from rebase branch
0dd8407 added info about rebase.txt
54a99d2 created rebase.txt
671ad9d inserted hii in hello.txt
3736f7b created hello.txt
smit@sf-cpu-456:~/Desktop/git_LMS_practical$ git push -u -f origin cherrypick branch
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 8 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 386 bytes | 386.00 KiB/s, done.
Total 3 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/Smit202/git_prac_repo.git
   5d21e89..dada2e6 cherrypick_branch -> cherrypick_branch
Branch 'cherrypick_branch' set up to track remote branch 'cherrypick_branch' from 'origin'.
smit@sf-cpu-456:~/Desktop/git_LMS_practical$
```

2. Now we will cherry pick first and third commit into master. For that first checkout to master and then run cherry pick command with commit id as argument.





5. Drop commit

- Remove some commit from feature branch.
 - 1. To remove specific commit we need to use git interactive rebase as below:

```
smit@sf-cpu-456: ~/Desktop/git_LMS_practical
                                                                       Q
smit@sf-cpu-456:~/Desktop/git_LMS_practical$ git log --oneline
dada2e6 (HEAD -> cherrypick_branch, origin/cherrypick_branch) inserted 1 line in hello.txt
5d21e89 updated cherry.txt
e9080a3 updated message: inserted 2 lines in hello.txt
fe6093a created cherry.txt
                             , rebase_branch) inserted line in hello.txt from rebase branch
0dd8407 added info about rebase.txt
54a99d2 created rebase.txt
671ad9d inserted hii in hello.txt
3736f7b created hello.txt
smit@sf-cpu-456:~/Desktop/git_LMS_practical$ git rebase -i 5d21e89~1
Successfully rebased and updated refs/heads/cherrypick branch.
smit@sf-cpu-456:~/Desktop/git_LMS_practical$ git log --oneline
dada2e6 (HEAD -> cherrypick_branch, origin/cherrypic
                                                     _branch) inserted 1 line in hello.txt
5d21e89 updated cherry.txt
e9080a3 updated message: inserted 2 lines in hello.txt
fe6093a created cherry.txt
                             , rebase_branch) inserted line in hello.txt from rebase branch
0dd8407 added info about rebase.txt
54a99d2 created rebase.txt
671ad9d inserted hii in hello.txt
3736f7b created hello.txt
smit@sf-cpu-456:~/Desktop/git_LMS_practical$
```

2. When we run git rebase -I it will prompt us to ineractive environment in code editor there type drop 5d21e89, save it and close. Now this commit is dropped.

1. Pull and merge difference

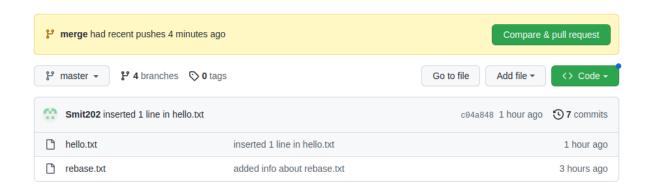
- Make example of pull request and two branch merge event.
 - 1. Create one branch named merge and add some files and do commit and pushes as below:

```
Ħ
                            smit@sf-cpu-456: ~/Desktop/git_LMS_practical
                                                                      Q
smit@sf-cpu-456:~/Desktop/git_LMS_practical$ git branch merge
smit@sf-cpu-456:~/Desktop/git_LMS_practical$ git checkout merge
Switched to branch 'merge'
smit@sf-cpu-456:~/Desktop/git_LMS_practical$ echo "this is file a which will be merged with
master" > abc.txt
smit@sf-cpu-456:~/Desktop/git_LMS_practical$ git add .
smit@sf-cpu-456:~/Desktop/git_LMS_practical$ git commit -m "created file abc.txt"
[merge 59cbdea] created file abc.txt
1 file changed, 1 insertion(+)
create mode 100644 abc.txt
smit@sf-cpu-456:~/Desktop/git_LMS_practical$
smit@sf-cpu-456:~/Desktop/git_LMS_practical$ echo "hello in file xyz from branch merge"
yz.txt
smit@sf-cpu-456:~/Desktop/git_LMS_practical$ git add .
smit@sf-cpu-456:~/Desktop/git_LMS_practical$ git commit -m "created file xyz.txt"
[merge 40a8425] created file xyz.txt
1 file changed, 1 insertion(+)
create mode 100644 xyz.txt
smit@sf-cpu-456:~/Desktop/git_LMS_practical$
```

2. Now add some text in hello.txt and push this branch in remote repo.

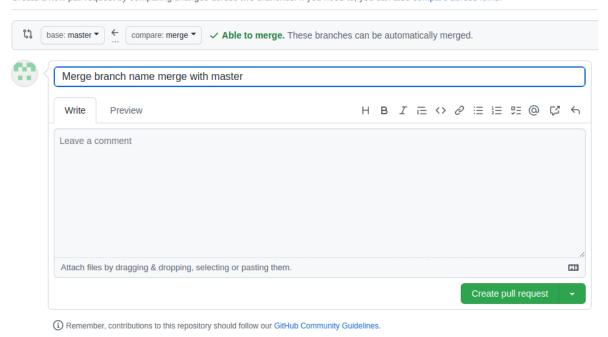
```
smit@sf-cpu-456: ~/Desktop/git_LMS_practical
                                                                               Q II
smit@sf-cpu-456:~/Desktop/git_LMS_practical$ echo "this line is created in merge branch and
it is merged" >> hello.txt
smit@sf-cpu-456:~/Desktop/
                             git_LMS_practical$ git commit -am "inserted 1 line in hello.txt"
[merge cf325f6] inserted 1 line in hello.txt
1 file changed, 1 insertion(+)
smit@sf-cpu-456:~/Desktop/git_LMS_practical$
smit@sf-cpu-456:~/Desktop/git_LMS_practical$ git push origin merge
Enumerating objects: 11, done.
Counting objects: 100% (11/11), done.
Delta compression using up to 8 threads
Compressing objects: 100% (7/7), done.
Writing objects: 100% (9/9), 912 bytes | 912.00 KiB/s, done.
Total 9 (delta 3), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (3/3), completed with 1 local object.
remote:
remote: Create a pull request for 'merge' on GitHub by visiting:
remote:
              https://github.com/Smit202/git prac repo/pull/new/merge
remote:
To https://github.com/Smit202/git_prac_repo.git
 * [new branch]
                     merge -> merge
smit@sf-cpu-456:~/Desktop/git_LMS_practical$ git log --oneline
cf325f6 (HEAD -> merge, origin/merge) inserted 1 line in hello.txt
40a8425 created file xyz.txt
59cbdea created file abc.txt
                         , master) inserted 1 line in hello.txt
9d4f010 updated message: inserted 2 lines in hello.txt
                                  rebase_branch) inserted line in hello.txt from rebase branch
0dd8407 added info about rebase.txt
54a99d2 created rebase.txt
671ad9d inserted hii in hello.txt
3736f7b created hello.txt
smit@sf-cpu-456:~/Desktop/git_LMS_practical$
```

3. After push we will see compare and pull request option at top in github repository. Click on that button, it will prompt to the new page. Type pull request message and click on create pull request as shown as below:

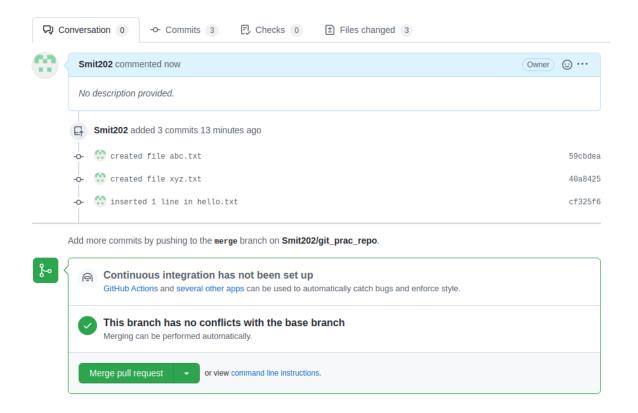


Open a pull request

Create a new pull request by comparing changes across two branches. If you need to, you can also compare across forks.



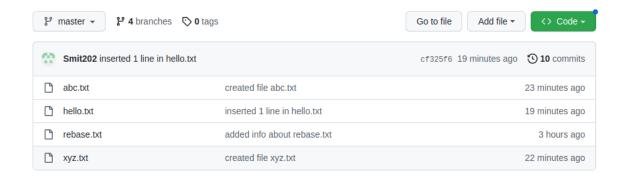
4. After creating pull request we can view the changes and commits in this branch and can approve request by clicking on button merge pull request, but will do this locally by git commands.

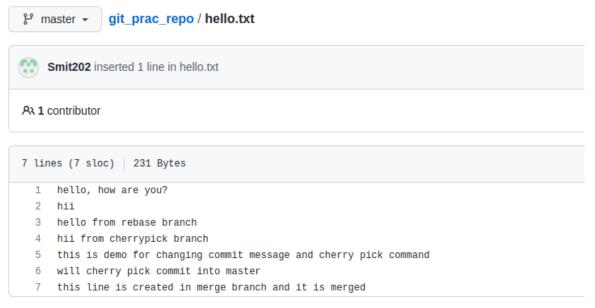


5. Now checkout to master branch and then run git merge merge. It will merge the merge branch into master. After the pushing changes we can see in github that branch is merged.

```
smit@sf-cpu-456: ~/Desktop/git_LMS_practical
                                                                      Q =
smit@sf-cpu-456:~/Desktop/git_LMS_practical$ git checkout master
Switched to branch 'master'
smit@sf-cpu-456:~/Desktop/git_LMS_practical$
smit@sf-cpu-456:~/Desktop/git_LMS_practical$ git merge merge
Updating c04a848..cf325f6
Fast-forward
abc.txt
hello.txt | 1 +
           1 +
xyz.txt
3 files changed, 3 insertions(+)
create mode 100644 abc.txt
create mode 100644 xyz.txt
smit@sf-cpu-456:~/Desktop/git_LMS_practical$
smit@sf-cpu-456:~/Desktop/git_LMS_practical$ git push origin master
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/Smit202/git_prac_repo.git
  c04a848..cf325f6 master -> master
smit@sf-cpu-456:~/Desktop/git_LMS_practical$
```

```
smit@sf-cpu-456:~/Desktop/git_LMS_practical$ git log --oneline
cf325f6 (HEAD -> master, origin/merge, origin/master, merge) inserted 1 line in hello.txt
40a8425 created file xyz.txt
59cbdea created file abc.txt
c04a848 inserted 1 line in hello.txt
9d4f010 updated message: inserted 2 lines in hello.txt
d987e55 (origin/rebase_branch, rebase_branch) inserted line in hello.txt from rebase branch
0dd8407 added info about rebase.txt
54a99d2 created rebase.txt
671ad9d inserted hii in hello.txt
3736f7b created hello.txt
smit@sf-cpu-456:~/Desktop/git_LMS_practical$ [
```





Give feedback

Link of github repo: https://github.com/Smit202/git_prac_repo