1. Fork below public repository to your account. Then clone the repository locally. Create 2 branches cloud_dev01. Then add cloud_dev02 to that repository locally and hello.txt , moto.txt and world.txt to one branch and add another 3 files to another branch. Then push cloud_dev02 branch to the Forked repository on the remote. https://github.com/ripienaar/free-for-dev

First we have to fork a project on our GIT hub by using GIT.

root@DESKTOP-PDOJQQA:vivek# git clone git@github.com:vivekmore2001/free-for-dev.git
Cloning into 'free-for-dev'...
remote: Enumerating objects: 13035, done.
remote: Counting objects: 100% (93/93), done.
remote: Compressing objects: 100% (57/57), done.
remote: Total 13035 (delta 50), reused 71 (delta 36), pack-reused 12942
Receiving objects: 100% (13035/13035), 7.09 MiB | 1.59 MiB/s, done.
Resolving deltas: 100% (6769/6769), done.

root@DESKTOP-PDOJQQA:free-for-dev# git checkout -b cloud_dev01
root@DESKTOP-PDOJQQA:free-for-dev# git checkout master
Switched to branch 'master'
Your branch is up to date with 'origin/master'.
root@DESKTOP-PDOJQQA:free-for-dev# git checkout -b cloud_dev02
root@DESKTOP-PDOJQQA:free-for-dev# git branch -a
* cloud_dev01
  cloud_dev02
  master
  remotes/origin/HEAD -> origin/master
  remotes/origin/master

root@DESKTOP-PDOJQQA:free-for-dev# vi hello.txt
root@DESKTOP-PDOJQQA:free-for-dev# vi moto.txt
root@DESKTOP-PDOJQQA:free-for-dev# vi world.txt

```
root@DESKTOP-PDOJQQA:free-for-dev# git checkout cloud_dev02
Switched to branch 'cloud_dev02'
root@DESKTOP-PDOJQQA:free-for-dev# vi abc.txt
root@DESKTOP-PDOJQQA:free-for-dev# vi xyz.txt
root@DESKTOP-PDOJQQA:free-for-dev# vi pqr.txt

root@DESKTOP-PDOJQQA:free-for-dev# git add .
root@DESKTOP-PDOJQQA:free-for-dev# git commit -m "hello.txt
moto.txt abc.txt pqr.txt world.txt xyz.txt is added"
[cloud_dev02 40029fd] hello.txt moto.txt abc.txt pqr.txt world.txt xyz.txt
is added
 6 files changed, 8 insertions(+)
 create mode 100644 abc.txt
 create mode 100644 hello.txt
 create mode 100644 moto.txt
 create mode 100644 pqr.txt
 create mode 100644 world.txt
 create mode 100644 xyz.txt
root@DESKTOP-PDOJQQA:free-for-dev# git log
commit 40029fd1875d0bf81bb61db832f80a030e7b338a (HEAD ->
cloud_dev02)
Author: vivek more <vivekmore1992@gmail.com.com>
Date:   Tue Jan 9 12:17:55 2024 +0530

    hello.txt moto.txt abc.txt pqr.txt world.txt xyz.txt is added

commit 72bedd907654f46f5950becc1c7ba2e0c1399749 (origin/master,
origin/cloud_dev02, origin/HEAD, master, cloud_dev01)
Merge: 18cc926 f82f08b
Author: R.I.Pienaar <rip@devco.net>
Date:   Mon Jan 8 08:43:10 2024 +0100

    Merge pull request #3213 from camposped/templated

    Add Templated.io to APIs
```

commit f82f08b5632ba277b8ef28c51f69a2d228d54a40
Author: Pedro Campos <campospdro@gmail.com>
Date: Sun Jan 7 21:14:45 2024 -0300

    Update

commit 18cc926d34b8c5cc011a6da212dbcb4e9ddba277
Merge: 6a6e084 ba15ff0
Author: R.I.Pienaar <rip@devco.net>
Date: Sun Jan 7 14:28:23 2024 +0100

    Merge pull request #3214 from hschne/master

    Add Data Dead Drop to APIs & Data

commit ba15ff00f3c662c337e01db68fb4028c48ae97e9
Author: Hans Schnedlitz <hello@hansschnedlitz.com>
Date: Sun Jan 7 13:46:00 2024 +0100

[1]+ Stopped   git log
root@DESKTOP-PDOJQQA:free-for-dev# git push origin cloud_dev02
Enumerating objects: 9, done.
Counting objects: 100% (9/9), done.
Delta compression using up to 4 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (8/8), 696 bytes | 696.00 KiB/s, done.
Total 8 (delta 0), reused 0 (delta 0), pack-reused 0
To github.com:vivekmore2001/free-for-dev.git
   72bedd9..40029fd cloud_dev02 -> cloud_dev02

2. Create a remote repository merge_confilct_demo. Add some files in the remote master branch. Clone the repository locally. Create 2 branches locally named demo/merge and demo/conflicts. Add a merge.txt file in both branches with some data like "Hello CloudEthiX…." And "Fello CloudEthiX…." respectively and commit. Then merge demo/conflicts branch to demo/merge branch and solve the merge conflicts.

First I Created one remote Repo merge_confilct_demo.
After that created two files FILE1 and FILE2 in remote.

root@DESKTOP-PDOJQQA:vivek# git clone git@github.com:vivekmore2001/merge_confilct_demo.git
Cloning into 'merge_confilct_demo'...
remote: Enumerating objects: 9, done.
remote: Counting objects: 100% (9/9), done.
remote: Compressing objects: 100% (5/5), done.
remote: Total 9 (delta 0), reused 0 (delta 0), pack-reused 0
Receiving objects: 100% (9/9), done.

root@DESKTOP-PDOJQQA:vivek# git clone git@github.com:vivekmore2001/merge_confilct_demo.git
Cloning into 'merge_confilct_demo'...
remote: Enumerating objects: 9, done.
remote: Counting objects: 100% (9/9), done.
remote: Compressing objects: 100% (5/5), done.
remote: Total 9 (delta 0), reused 0 (delta 0), pack-reused 0
Receiving objects: 100% (9/9), done.

root@DESKTOP-PDOJQQA:vivek# cd merge_confilct_demo/

root@DESKTOP-PDOJQQA:merge_confilct_demo# git checkout -b demo/merge
Switched to a new branch 'demo/merge'
root@DESKTOP-PDOJQQA:merge_confilct_demo# git checkout main
Switched to branch 'main'

Your branch is up to date with 'origin/main'.
root@DESKTOP-PDOJQQA:merge_confilct_demo# git checkout -b
demo/conflicts
Switched to a new branch 'demo/conflicts'

root@DESKTOP-PDOJQQA:merge_confilct_demo# vi merge.txt
root@DESKTOP-PDOJQQA:merge_confilct_demo# git add .
root@DESKTOP-PDOJQQA:merge_confilct_demo# git commit -m
"merge.txt added"
[demo/merge 978579d] merge.txt added
 1 file changed, 1 insertion(+)
 create mode 100644 merge.txt
root@DESKTOP-PDOJQQA:merge_confilct_demo# git checkout
demo/conflicts
Switched to branch 'demo/conflicts'
root@DESKTOP-PDOJQQA:merge_confilct_demo# ll
total 24
drwxr-xr-x 3 root root 4096 Jan 9 12:36 ./
drwxr-x--- 10 vivek vivek 4096 Jan 9 12:29 ../
drwxr-xr-x 8 root root 4096 Jan 9 12:36 .git/
-rw-r--r-- 1 root root   34 Jan 9 12:29 FILE1
-rw-r--r-- 1 root root   12 Jan 9 12:29 FILE2
-rw-r--r-- 1 root root   42 Jan 9 12:29 README.md
root@DESKTOP-PDOJQQA:merge_confilct_demo# git add .
root@DESKTOP-PDOJQQA:merge_confilct_demo# git commit -m
"merge.txt added"
On branch demo/conflicts
nothing to commit, working tree clean
root@DESKTOP-PDOJQQA:merge_confilct_demo# git commit -m
"merge.txt added in conflict"
On branch demo/conflicts
nothing to commit, working tree clean

root@DESKTOP-PDOJQQA:merge_confilct_demo# git merge
demo/merge

Updating 87e69bd..978579d
Fast-forward
 merge.txt | 1 +
 1 file changed, 1 insertion(+)
 create mode 100644 merge.txt

3. Create PR to merge the cloud_dev02 branch to Forked repository.
   Approve the PR and merge cloud_dev02 branch to master branch
   remotely.

free-for-dev Public
forked from ripienaar/free-for-dev

4. Fetch latest changes from master branch of remote forked repository to
   local master branch. Then merge forked remote master branch with
   local master branch. Check If all the latest files are there. Then checkout
   to local cloud_dev03 branch locally. Then Pull latest changes from the
   remote master branch.

   root@DESKTOP-PDOJQQA:free-for-dev# git pull origin master
   From github.com:vivekmore2001/free-for-dev
    * branch   master   -> FETCH_HEAD
   Already up to date.

   root@DESKTOP-PDOJQQA:free-for-dev# ls
   CNAME README.md abc.txt hello.txt index.html logo.webp moto.txt
   pqr.txt world.txt xyz.txt
   root@DESKTOP-PDOJQQA:free-for-dev# git checkout -b cloud_dev03
   Switched to a new branch 'cloud_dev03'
   root@DESKTOP-PDOJQQA:free-for-dev# touch done.txt
   root@DESKTOP-PDOJQQA:free-for-dev# git add .
   root@DESKTOP-PDOJQQA:free-for-dev# git commit -m "done.txt added"
   [cloud_dev03 eb72864] done.txt added
    1 file changed, 0 insertions(+), 0 deletions(-)
    create mode 100644 done.txt
   root@DESKTOP-PDOJQQA:free-for-dev# git checkout master
   Switched to branch 'master'

Your branch is up to date with 'origin/master'.

root@DESKTOP-PDOJQQA:free-for-dev# git merge cloud_dev03
Updating 807b79f..eb72864
Fast-forward
 done.txt | 0
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 done.txt
root@DESKTOP-PDOJQQA:free-for-dev# git checkout cloud_dev03
Switched to branch 'cloud_dev03'

root@DESKTOP-PDOJQQA:free-for-dev# git pull origin master
From github.com:vivekmore2001/free-for-dev
 * branch   master   -> FETCH_HEAD
Already up to date.

root@DESKTOP-PDOJQQA:free-for-dev# git pull --rebase origin master
From github.com:vivekmore2001/free-for-dev
 * branch   master   -> FETCH_HEAD
Current branch cloud_dev03 is up to date.

5. Checkout to the cloud_dev01 branch locally and rebase the remote
    master branch of the forked repository.

    root@DESKTOP-PDOJQQA:free-for-dev# git branch -l
      cloud_dev01
      cloud_dev02
    * master

    root@DESKTOP-PDOJQQA:free-for-dev# touch vivek.txt

    root@DESKTOP-PDOJQQA:free-for-dev# git checkout cloud_dev01
    Switched to branch 'cloud_dev01'

    root@DESKTOP-PDOJQQA:free-for-dev# git branch -l
    * cloud_dev01
      cloud_dev02
      master

    root@DESKTOP-PDOJQQA:free-for-dev# git rebase master

Successfully rebased and updated refs/heads/cloud_dev01.

root@DESKTOP-PDOJQQA:free-for-dev# git status
On branch cloud_dev01
Untracked files:
  (use "git add <file>..." to include in what will be committed)
      vivek.txt

nothing added to commit but untracked files present (use "git add" to track)

root@DESKTOP-PDOJQQA:free-for-dev# git add .

root@DESKTOP-PDOJQQA:free-for-dev# git commit -m "vivek.txt added"
[cloud_dev01 637058b] vivek.txt added
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 vivek.txt

root@DESKTOP-PDOJQQA:free-for-dev# git checkout master
Switched to branch 'master'
Your branch is up to date with 'origin/master'.

root@DESKTOP-PDOJQQA:free-for-dev# git merge cloud_dev01
Updating 807b79f..637058b
Fast-forward
 vivek.txt | 0
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 vivek.txt

6. Create one repository locally. Commit any 3 files to the local repository. And the revert back the commits.

root@DESKTOP-PDOJQQA:~# mkdir pro

root@DESKTOP-PDOJQQA:~# cd pro/

```
root@DESKTOP-PDOJQQA:pro# ll
total 8
drwxr-xr-x  2 root root 4096 Jan  9 16:26 ./
drwx------ 10 root root 4096 Jan  9 16:26 ../
root@DESKTOP-PDOJQQA:pro# git init
Initialized empty Git repository in /root/pro/.git/

root@DESKTOP-PDOJQQA:pro# ll
total 12
drwxr-xr-x  3 root root 4096 Jan  9 16:26 ./
drwx------ 10 root root 4096 Jan  9 16:26 ../
drwxr-xr-x  7 root root 4096 Jan  9 16:26 .git/

root@DESKTOP-PDOJQQA:pro# echo "Revert Test" >revert.txt

root@DESKTOP-PDOJQQA:pro# echo "Revert_01 Test" >revert_01.txt

root@DESKTOP-PDOJQQA:pro# echo "Revert_02 Test" >revert_02.txt

root@DESKTOP-PDOJQQA:pro# git add .

root@DESKTOP-PDOJQQA:pro# git commit -m "all files added"
[master (root-commit) c905033] all files added
 3 files changed, 3 insertions(+)
 create mode 100644 revert.txt
 create mode 100644 revert_01.txt
 create mode 100644 revert_02.txt

root@DESKTOP-PDOJQQA:pro# git log --oneline
c905033 (HEAD -> master) all files added

root@DESKTOP-PDOJQQA:pro# git revert c905033
Removing revert_02.txt
Removing revert_01.txt
Removing revert.txt
```

[master 829835c] Revert "all files added"
 3 files changed, 3 deletions(-)
 delete mode 100644 revert.txt
 delete mode 100644 revert_01.txt
 delete mode 100644 revert_02.txt

root@DESKTOP-PDOJQQA:pro# git revert --no-edit c905033
On branch master
nothing to commit, working tree clean

root@DESKTOP-PDOJQQA:pro# git log
commit 829835cc4918c76627fc07375b88150ffb821537 (HEAD ->
master)
Author: vivek more <vivekmore1992@gmail.com.com>
Date: Tue Jan 9 16:28:58 2024 +0530

    Revert "all files added"

    This reverts commit c905033157dabff4e4b521c52a83388b507e54c2.

commit c905033157dabff4e4b521c52a83388b507e54c2
Author: vivek more <vivekmore1992@gmail.com.com>
Date: Tue Jan 9 16:27:28 2024 +0530

    all files added

7. Create one local repository. commit some files to the local master
   branch. Checkout to master_02 branch. Create 2 more files. Add those
   to the staging area. Create stash area and those files. Then list and
   delete the stash.

root@DESKTOP-PDOJQQA:pro# ll
total 12
drwxr-xr-x 3 root root 4096 Jan 9 16:28 ./

```
drwx------ 10 root root 4096 Jan  9 18:34 ../
drwxr-xr-x  8 root root 4096 Jan  9 18:22 .git/

root@DESKTOP-PDOJQQA:pro# git checkout -b main
Switched to a new branch 'main'
root@DESKTOP-PDOJQQA:pro# touch file01
root@DESKTOP-PDOJQQA:pro# touch file02

root@DESKTOP-PDOJQQA:pro# git add .
root@DESKTOP-PDOJQQA:pro# git commit -m "both the files added"
[main 8cff378] both the files added
 2 files changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 file01
 create mode 100644 file02

root@DESKTOP-PDOJQQA:pro# git checkout -b master_02
Switched to a new branch 'master_02'
root@DESKTOP-PDOJQQA:pro# touch data01
root@DESKTOP-PDOJQQA:pro# touch data02

root@DESKTOP-PDOJQQA:pro# git add .
root@DESKTOP-PDOJQQA:pro# git commit -m "the files are added"
[master_02 c769e8c] the files are added
 2 files changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 data01
 create mode 100644 data02

root@DESKTOP-PDOJQQA:pro# touch data 03
root@DESKTOP-PDOJQQA:pro# git add .

root@DESKTOP-PDOJQQA:pro# git stash list

root@DESKTOP-PDOJQQA:pro# git stash
Saved working directory and index state WIP on master_02: c769e8c the
files are added
```

root@DESKTOP-PDOJQQA:pro# git stash drop
Dropped refs/stash@{0}
(051a656388da9a5dca134b2cdb6e8b4832d40c0c)

8. Create a local repository, initialise it and create 3 branches: develop,
   hotfix and release. Checkout to hotfix branch and commit cloudethix.txt
   and once committed amend the commit message.

root@DESKTOP-PDOJQQA:hotfix# git branch -l
* develop
root@DESKTOP-PDOJQQA:hotfix# git checkout main
error: pathspec 'main' did not match any file(s) known to git
root@DESKTOP-PDOJQQA:hotfix# git checkout develop
Already on 'develop'
root@DESKTOP-PDOJQQA:hotfix# git checkout -b hotfix
Switched to a new branch 'hotfix'
root@DESKTOP-PDOJQQA:hotfix# git checkout -b release
Switched to a new branch 'release'
root@DESKTOP-PDOJQQA:hotfix# git branch -l
  develop
  hotfix
* release
root@DESKTOP-PDOJQQA:hotfix# git checkout hotfix
Switched to branch 'hotfix'
root@DESKTOP-PDOJQQA:hotfix# touch cloudethix.txt
root@DESKTOP-PDOJQQA:hotfix# git add cloudethix.txt
root@DESKTOP-PDOJQQA:hotfix# git commit -m "cloudethix.txt is
adding"
[hotfix 98830f2] cloudethix.txt is adding
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 cloudethix.txt
root@DESKTOP-PDOJQQA:hotfix# git log --oneline
98830f2 (HEAD -> hotfix) cloudethix.txt is adding
3612836 (release, develop) added

```
root@DESKTOP-PDOJQQA:hotfix# git commit --amend -m
"cloudethix.txt is adding is modified"
[hotfix ca79c8c] cloudethix.txt is adding is modified
 Date: Wed Jan 10 11:40:22 2024 +0530
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 cloudethix.txt
root@DESKTOP-PDOJQQA:hotfix#
```