

Name: Vaishnavi Kahar

1. Set your username and email in git config

```
git config --global user.name "vaish22"  
git config --global user.email "vaishnavi.kahar@practo.com"
```

2. Create a new branch named "feature-branch" and switch to it.

```
git checkout -b feature-branch
```

3. List all branches in the repository.

```
git branch
```

4. Delete the branch "feature-branch"

```
git checkout master  
git branch -D feature-branch
```

5. How do you undo the last commit

```
git revert HEAD
```

```
Desktop      Downloads      Movies      Pictures  
vaishnavihemantkahar@practos-MacBook-Pro ~ % cd Documents  
vaishnavihemantkahar@practos-MacBook-Pro Documents % cd GitAssignment  
vaishnavihemantkahar@practos-MacBook-Pro GitAssignment % git config --global user.name "vaish22"  
vaishnavihemantkahar@practos-MacBook-Pro GitAssignment % git config --global user.email "vaishnavi.kahar@practo.com"  
vaishnavihemantkahar@practos-MacBook-Pro GitAssignment % git init  
hint: Using 'master' as the name for the initial branch. This default branch name  
hint: is subject to change. To configure the initial branch name to use in all  
hint: of your new repositories, which will suppress this warning, call:  
hint:  
hint:   git config --global init.defaultBranch <name>  
hint:  
hint: Names commonly chosen instead of 'master' are 'main', 'trunk' and  
hint: 'development'. The just-created branch can be renamed via this command:  
hint:  
hint:   git branch -m <name>  
Initialized empty Git repository in /Users/vaishnavihemantkahar/Documents/GitAssignment/.git/  
vaishnavihemantkahar@practos-MacBook-Pro GitAssignment % git branch  
vaishnavihemantkahar@practos-MacBook-Pro GitAssignment % git status  
On branch master  
No commits yet  
  
Untracked files:  
  (use "git add <file>" to include in what will be committed)  
    File 1.txt  
vaishnavihemantkahar@practos-MacBook-Pro GitAssignmentvaishnavihemantkahar@practos-MacBook-Pro GitAssignmentvaishnavihemantkahar@practos-MacBook-Pro GitAssignment % git  
add .  
vaishnavihemantkahar@practos-MacBook-Pro GitAssignment % git commit -m "initial commit"  
[master (root-commit) 8d309b4] initial commit  
 1 file changed, 1 insertion()  
  create mode 100644 File 1.txt  
vaishnavihemantkahar@practos-MacBook-Pro GitAssignment % git checkout -b feature-branch  
Switched to a new branch 'feature-branch'  
vaishnavihemantkahar@practos-MacBook-Pro GitAssignment % git branch  
* feature-branch  
  master  
vaishnavihemantkahar@practos-MacBook-Pro GitAssignment % git branch -d feature-branch  
error: cannot delete branch 'feature-branch' used by worktree at '/Users/vaishnavihemantkahar/Documents/GitAssignment'  
vaishnavihemantkahar@practos-MacBook-Pro GitAssignment % git log  
commit 8d309b425c9f25ed5804ee956cae688cdc19b261 (HEAD -> feature-branch, master)  
Author: vaish22 <vaishnavi.kahar@practo.com>  
Date:   Wed Jun 26 00:10:15 2024 +0530  
  
[ initial commit  
vaishnavihemantkahar@practos-MacBook-Pro GitAssignment % git revert HEAD  
hint: Waiting for your editor to close the file... [feature-branch d4aec9] Revert "initial commit"  
vaishnavihemantkahar@practos-MacBook-Pro GitAssignment % ]
```

6. Create a new branch names "conflict-branch"

```
git checkout -b conflict-branch
```

7. Create a another branch named "feature1"

```
git checkout -b feature1
```

8. Make some changes in to feature1 branch

(made changes now committing them)

git add .

git commit -m "Made some changes in feature1"

9. Merge “feature1” branch into main branch

git checkout main

git merge feature1

```
Untracked files:
  (use "git add <file>..." to include in what will be committed)
    File 1.txt

nothing added to commit but untracked files present (use "git add" to track)
vaishnavihemantkumar@practos-MacBook-Pro GitAssignment % git add .
vaishnavihemantkumar@practos-MacBook-Pro GitAssignment % git commit -m "File 1 added"
[feature-branch 6d1dc9e] File 1 added
1 file changed, 1 insertion(+)
create mode 100644 File 1.txt
vaishnavihemantkumar@practos-MacBook-Pro GitAssignment % git branch
* feature-branch
  master
vaishnavihemantkumar@practos-MacBook-Pro GitAssignment % git branch -d feature-branch
error: cannot delete branch 'feature-branch' used by worktree at '/Users/vaishnavihemantkumar/Documents/GitAssignment'
vaishnavihemantkumar@practos-MacBook-Pro GitAssignment % git checkout master
Switched to branch 'master'
vaishnavihemantkumar@practos-MacBook-Pro GitAssignment % git branch -d feature-branch
error: the branch 'feature-branch' is not fully merged
hint: If you are sure you want to delete it, run 'git branch -D feature-branch'
hint: Disable this message with 'git config advice.forceDeleteBranch false'
vaishnavihemantkumar@practos-MacBook-Pro GitAssignment % git branch -D feature-branch
Deleted branch feature-branch (was 6d1dc9e).
vaishnavihemantkumar@practos-MacBook-Pro GitAssignment % git branch
* master
vaishnavihemantkumar@practos-MacBook-Pro GitAssignment % git checkout -b conflict-branch
Switched to a new branch 'conflict-branch'
vaishnavihemantkumar@practos-MacBook-Pro GitAssignment % git checkout -b feature1
Switched to a new branch 'feature1'
vaishnavihemantkumar@practos-MacBook-Pro GitAssignment % git status
On branch feature1
  Untracked files:
    (use "git add <file>..." to include in what will be committed)
      File 2.txt

nothing added to commit but untracked files present (use "git add" to track)
vaishnavihemantkumar@practos-MacBook-Pro GitAssignment % git add .
vaishnavihemantkumar@practos-MacBook-Pro GitAssignment % git commit -m "made some changes in feature1 branch"
[feature1 3271cb7] made some changes in feature1 branch
1 file changed, 1 insertion(+)
create mode 100644 File 2.txt
vaishnavihemantkumar@practos-MacBook-Pro GitAssignment % git checkout master
Switched to branch 'master'
vaishnavihemantkumar@practos-MacBook-Pro GitAssignment % git merge feature1
Updating 8d309b4..3271cb7
Fast-forward
  File 2.txt | 1 +
  1 file changed, 1 insertion(+)
create mode 100644 File 2.txt
vaishnavihemantkumar@practos-MacBook-Pro GitAssignment %
```

10. Make changes in “conflict-branch”, in the same file and line that you had made changes in feature1

git checkout conflict-branch

(made conflicting changes to the same file and line)

git add .

git commit -m "Made conflicting changes in conflict-branch"

11. Merge master into conflict-branch [Attach screenshot of terminal & file]

git merge master

A screenshot of a Mac desktop environment. At the top, a terminal window titled 'GitAssignment' shows a sequence of Git commands and their output. Below it, a Finder window titled 'GitAssignment' displays two files: 'File 1' and 'File 2.txt'. A preview window titled 'File 1' shows the contents of 'File 1' with the note 'This is file 1 but updated in conflict-branch'. The desktop background is a scenic landscape. The Dock at the bottom contains various application icons.

```

apple Chrome File Edit View History Bookmarks Profiles Tab Window Help
GitAssignment -- zsh - 89x33
1 file changed, 1 insertion(+)
create mode 100644 File 2.txt
vaishnavihemantkumar@practos-MacBook-Pro GitAssignment % git checkout master
Switched to branch 'master'
vaishnavihemantkumar@practos-MacBook-Pro GitAssignment % git merge feature1
Updating 8d369b4..3271cb7
Fast-forward
 File 2.txt | 1 +
1 file changed, 1 insertion(+)
create mode 100644 File 2.txt
vaishnavihemantkumar@practos-MacBook-Pro GitAssignment % git checkout conflict-branch
Switched to branch 'conflict-branch'
vaishnavihemantkumar@practos-MacBook-Pro GitAssignment % git add .
vaishnavihemantkumar@practos-MacBook-Pro GitAssignment % git commit -m "Made conflicting changes in conflict-branch"
[conflict-branch 1dbb3f7] Made conflicting changes in conflict-branch
1 file changed, 1 insertion(+), 1 deletion(-)
vaishnavihemantkumar@practos-MacBook-Pro GitAssignment % git branch
* conflict-branch
  feature1
    master
vaishnavihemantkumar@practos-MacBook-Pro GitAssignment % git merge master
Merge made by the 'ort' strategy.
 File 2.txt | 1 +
1 file changed, 1 insertion(+)
create mode 100644 File 2.txt
vaishnavihemantkumar@practos-MacBook-Pro GitAssignment % git add .
vaishnavihemantkumar@practos-MacBook-Pro GitAssignment % git commit -m "Resolved merge conflicts"
[conflict-branch dd3f3f8] Resolved merge conflicts
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 .DS_Store
vaishnavihemantkumar@practos-MacBook-Pro GitAssignment %

```

12. Resolve merge conflicts

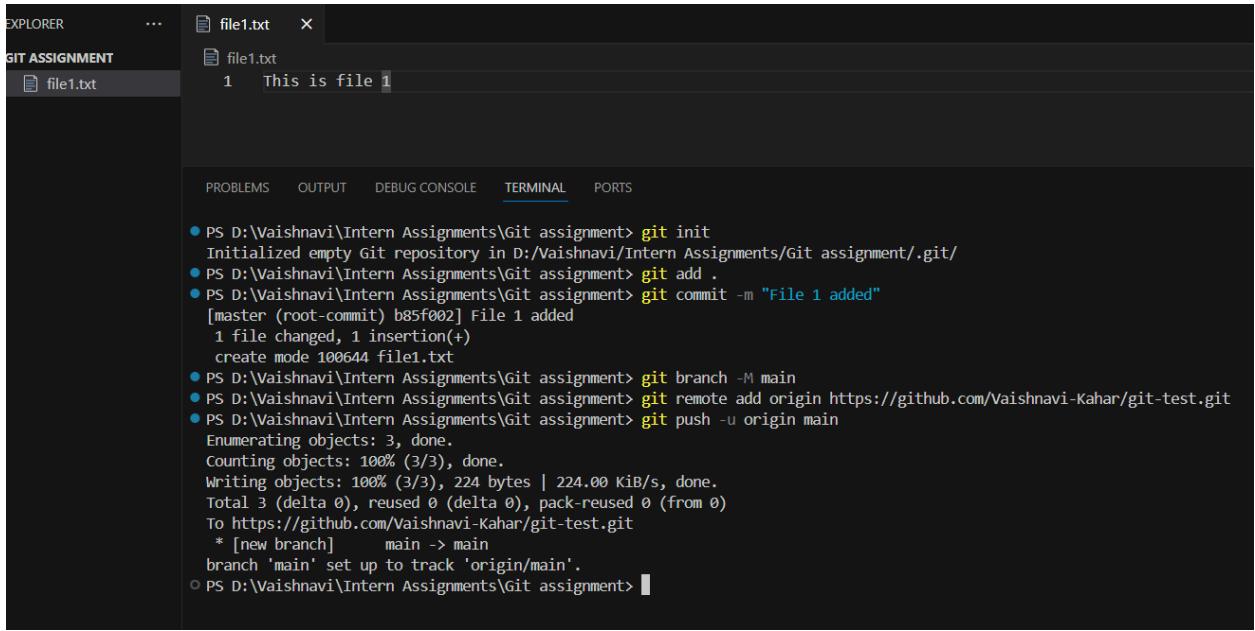
(Opened the conflicting files, resolved conflicts, then)

`git add .`

`git commit -m "Resolved merge conflicts"`

13. Add a remote named "origin" pointing to a GitHub repository.

`git remote add origin <url to github repo>`



The screenshot shows the VS Code interface with the terminal tab selected. The terminal window displays a command-line session for a Git repository named 'Git assignment'. The session shows the following steps:

- git init
- git add file1.txt
- git commit -m "File 1 added"
- git branch -M main
- git remote add origin https://github.com/Vaishnavi-Kahar/git-test.git
- git push -u origin main

The terminal also shows the creation of a file named 'file1.txt' containing the text "This is file 1".

14. Fork a repository on GitHub and clone it to your local machine.

```
git clone <url to github repo>
```

15. Create a new branch on your fork, make changes, and open a pull request to the original repository.

```
git checkout -b new-branch  
# Make changes, then:  
git add .  
git commit -m "File added"  
git push origin new-branch  
# Then open a pull request on GitHub from new-branch to the original repository
```

```
Ξ Dummy ×
New > Ξ Dummy
1 dummy updated
2

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS zsh - New + □ └ ... ^

● vaishnavihemantkahar@practos-MacBook-Pro Cloning % git clone https://github.com/Vaishnavi-Kahar/New.git
Cloning into 'New'...
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
Receiving objects: 100% (3/3), done.
① vaishnavihemantkahar@practos-MacBook-Pro Cloning % git branch
fatal: not a git repository (or any of the parent directories): .git
● vaishnavihemantkahar@practos-MacBook-Pro Cloning % cd New
● vaishnavihemantkahar@practos-MacBook-Pro New % git status
On branch main
Your branch is up to date with 'origin/main'.

nothing to commit, working tree clean
● vaishnavihemantkahar@practos-MacBook-Pro New % git branch
* main
● vaishnavihemantkahar@practos-MacBook-Pro New % git checkout -b new-branch
Switched to a new branch 'new-branch'
● vaishnavihemantkahar@practos-MacBook-Pro New % git add .
● vaishnavihemantkahar@practos-MacBook-Pro New % git commit -m "Dummy File changed"
[new-branch f6e2832] Dummy File changed
 1 file changed, 1 insertion(+), 1 deletion(-)
● vaishnavihemantkahar@practos-MacBook-Pro New % git push origin new-branch
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Writing objects: 100% (3/3), 279 bytes | 279.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: Create a pull request for 'new-branch' on GitHub by visiting:
remote:     https://github.com/Vaishnavi-Kahar/New/pull/new/new-branch
remote:
To https://github.com/Vaishnavi-Kahar/New.git
 * [new branch]    new-branch -> new-branch
💡 vaishnavihemantkahar@practos-MacBook-Pro New %
```

16. Comment on a PR and suggest improvements

Dummy File changed #1

The screenshot shows a GitHub pull request titled "Dummy File changed #1". The top bar indicates "Vaishnavi-Kahar wants to merge 1 commit into Bhargav1603:main from Vaishnavi-Kahar:new-branch". Below the title, there are tabs for Conversation (0), Commits (1), Checks (0), and Files changed (1). A comment from "Vaishnavi-Kahar" is shown, stating "No description provided." and "Dummy File changed". The commit hash is f6e2832. A note below says "Add more commits by pushing to the new-branch branch on Vaishnavi-Kahar/New.". A green box highlights the message "This branch has no conflicts with the base branch". The "Comment" section allows adding a comment with a rich text editor, where "Dummy file changed" is typed. It also includes a note that Markdown is supported.

17. Create a Git alias for the command `git log --oneline` named `gitlol`.

```
git config --global alias.gitlol "log --oneline"
```

18. Create a pre-commit hook

```
cd .git/hooks  
touch pre-commit  
chmod +x pre-commit  
dummy scripts added in pre-commit
```

19. You have made local changes in your branch, but you need to switch to another branch urgently without committing. How would you handle this situation?

```
git stash  
git checkout other-branch  
# When you come back to your branch:
```

```
git checkout your-branch  
git stash pop
```

20. You accidentally deleted a file in your local repository. How do you restore it using Git?
git checkout -- path/to/your/file

21. You have committed changes to your branch but forgot to include a file. How do you add the file to the last commit without creating a new commit?
git add forgotten-file
git commit --amend
git push --force

22. You want to discard all changes in your working directory and revert to the last commit. What Git command would you use?
git reset --hard HEAD

23. You need to view specific commit changes. What Git command can be used to show the changes introduced by a particular commit?
git show <commit-hash>

```
create dummy  
● vaishnavihemantkahar@practos-MacBook-Pro New % git show f6e2832ac9b3001a0629751f4a2ba70e89f4f1be  
commit f6e2832ac9b3001a0629751f4a2ba70e89f4f1be (HEAD -> new-branch, origin/new-branch)  
Author: "vaish22" <vaishnavi.kahar@practo.com>  
Date:   Wed Jun 26 12:38:10 2024 +0530
```

Dummy File changed

```
diff --git a/Dummy b/Dummy  
index 46b7291..120d3f5 100644  
--- a/Dummy  
+++ b/Dummy  
@@ -1,2 +1,2 @@  
-dummy  
+dummy updated
```

```
○ vaishnavihemantkahar@practos-MacBook-Pro New %
```

24. You want to change a commit message, after you have already committed, how do you do so?
git commit --amend -m "New commit message"
git push --force

25. Your colleague has made changes in their branch, and you want to incorporate those changes into your branch without merging. How do you achieve this?

```
git checkout colleague-branch
```

26. You've made several commits on a branch, but you want to club them into a single commit before pushing to the remote repository. How would you do that?

```
git rebase -i HEAD~n # n is the number of commits to combine  
# Mark commits as "squash" or "fixup", then:  
git push --force
```

27. You accidentally staged a file that you don't want to commit. How do you unstage it?

```
git reset HEAD path/to/file
```

28. You don't want to commit files that have .yml in the end, and also files inside folder config. How do you do that?

```
echo "*.yml" >> .gitignore  
echo "config/" >> .gitignore  
git add .gitignore  
git commit -m "Add .yml and config folder to .gitignore"
```

29. You want to see a list of all the files changed in the last commit. What Git command would you use?

```
git diff --name-only HEAD~1 HEAD
```

30. You realize that your local branch is outdated, and you want to fetch the latest changes from the remote repository. How do you do this without merging?

```
git fetch
```

31. You accidentally deleted a branch. How do you recover from it?

```
git checkout -b deleted-branch-name <commit-hash>
```

32. You want to remove untracked files and directories from your working directory. What Git command would you use?

```
git clean -fd
```

33. You have a commit from a feature branch that you want to apply to the main branch without merging the entire feature branch.

```
Git log feature-branch  
git checkout main  
git cherry-pick <commit-hash>
```

34. You mistakenly committed a change to the wrong branch and need to apply that commit to the correct branch.

```
git checkout wrong-branch  
git log # Get the commit hash of the wrong commit  
git checkout correct-branch  
git cherry-pick <commit-hash>  
git checkout wrong-branch  
git reset --hard HEAD~1 # Remove the wrong commit from the wrong branch
```

35. There is a series of commits on a feature branch, but you only want to cherry-pick a specific range of commits.

```
git cherry-pick <start-commit-hash>^..<end-commit-hash>
```

36. You want to clone a GitHub repository onto your local machine, but you only need a specific branch. How can you achieve this?

```
git clone --branch branch-name --single-branch  
https://github.com/yourusername/repository.git
```

37. You've made changes to your local repository and want to push them to your fork on GitHub. What Git commands would you use?

```
git add .  
git commit -m "Your commit message"  
git push origin your-branch
```

38. You want to create a new branch both locally and on GitHub to work on a new feature. What commands would you use?

```
git checkout -b new-feature-branch  
git push origin new-feature-branch
```

39. You want to see the commit history of a GitHub repository. How can you do this using Git commands?

```
git log
```

40. You've accidentally committed sensitive information and want to remove the commit from both your local and remote repositories on GitHub. What commands would you use?

```
git log # Find the commit hash of the sensitive commit  
git rebase -i <commit-hash>~1  
# Mark the sensitive commit as "drop"  
git push --force
```

41. You want to delete a remote branch on GitHub. What Git command would you use?

```
git push origin --delete branch-name
```

42. Create a git repository for all your assignments and upload them in it. Ask your peers to code review it, and you need to code review your peers assignments

```
git init  
git remote add origin <repoLink>  
git add .  
git commit -m "Initial commit"  
git push -u origin main
```

```
vaishnavihemantkahar@practos-MacBook-Pro Practo-assignment % git init  
hint: Using 'master' as the name for the initial branch. This default branch name  
hint: is subject to change. To configure the initial branch name to use in all  
hint: of your new repositories, which will suppress this warning, call:  
hint:  
hint:   git config --global init.defaultBranch <name>  
hint:  
hint: Names commonly chosen instead of 'master' are 'main', 'trunk' and  
hint: 'development'. The just-created branch can be renamed via this command:  
hint:  
hint:   git branch -m <name>  
Initialized empty Git repository in /Users/vaishnavihemantkahar/Documents/Practo-assignment/.git/  
vaishnavihemantkahar@practos-MacBook-Pro Practo-assignment % git add .  
vaishnavihemantkahar@practos-MacBook-Pro Practo-assignment % git commit -m "first commit"  
[master (root-commit) 24ad9a7] first commit  
 1 file changed, 0 insertions(+), 0 deletions(-)  
  create mode 100644 Github Assignment.pdf  
vaishnavihemantkahar@practos-MacBook-Pro Practo-assignment % git branch -M main  
vaishnavihemantkahar@practos-MacBook-Pro Practo-assignment % git remote add origin https://github.co  
ssignment.git  
vaishnavihemantkahar@practos-MacBook-Pro Practo-assignment % git push -u origin main  
Enumerating objects: 3, done.  
Counting objects: 100% (3/3), done.  
Delta compression using up to 12 threads  
Compressing objects: 100% (2/2), done.  
Writing objects: 100% (3/3), 3.76 MiB | 1.42 MiB/s, done.  
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)  
To https://github.com/Vaishnavi-Kahar/Practo-Assignment.git  
 * [new branch]      main -> main  
branch 'main' set up to track 'origin/main'.  
vaishnavihemantkahar@practos-MacBook-Pro Practo-assignment %
```

43. Create a pull request on any open source library on github, attach the pull request link to the readme file of this project's repository

Done