

## Week – 2 (Linux)

1. Setup a remote repository in Local , Add a file and commit or save the changes and push to master branch

**Resources :**

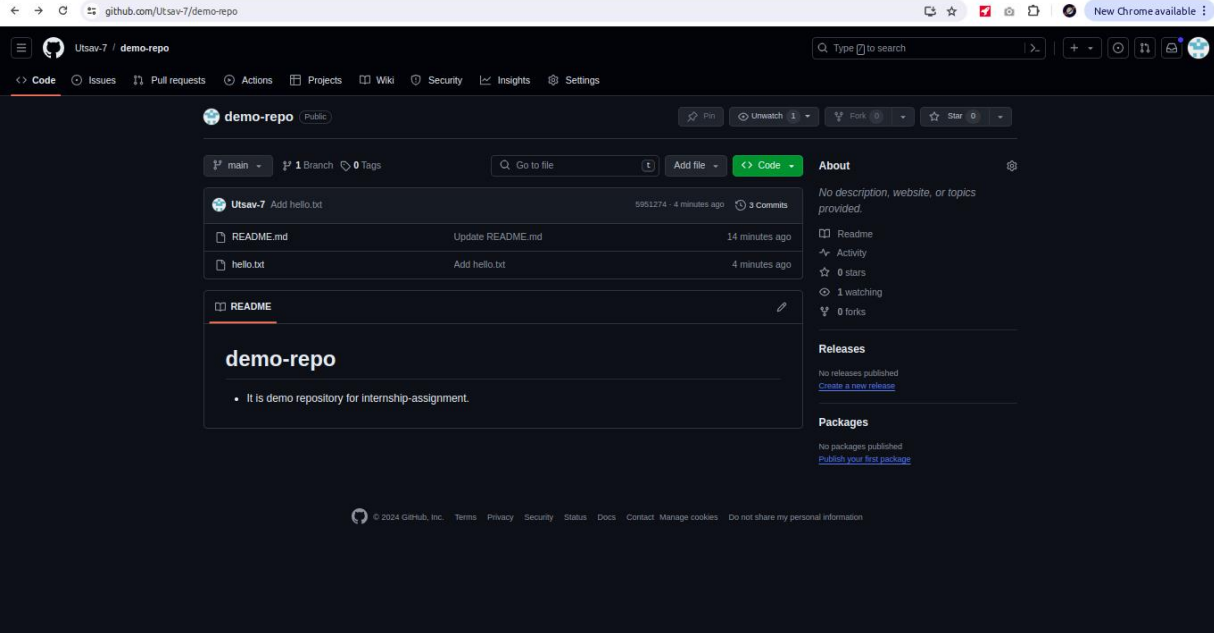
<https://www.youtube.com/watch?v=apGV9Kg7ics><https://git-scm.com/book/en/v2>

**Answer:**

- Clone the repository to your local machine:
  1. Create a new file
  2. Add the file to the staging area:
  3. Commit the changes:
  4. Push the changes to the master branch

```
utsav@utsav-katharotiya:~$ git clone https://github.com/utsav-7/demo-repo.git
Cloning into 'demo-repo'...
remote: Enumerating objects: 6, done.
remote: Counting objects: 100% (6/6), done.
remote: Compressing objects: 100% (3/3), done.
remote: Total 6 (delta 0), reused 0 (delta 0), pack-reused 0
Unpacking objects: 100% (6/6), 1.77 KiB | 258.00 KiB/s, done.
utsav@utsav-katharotiya:~$ cd demo-repo
utsav@utsav-katharotiya:~/demo-repo$
utsav@utsav-katharotiya:~/demo-repo$ git config --global credential.helper store
utsav@utsav-katharotiya:~/demo-repo$
utsav@utsav-katharotiya:~/demo-repo$ echo "Hello, World!" > hello.txt
utsav@utsav-katharotiya:~/demo-repo$
utsav@utsav-katharotiya:~/demo-repo$ git add hello.txt
utsav@utsav-katharotiya:~/demo-repo$
utsav@utsav-katharotiya:~/demo-repo$ git commit -m "Add hello.txt"
[main 5951274] Add hello.txt
1 file changed, 1 insertion(+)
create mode 100644 hello.txt
utsav@utsav-katharotiya:~/demo-repo$
```

```
utsav@utsav-katharotiya:~/demo-repo$  
utsav@utsav-katharotiya:~/demo-repo$ git push origin main  
git: 'credential-osxkeychain' is not a git command. See 'git --help'.  
Enumerating objects: 4, done.  
Counting objects: 100% (4/4), done.  
Delta compression using up to 4 threads  
Compressing objects: 100% (2/2), done.  
Writing objects: 100% (3/3), 299 bytes | 299.00 KiB/s, done.  
Total 3 (delta 0), reused 0 (delta 0)  
remote: This repository moved. Please use the new location:  
remote: https://github.com/Utsav-7/demo-repo.git  
To https://github.com/utsav-7/demo-repo.git  
e725d3f..5951274 main -> main
```



2. Create a new branch then commit and push the changes to new branch and merge it with the master branch using pull request.

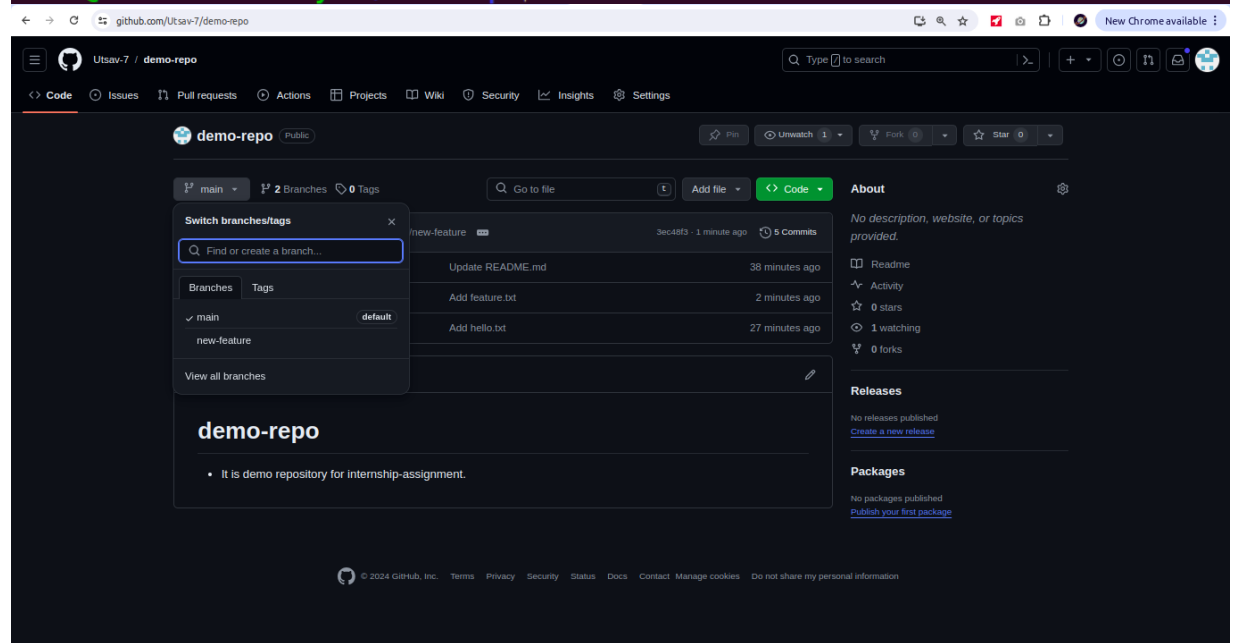
### Resources :

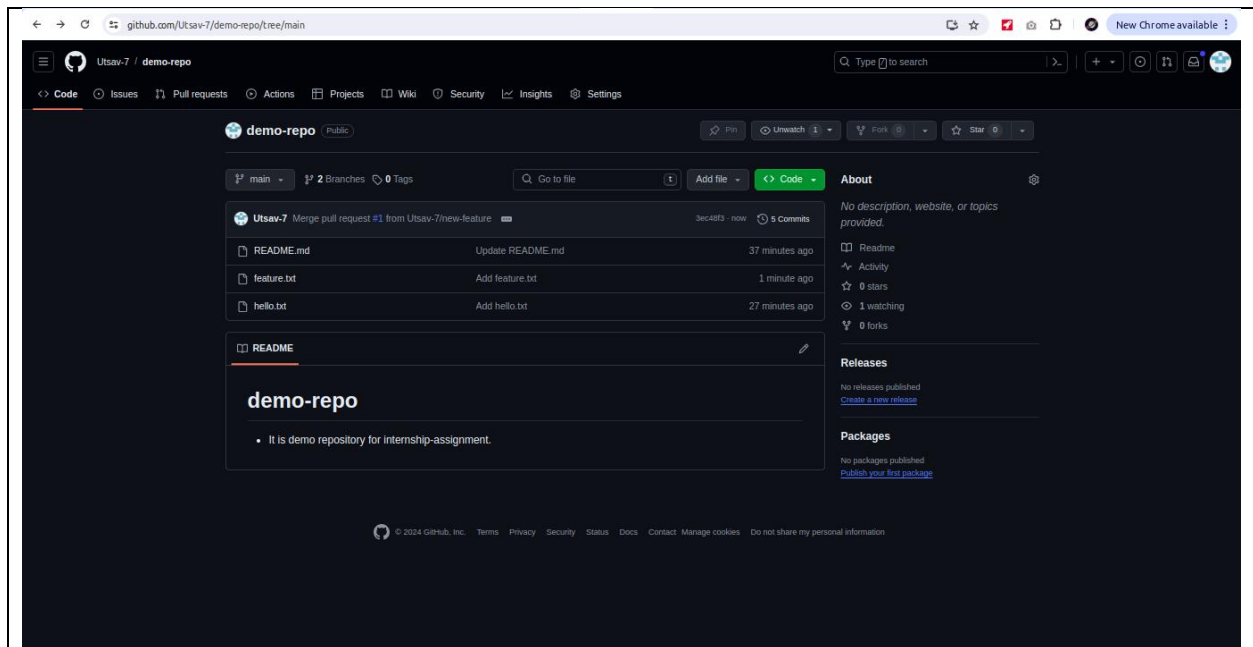
<https://git-scm.com/book/en/v3>

### Answer:

1. Create a new branch
2. Make changes in the new branch:
3. Push the new branch to the remote repository

```
utsav@utsav-katharotiya:~/demo-repo$  
utsav@utsav-katharotiya:~/demo-repo$ git checkout -b new-feature  
Switched to a new branch 'new-feature'  
utsav@utsav-katharotiya:~/demo-repo$ echo "This is a new feature." > feature.txt  
utsav@utsav-katharotiya:~/demo-repo$ git add feature.txt  
utsav@utsav-katharotiya:~/demo-repo$ git commit -m "Add feature.txt"  
[new-feature 7166a21] Add feature.txt  
1 file changed, 1 insertion(+)  
create mode 100644 feature.txt  
utsav@utsav-katharotiya:~/demo-repo$ git push origin new-feature  
git: 'credential-osxkeychain' is not a git command. See 'git --help'.  
Enumerating objects: 4, done.  
Counting objects: 100% (4/4), done.  
Delta compression using up to 4 threads  
Compressing objects: 100% (2/2), done.  
Writing objects: 100% (3/3), 342 bytes | 171.00 KiB/s, done.  
Total 3 (delta 0), reused 0 (delta 0)  
remote: This repository moved. Please use the new location:  
remote: https://github.com/Utsav-7/demo-repo.git  
remote:  
remote: Create a pull request for 'new-feature' on GitHub by visiting:  
remote: https://github.com/Utsav-7/demo-repo/pull/new/new-feature  
remote:  
To https://github.com/utsav-7/demo-repo.git  
* [new branch] new-feature -> new-feature  
utsav@utsav-katharotiya:~/demo-repo$
```





3. Undo the last commit or remove the last created file from remote repo using CLI

### Resources :

<https://git-scm.com/book/en/v4>

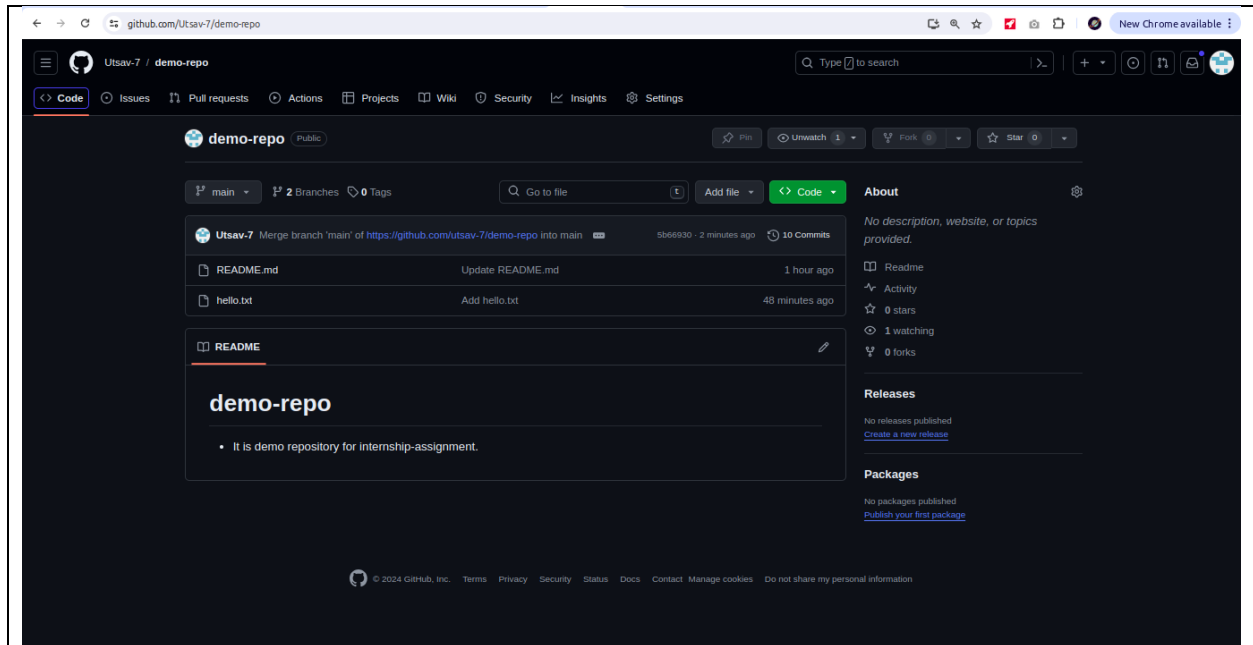
### Answer:

#### 1. Undo the last commit

```
utsav@utsav-katharotiya:~/demo-repo$ git revert HEAD
error: commit 3ec48f30bf1a341311a9cfb9818c8f863a4d9c42 is a merge but no -m option was given.
fatal: revert failed
```

#### 2. Remove the last created file

```
utsav@utsav-katharotiya:~/demo-repo$
utsav@utsav-katharotiya:~/demo-repo$ git rm feature.txt
rm 'feature.txt'
utsav@utsav-katharotiya:~/demo-repo$ git commit -m "Remove feature.txt"
[main 72c6311] Remove feature.txt
1 file changed, 1 deletion(-)
delete mode 100644 feature.txt
```



#### 4. Resolve a merge conflicts

##### Resources :

<https://git-scm.com/book/en/v5>

##### Answer:

1. Create a conflict situation:
  - ❖ Make changes in the master branch and commitPush the new branch to the remote repository.
  - ❖ Make conflicting changes in the new branch

```
utsav@utsav-katharotiya:~/demo-repo$ git checkout -b conflict-branch
Switched to a new branch 'conflict-branch'
utsav@utsav-katharotiya:~/demo-repo$ echo "Change in conflict branch" > conflict.txt
utsav@utsav-katharotiya:~/demo-repo$ git add conflict.txt
utsav@utsav-katharotiya:~/demo-repo$ git commit -m "Change in conflict branch"
[conflict-branch af86c85] Change in conflict branch
1 file changed, 1 insertion(+), 1 deletion(-)
utsav@utsav-katharotiya:~/demo-repo$ git push origin conflict-branch
git: 'credential-osxkeychain' is not a git command. See 'git --help'.
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 4 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 356 bytes | 356.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0)
remote: This repository moved. Please use the new location:
remote: https://github.com/Utsav-7/demo-repo.git
remote:
remote: Create a pull request for 'conflict-branch' on GitHub by visiting:
remote: https://github.com/Utsav-7/demo-repo/pull/new/conflict-branch
remote:
To https://github.com/utsav-7/demo-repo.git
* [new branch] conflict-branch -> conflict-branch
```

## 2. Attempt to merge and resolve conflicts

- Merge conflict branch into master
- Resolve the conflict manually by editing the conflicted files.

```
utsav@utsav-katharotiya:~/demo-repo$ git checkout main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.
utsav@utsav-katharotiya:~/demo-repo$ git merge conflict-branch
Updating f983931..af86c85
Fast-forward
 conflict.txt | 2 +
1 file changed, 1 insertion(+), 1 deletion(-)
utsav@utsav-katharotiya:~/demo-repo$ git add conflict.txt
utsav@utsav-katharotiya:~/demo-repo$ git commit -m "Resolve merge conflict"
On branch main
Your branch is ahead of 'origin/main' by 1 commit.
(use "git push" to publish your local commits)

nothing to commit, working tree clean
utsav@utsav-katharotiya:~/demo-repo$ git push origin main
git: 'credential-osxkeychain' is not a git command. See 'git --help'.
Total 0 (delta 0), reused 0 (delta 0)
remote: This repository moved. Please use the new location:
remote: https://github.com/Utsav-7/demo-repo.git
To https://github.com/utsav-7/demo-repo.git
f983931..af86c85 main -> main
```

