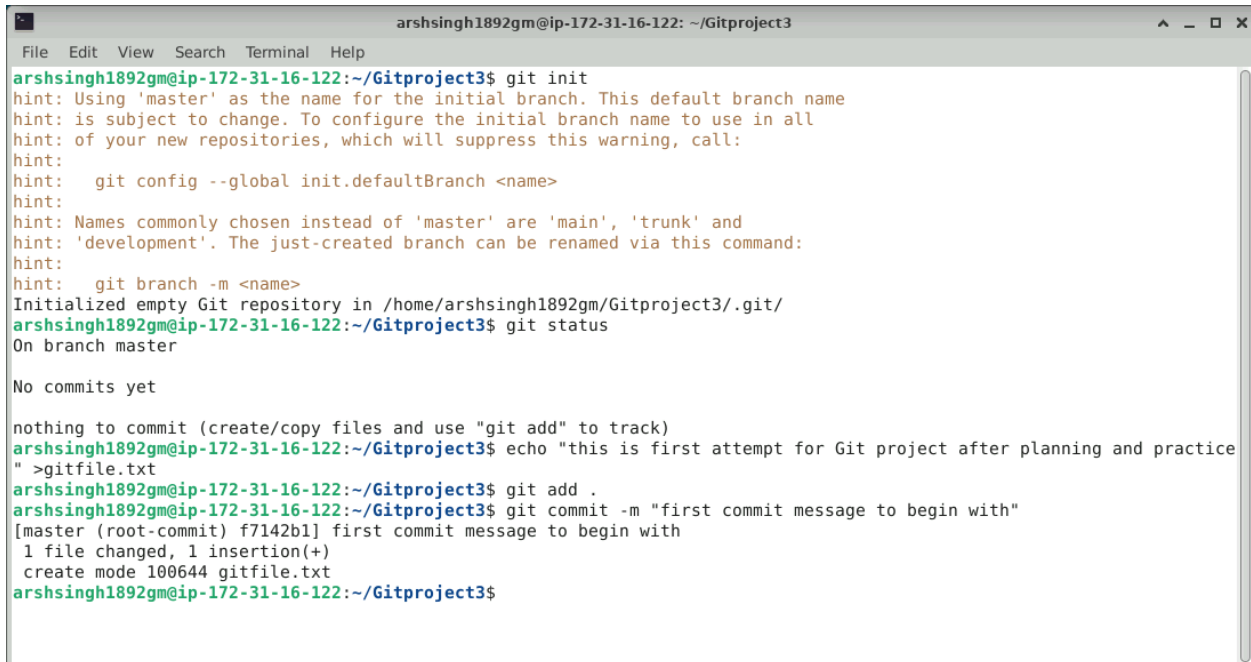# Screenshot file

This file contains the step by step approach of accomplishing the task.

I have purposefully not renamed the master branch to production for my convenience.

Note: after every 2 to 3 steps keep reviewing the status with Git Status and Git log --oneline to make sure we are moving in the right direction.
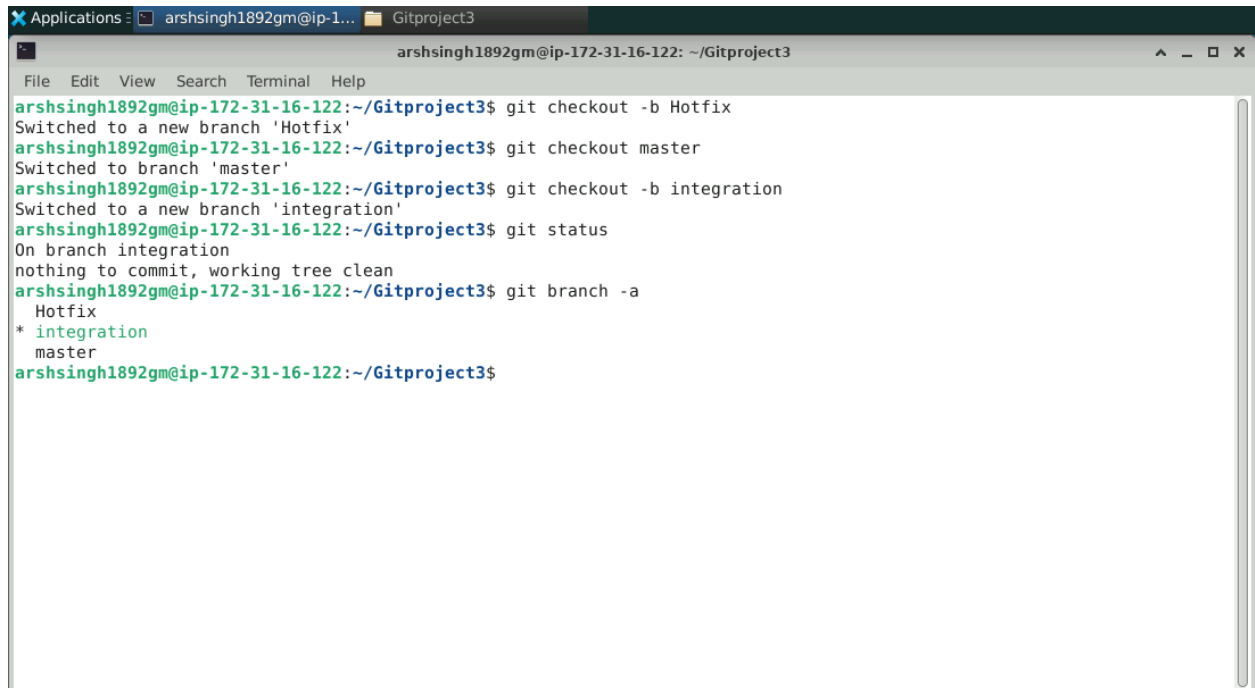
1. Create a file, add the file and commit with a message

2. Check the status of the master branch.
3. Create a Hotfix branch and switch back to the master branch.
4. Create an Integration branch and stay with the Integration branch. Verify with git Status.

```
arshsingh1892gm@ip-172-31-16-122: ~/Gitproject3
File  Edit  View  Search  Terminal  Help
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git checkout -b Hotfix
Switched to a new branch 'Hotfix'
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git checkout master
Switched to branch 'master'
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git checkout -b integration
Switched to a new branch 'integration'
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git status
On branch integration
nothing to commit, working tree clean
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git branch -a
  Hotfix
* integration
  master
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$
```

5. Create Feature1 branch, checkout to Integration branch and create Feature2 branch.


```
arshsingh1892gm@ip-172-31-16-122: ~/Gitproject3
File  Edit  View  Search  Terminal  Help
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git branch -a
  Hotfix
* integration
  master
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git checkout -b feature1
Switched to a new branch 'feature1'
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git checkout integration
Switched to branch 'integration'
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git checkout -b feature2
Switched to a new branch 'feature2'
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git branch -a
  Hotfix
  feature1
* feature2
  integration
  master
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$
```

6. Checkout to Feature2 Branch and commit 2 changes

```
arshsingh1892gm@ip-172-31-16-122: ~/Gitproject3                    ^ _ □ ✕
File  Edit  View  Search  Terminal  Help
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git status
On branch feature2
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
        modified:   gitfile.txt

no changes added to commit (use "git add" and/or "git commit -a")
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git add .
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git commit -m "feature2 message1"
[feature2 019f0eb] feature2 message1
 1 file changed, 1 insertion(+)
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git status
On branch feature2
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
        modified:   gitfile.txt

no changes added to commit (use "git add" and/or "git commit -a")
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git add .
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git commit -m "feature2 message2"
[feature2 791e11c] feature2 message2
 1 file changed, 1 insertion(+)
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git status
On branch feature2
nothing to commit, working tree clean
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$
```
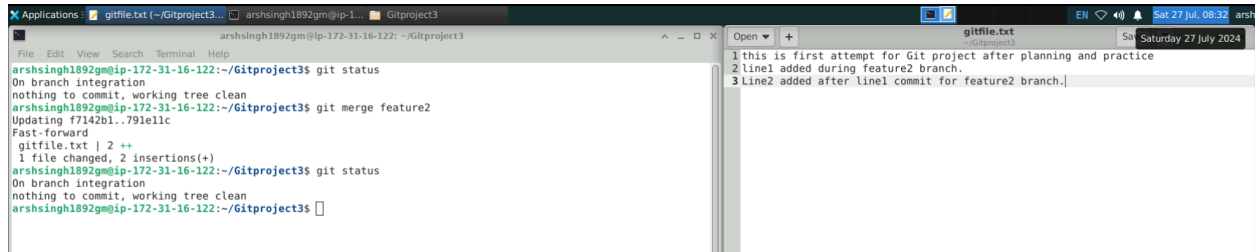
```
Open ▾   +                    gitfile.txt                  Save  ≡  −  +  ✕
                            ~/Gitproject3
1 this is first attempt for Git project after planning and practice
2 line1 added during feature2 branch.
3 Line2 added after line1 commit for feature2 branch.
```

7. Checkout to Integration branch and Merge Feature2 branch to Integration Branch

```
arshsingh1892gm@ip-172-31-16-122: ~/Gitproject3      ^ _ □ ✕    Open ▾  +        gitfile.txt      Save  Saturday 27 July 2024
File  Edit  View  Search  Terminal  Help                                       ~/Gitproject3
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git status       1 this is first attempt for Git project after planning and practice
On branch integration
nothing to commit, working tree clean
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$
```

```
arshsingh1892gm@ip-172-31-16-122: ~/Gitproject3                    ^ _ □ X   Open ▾   +                          gitfile.txt                        Sa Saturday 27 July 2024
File  Edit  View  Search  Terminal  Help                                                                       ~/Gitproject3
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git status                    1 this is first attempt for Git project after planning and practice
On branch integration                                                         2 line1 added during feature2 branch.
nothing to commit, working tree clean                                         3 Line2 added after line1 commit for feature2 branch.
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git merge feature2
Updating f7142b1..791e11c
Fast-forward
 gitfile.txt | 2 ++
 1 file changed, 2 insertions(+)
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git status
On branch integration
nothing to commit, working tree clean
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ ▯
```
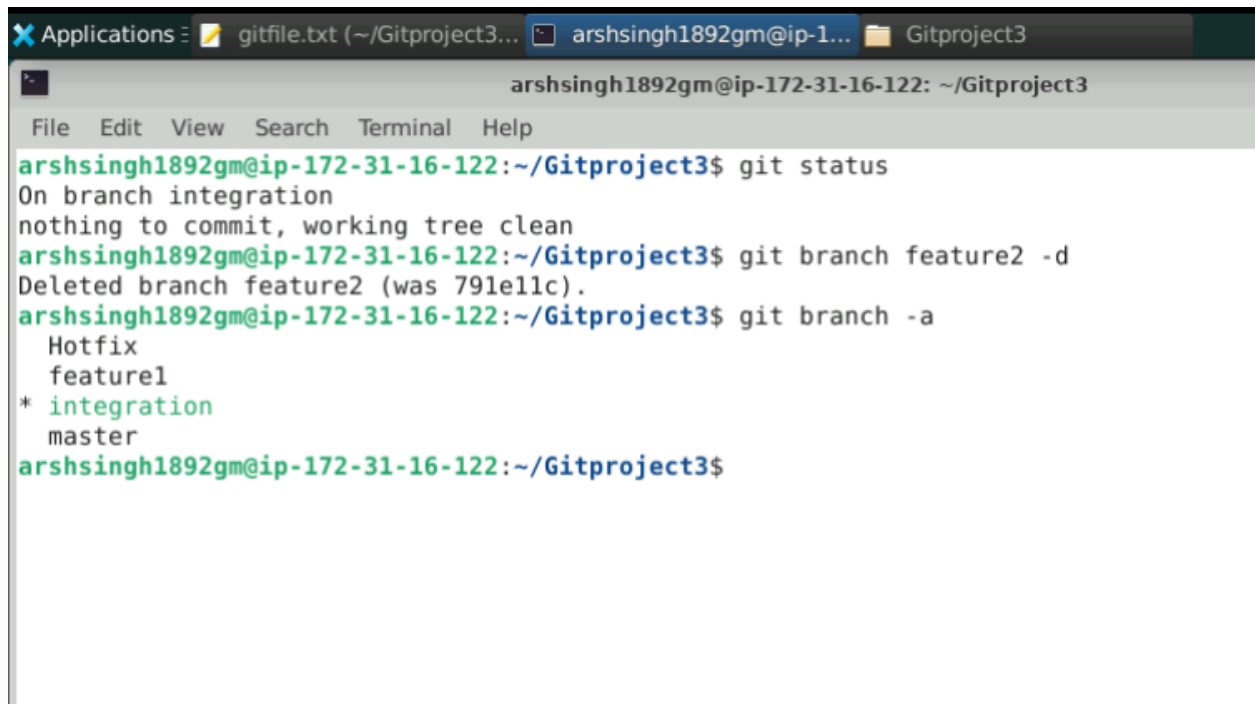
8.   Delete Feature2 branch.

arshsingh1892gm@ip-172-31-16-122: ~/Gitproject3

File   Edit   View   Search   Terminal   Help

```
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git status
On branch integration
nothing to commit, working tree clean
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git branch feature2 -d
Deleted branch feature2 (was 791e11c).
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git branch -a
  Hotfix
  feature1
* integration
  master
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$
```

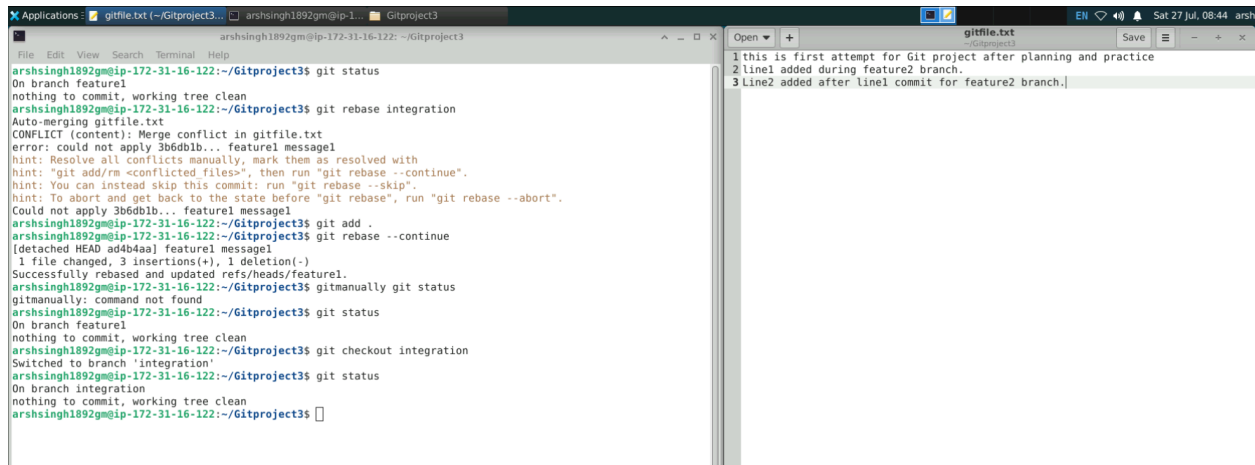9.   Checkout Feature1, Check Status and Commit message.

```
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git status
On branch integration
nothing to commit, working tree clean
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git branch feature2 -d
Deleted branch feature2 (was 791e11c).
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git branch -a
  Hotfix
  feature1
* integration
  master
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git checkout feature1
Switched to branch 'feature1'
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git status
On branch feature1
nothing to commit, working tree clean
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git status
On branch feature1
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
        modified:   gitfile.txt

no changes added to commit (use "git add" and/or "git commit -a")
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git add .
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git commit -m "feature1 message1"
[feature1 3b6db1b] feature1 message1
 1 file changed, 2 insertions(+), 1 deletion(-)
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git status
On branch feature1
nothing to commit, working tree clean
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$
```

10. Rebase it to the Integration branch and resolve conflicts manually.


```
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git status
On branch feature1
nothing to commit, working tree clean
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git rebase integration
Auto-merging gitfile.txt
CONFLICT (content): Merge conflict in gitfile.txt
error: could not apply 3b6db1b... feature1 message1
hint: Resolve all conflicts manually, mark them as resolved with
hint: "git add/rm <conflicted_files>", then run "git rebase --continue".
hint: You can instead skip this commit: run "git rebase --skip".
hint: To abort and get back to the state before "git rebase", run "git rebase --abort".
Could not apply 3b6db1b... feature1 message1
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git add .
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git rebase --continue
[detached HEAD ad4b4aa] feature1 message1
 1 file changed, 3 insertions(+), 1 deletion(-)
Successfully rebased and updated refs/heads/feature1.
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ gitmanually git status
gitmanually: command not found
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git status
On branch feature1
nothing to commit, working tree clean
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$
```
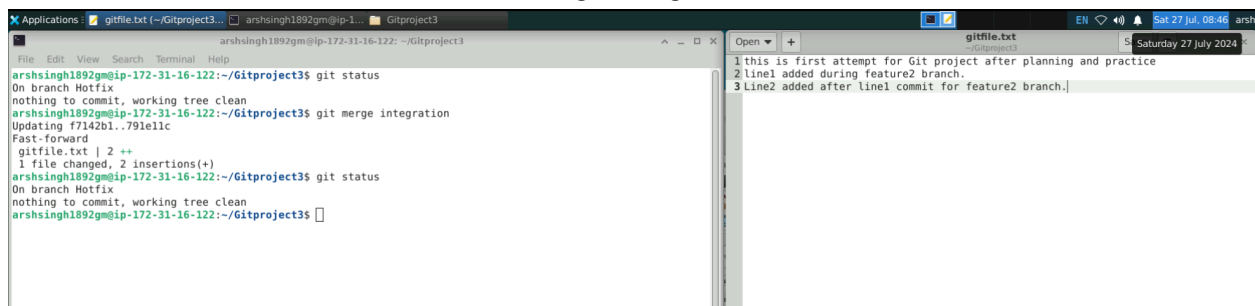
gitfile.txt

```
1 This is first attempt for Git project after planning and practice
2 Line1 added during feature2 branch.
3 Line2 added after line1 commit for feature2 branch.
4 This should be the 1st line added via feature1 branch.
5
```
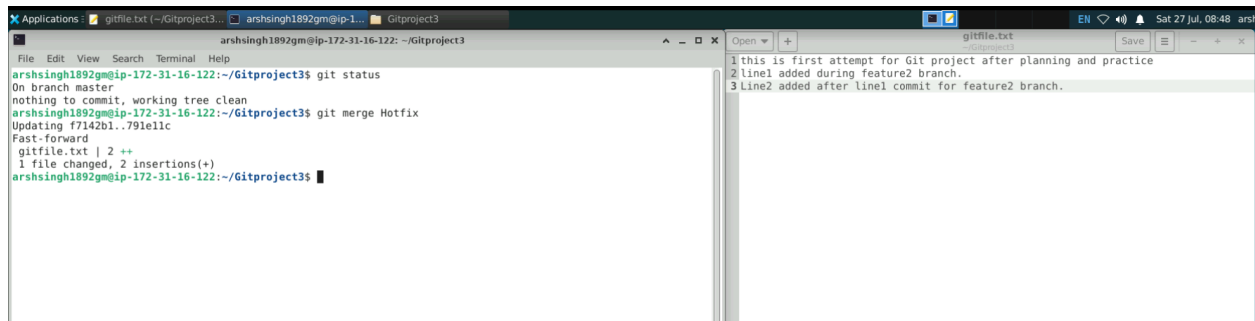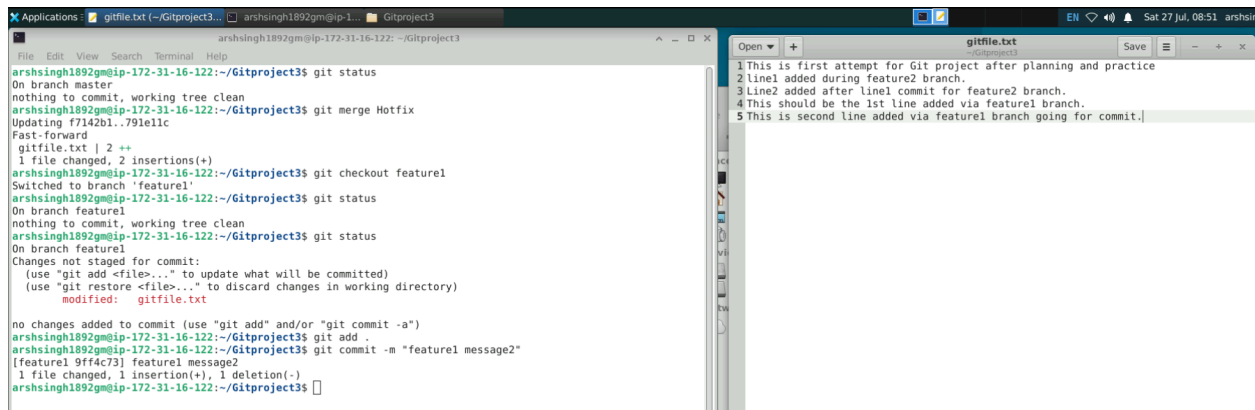
```
Applications    gitfile.txt (~/Gitproject3...    arshsingh1892gm@ip-1...    Gitproject3                                    EN        Sat 27 Jul, 08:44  arsh

                    arshsingh1892gm@ip-172-31-16-122: ~/Gitproject3              ^ _ □ X        Open ▾    +                gitfile.txt              Save   ≡   — + ×
                                                                                                                       ~/Gitproject3
File  Edit  View  Search  Terminal  Help                                                       1 this is first attempt for Git project after planning and practice
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git status                                     2 line1 added during feature2 branch.
On branch feature1                                                                             3 Line2 added after line1 commit for feature2 branch.
nothing to commit, working tree clean
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git rebase integration
Auto-merging gitfile.txt
CONFLICT (content): Merge conflict in gitfile.txt
error: could not apply 3b6db1b... feature1 message1
hint: Resolve all conflicts manually, mark them as resolved with
hint: "git add/rm <conflicted files>", then run "git rebase --continue".
hint: You can instead skip this commit: run "git rebase --skip".
hint: To abort and get back to the state before "git rebase", run "git rebase --abort".
Could not apply 3b6db1b... feature1 message1
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git add .
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git rebase --continue
[detached HEAD ad4b4aa] feature1 message1
 1 file changed, 3 insertions(+), 1 deletion(-)
Successfully rebased and updated refs/heads/feature1.
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ gitmanually git status
gitmanually: command not found
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git status
On branch feature1
nothing to commit, working tree clean
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git checkout integration
Switched to branch 'integration'
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git status
On branch integration
nothing to commit, working tree clean
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$
```

11. Checkout to Hotfix branch and Merge Integration to Hotfix.


```
Applications    gitfile.txt (~/Gitproject3...    arshsingh1892gm@ip-1...    Gitproject3                                    EN        Sat 27 Jul, 08:46  arsh

                    arshsingh1892gm@ip-172-31-16-122: ~/Gitproject3              ^ _ □ X        Open ▾    +                gitfile.txt              S  Saturday 27 July 2024  ×
                                                                                                                       ~/Gitproject3
File  Edit  View  Search  Terminal  Help                                                       1 this is first attempt for Git project after planning and practice
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git status                                     2 line1 added during feature2 branch.
On branch Hotfix                                                                               3 Line2 added after line1 commit for feature2 branch.
nothing to commit, working tree clean
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git merge integration
Updating f7142b1..791e11c
Fast-forward
 gitfile.txt | 2 ++
 1 file changed, 2 insertions(+)
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git status
On branch Hotfix
nothing to commit, working tree clean
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$
```

12. Checkout to the Master branch and merge Hotfix to Master.


```
Applications    gitfile.txt (~/Gitproject3...    arshsingh1892gm@ip-1...    Gitproject3                                    EN        Sat 27 Jul, 08:48  arsh

                    arshsingh1892gm@ip-172-31-16-122: ~/Gitproject3              ^ _ □ X        Open ▾    +                gitfile.txt              Save   ≡   — + ×
                                                                                                                       ~/Gitproject3
File  Edit  View  Search  Terminal  Help                                                       1 this is first attempt for Git project after planning and practice
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git status                                     2 line1 added during feature2 branch.
On branch master                                                                               3 Line2 added after line1 commit for feature2 branch.
nothing to commit, working tree clean
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git merge Hotfix
Updating f7142b1..791e11c
Fast-forward
 gitfile.txt | 2 ++
 1 file changed, 2 insertions(+)
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$
```

13. Checkout to Feature1 and make commits and then Checkout to Integration branch


```
Applications    gitfile.txt (~/Gitproject3...    arshsingh1892gm@ip-1...    Gitproject3                                    EN        Sat 27 Jul, 08:51  arshs

                    arshsingh1892gm@ip-172-31-16-122: ~/Gitproject3              ^ _ □ X        Open ▾    +                gitfile.txt              Save   ≡   — + ×
                                                                                                                       ~/Gitproject3
File  Edit  View  Search  Terminal  Help                                                       1 This is first attempt for Git project after planning and practice
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git status                                     2 line1 added during feature2 branch.
On branch master                                                                               3 Line2 added after line1 commit for feature2 branch.
nothing to commit, working tree clean                                                          4 This should be the 1st line added via feature1 branch.
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git merge Hotfix                               5 This is second line added via feature1 branch going for commit.
Updating f7142b1..791e11c
Fast-forward
 gitfile.txt | 2 ++
 1 file changed, 2 insertions(+)
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git checkout feature1
Switched to branch 'feature1'
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git status
On branch feature1
nothing to commit, working tree clean
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git status
On branch feature1
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
        modified:   gitfile.txt

no changes added to commit (use "git add" and/or "git commit -a")
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git add .
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git commit -m "feature1 message2"
[feature1 9ff4c73] feature1 message2
 1 file changed, 1 insertion(+), 1 deletion(-)
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$
```

14. Merge Feature1 to Integration Branch,Checkout to Hotfix branch and Merge Integration to Hotfix.


```
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git status
On branch master
nothing to commit, working tree clean
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git merge Hotfix
Updating f7142b1..791e11c
Fast-forward
 gitfile.txt | 2 ++
 1 file changed, 2 insertions(+)
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git checkout feature1
Switched to branch 'feature1'
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git status
On branch feature1
nothing to commit, working tree clean
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git status
On branch feature1
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
        modified:   gitfile.txt

no changes added to commit (use "git add" and/or "git commit -a")
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git add .
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git commit -m "feature1 message2"
[feature1 9ff4c73] feature1 message2
 1 file changed, 1 insertion(+), 1 deletion(-)
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git checkout integration
Switched to branch 'integration'
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$
```

gitfile.txt
```
1 this is first attempt for Git project after planning and practice
2 line1 added during feature2 branch.
3 Line2 added after line1 commit for feature2 branch.
```



```
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git status
On branch master
nothing to commit, working tree clean
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git merge Hotfix
Updating f7142b1..791e11c
Fast-forward
 gitfile.txt | 2 ++
 1 file changed, 2 insertions(+)
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git checkout feature1
Switched to branch 'feature1'
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git status
On branch feature1
nothing to commit, working tree clean
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git status
On branch feature1
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
        modified:   gitfile.txt

no changes added to commit (use "git add" and/or "git commit -a")
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git add .
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git commit -m "feature1 message2"
[feature1 9ff4c73] feature1 message2
 1 file changed, 1 insertion(+), 1 deletion(-)
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git checkout integration
Switched to branch 'integration'
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git merge feature1
Updating 791e11c..9ff4c73
Fast-forward
 gitfile.txt | 4 +++-
 1 file changed, 3 insertions(+), 1 deletion(-)
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$
```

gitfile.txt
```
1 This is first attempt for Git project after planning and practice
2 line1 added during feature2 branch.
3 Line2 added after line1 commit for feature2 branch.
4 This should be the 1st line added via feature1 branch.
5 This is second line added via feature1 branch going for commit.
```



```
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git checkout Hotfix
Switched to branch 'Hotfix'
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$
```

gitfile.txt
```
1 this is first attempt for Git project after planning and practice
2 line1 added during feature2 branch.
3 Line2 added after line1 commit for feature2 branch.
```

15. Checkout to Master branch and merge Hotfix to master branch

16. Delete Feature1
17. Checkout to Hotfix Branch and commit changes

```
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git checkout Hotfix
Switched to branch 'Hotfix'
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git merge integration
Updating 791e11c..9ff4c73
Fast-forward
 gitfile.txt | 4 +++-
 1 file changed, 3 insertions(+), 1 deletion(-)
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git checkout master
Switched to branch 'master'
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git merge Hotfix
Updating 791e11c..9ff4c73
Fast-forward
 gitfile.txt | 4 +++-
 1 file changed, 3 insertions(+), 1 deletion(-)
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git branch feature1 -d
Deleted branch feature1 (was 9ff4c73).
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git checkout Hotfix
Switched to branch 'Hotfix'
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git status
On branch Hotfix
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
        modified:   gitfile.txt

no changes added to commit (use "git add" and/or "git commit -a")
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git add .
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git commit -m "Hotfix branch message1"
[Hotfix 992b090] Hotfix branch message1
 1 file changed, 1 insertion(+)
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git status
On branch Hotfix
nothing to commit, working tree clean
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$
```

18. Checkout to Integration branch and Merge Hotfix to Integration Branch

19. Checkout to Master Branch and merge Hotfix to Master Branch.

Applications ☰ 📄 gitfile.txt (~/Gitproject3... 📄 arshsingh1892gm@ip-1... 📁 Gitproject3

arshsingh1892gm@ip-172-31-16-122: ~/Gitproject3

File Edit View Search Terminal Help

```
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git checkout master
Switched to branch 'master'
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git merge Hotfix
```

gitfile.txt
~/Gitproject3

Open ▾ +   Save ☰ — + ✕

```
1 This is first attempt for Git project after planning and practice
2 line1 added during feature2 branch.
3 Line2 added after line1 commit for feature2 branch.
4 This should be the 1st line added via feature1 branch.
5 This is second line added via feature1 branch going for commit.
```

Applications ☰ 📄 gitfile.txt (~/Gitproject3... 📄 arshsingh1892gm@ip-1... 📁 Gitproject3

arshsingh1892gm@ip-172-31-16-122: ~/Gitproject3

File Edit View Search Terminal Help

```
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git checkout master
Switched to branch 'master'
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git merge Hotfix
Updating 9ff4c73..992b090
Fast-forward
 gitfile.txt | 1 +
 1 file changed, 1 insertion(+)
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$ git status
On branch master
nothing to commit, working tree clean
arshsingh1892gm@ip-172-31-16-122:~/Gitproject3$
```

gitfile.txt
~/Gitproject3

Open ▾ +   Save ☰ — ÷ ✕

```
1 This is first attempt for Git project after planning and practice
2 line1 added during feature2 branch.
3 Line2 added after line1 commit for feature2 branch.
4 This should be the 1st line added via feature1 branch.
5 This is second line added via feature1 branch going for commit.
6 This is change made via Hotfix branch, going for commit.
```