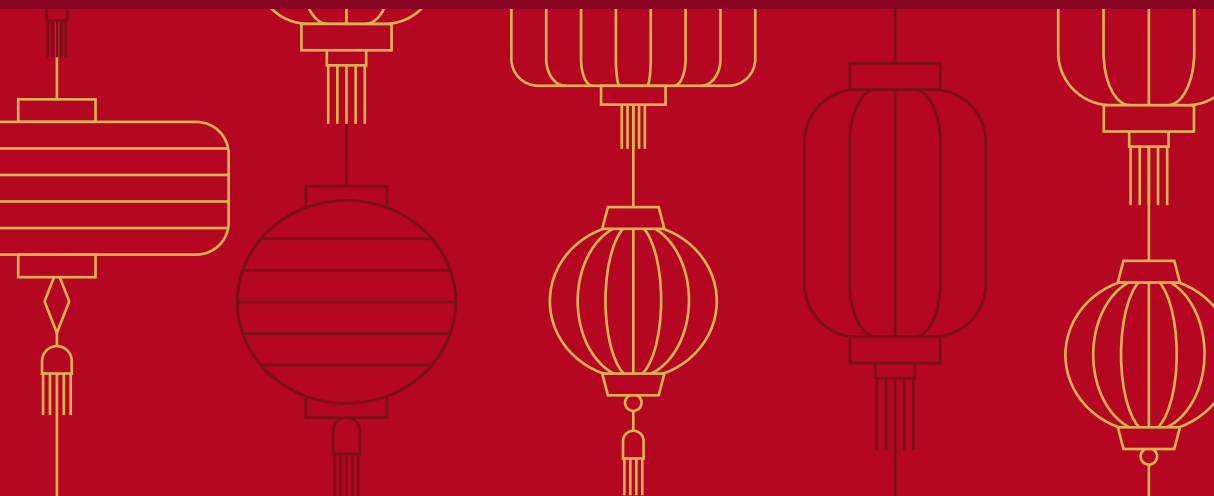
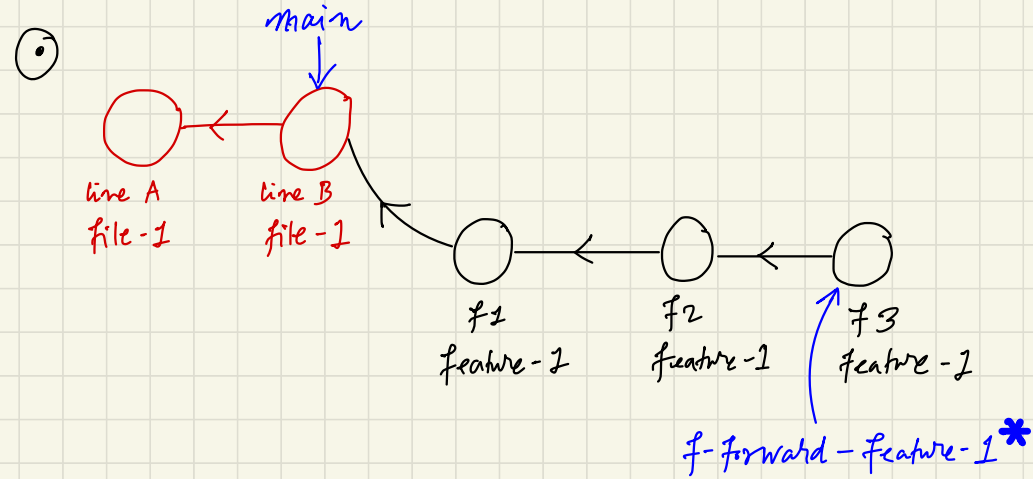


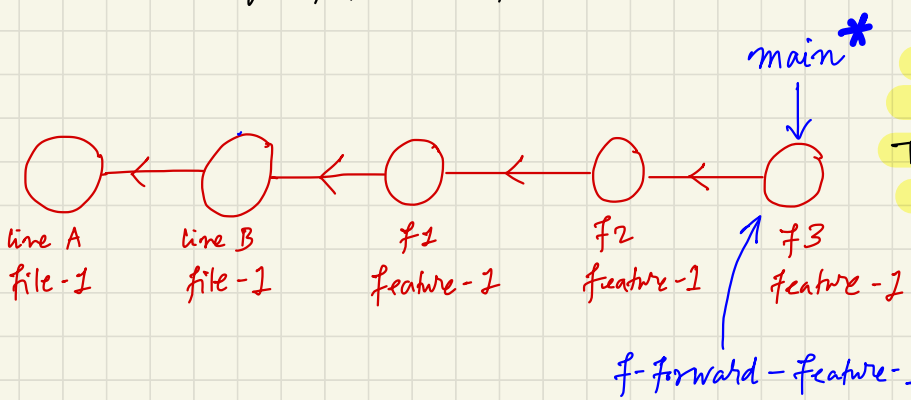
MERGE - FAST FORWARD

Experiment - 1 :



---

git checkout main
git merge f-forward - feature - 1

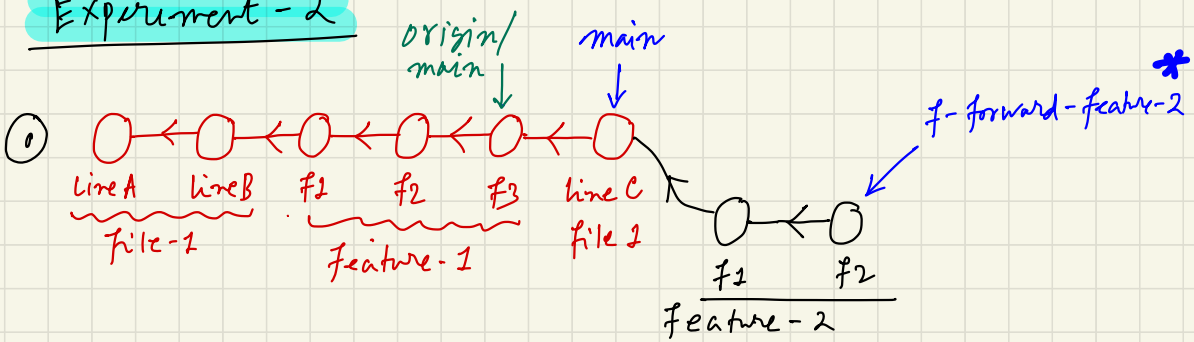


Note: No new commit is created This is called fast-forward

At this stage : we push local repo's main branch to that of remote repo

Even though f-forward - feature - 1 branch is present it does not show up in remote repo
(∵ we pushed into main branch & not into f-forward - feature - 1)

Experiment - 2



① git push origin f-forward-feature-2

Remote repo condition :

main

f3
f2
f1 } feature-1
line B
line A } file-1

f-forward-feature2

f2
f1 } feature-2
line C } file-1
f3
f2
f1 } feature-1
line B
line A } file-1

we do not need to checkout main before pushing main [NOTE]

② git checkout main
git push origin main ← this automatically pushes latest commits on local main to remote main

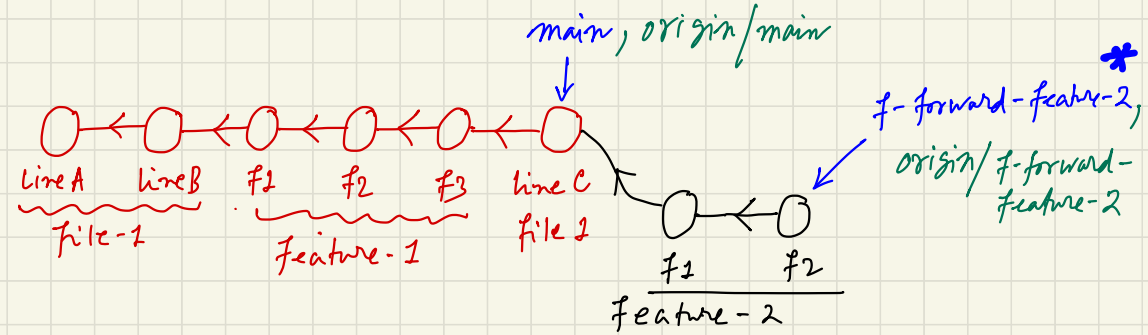
Remote repo condition :

main

line-C } file-1
f3
f2
f1 } feature-1
line B
line A } file-1

f-forward-feature2

f2
f1 } feature-2
line C } file-1
f3
f2
f1 } feature-1
line B
line A } file-1



---

① At this stage we create a pull request:

merge branch f-forward-feature-2 with main

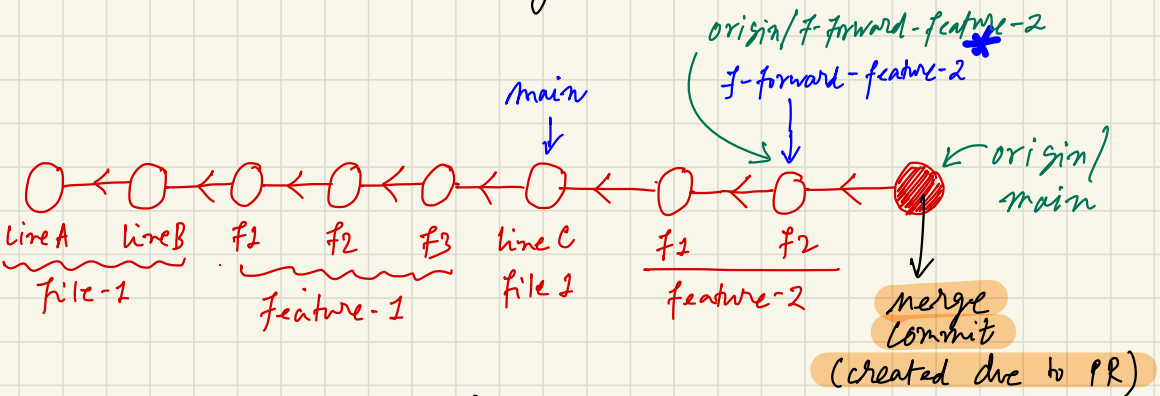
Once pull request is created:

i) We can merge and close PR (merge-commit / squash-commit / rebase)

OR

ii) We can discard change and close PR (branch is not merged into main)

In this case we do merge and close PR



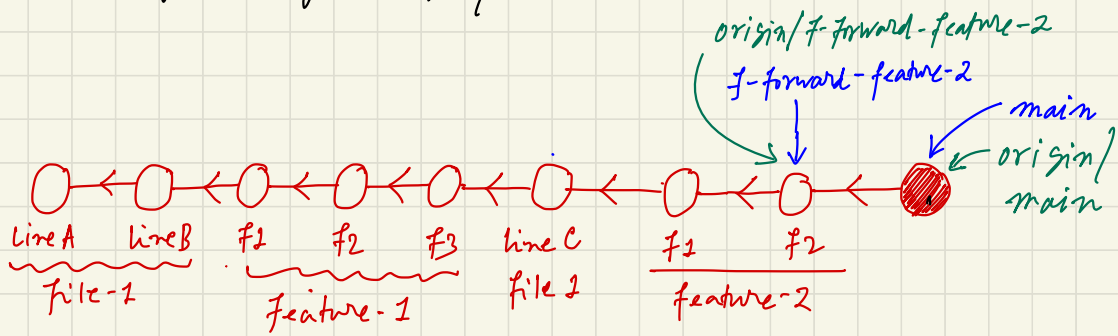
Note: We do not have fast forward like we had when merging in local repo

⑥ After this we run the following cmd:

```
git fetch origin
git checkout main
git merge origin/main
```

OR

```
git checkout main
git pull origin main
```



Now local repo main tracks remote main

---

⑦ Now we can delete the f-forward-feature-2 branch

Note that we have to individually delete in local and remote repos.

* delete in remote : cannot replicate that in local by pulling (nothing to pull from)

* delete in local : cannot replicate that in remote by pushing (nothing to push)

* delete in remote but present in local → if we push again branch is restored in remote
(we can also restore online through gui)

* delete in local but present in remote → if we pull again, branch is restored in local
(we can also restore locally through cli)