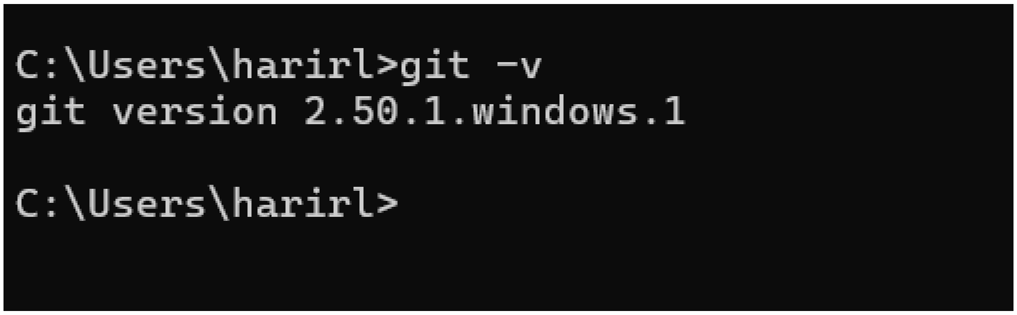
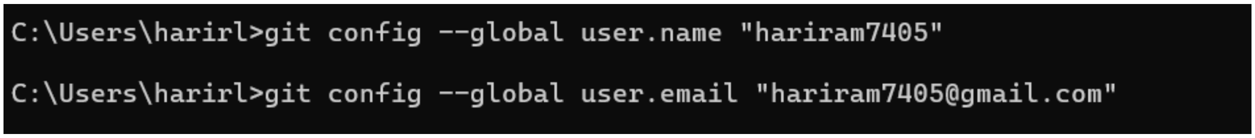
1) Install and verify Git



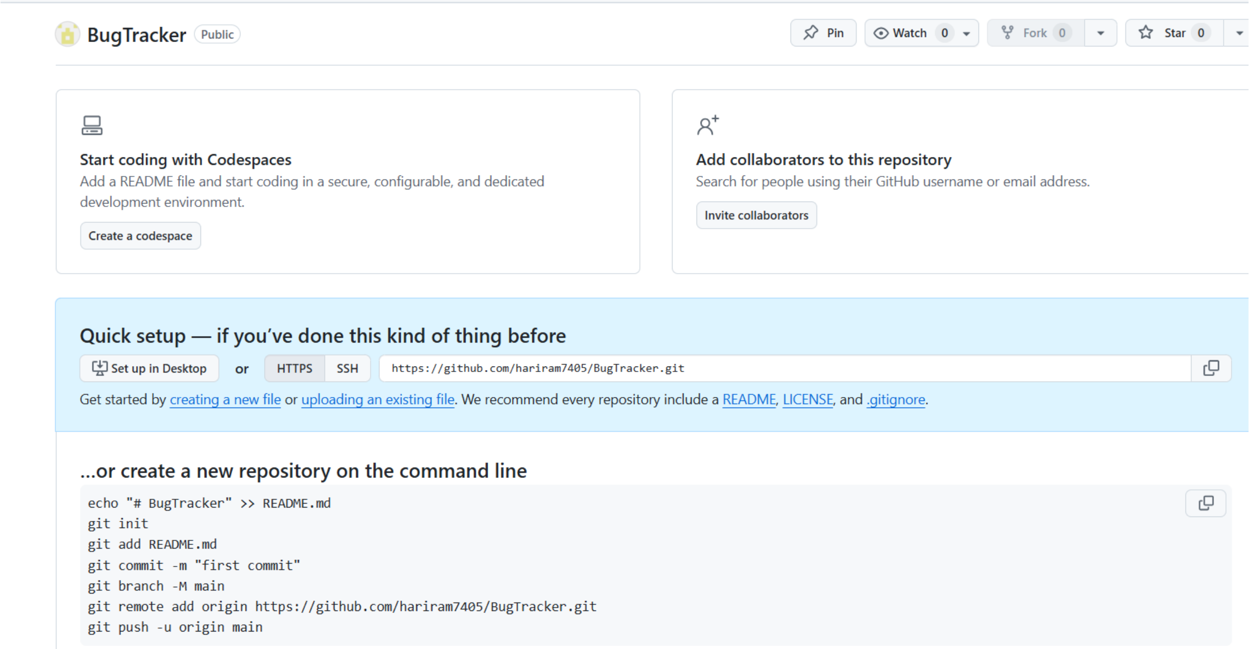
```
C:\Users\harirl>git -v
git version 2.50.1.windows.1

C:\Users\harirl>
```

2) Configure Git



```
C:\Users\harirl>git config --global user.name "hariram7405"

C:\Users\harirl>git config --global user.email "hariram7405@gmail.com"
```

3) Create GitHub Repository



Start coding with Codespaces

Add a README file and start coding in a secure, configurable, and dedicated development environment.

Add collaborators to this repository

Search for people using their GitHub username or email address.

Quick setup — if you've done this kind of thing before

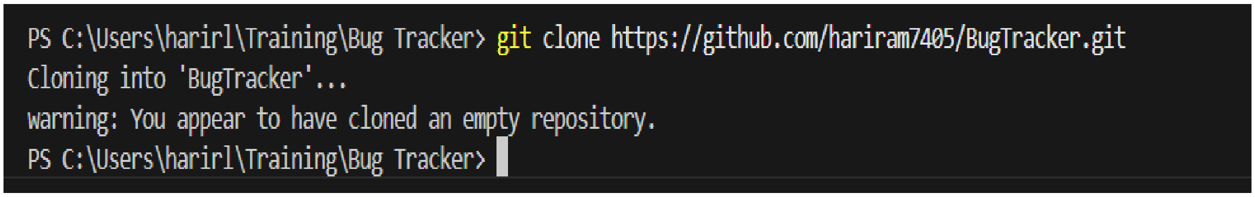
https://github.com/hariram7405/BugTracker.git

Get started by creating a new file or uploading an existing file. We recommend every repository include a README, LICENSE, and .gitignore.

...or create a new repository on the command line

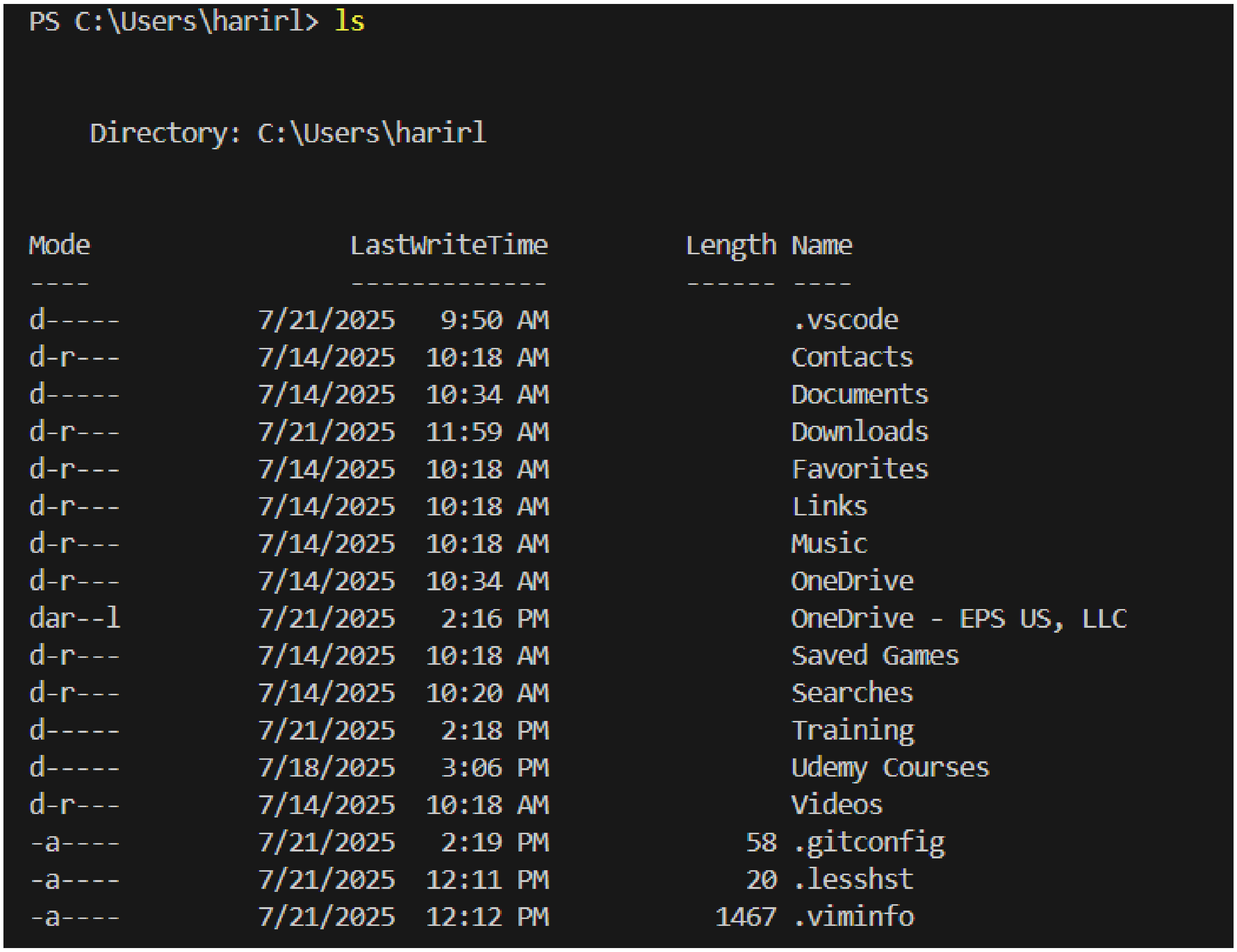
```
echo "# BugTracker" >> README.md
git init
git add README.md
git commit -m "first commit"
git branch -M main
git remote add origin https://github.com/hariram7405/BugTracker.git
git push -u origin main
```

4) Clone the repository



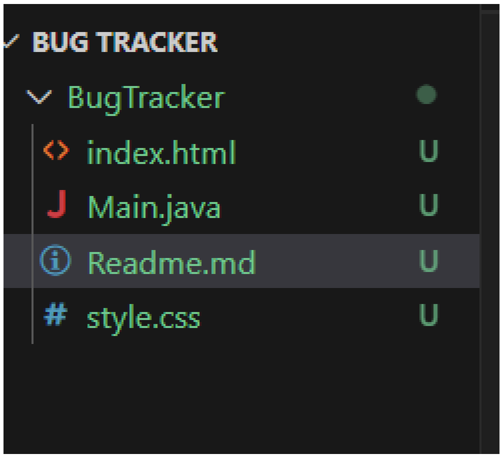
```
PS C:\Users\harirl\Training\Bug Tracker> git clone https://github.com/hariram7405/BugTracker.git
Cloning into 'BugTracker'...
warning: You appear to have cloned an empty repository.
PS C:\Users\harirl\Training\Bug Tracker>
```

5) Verify .git folder

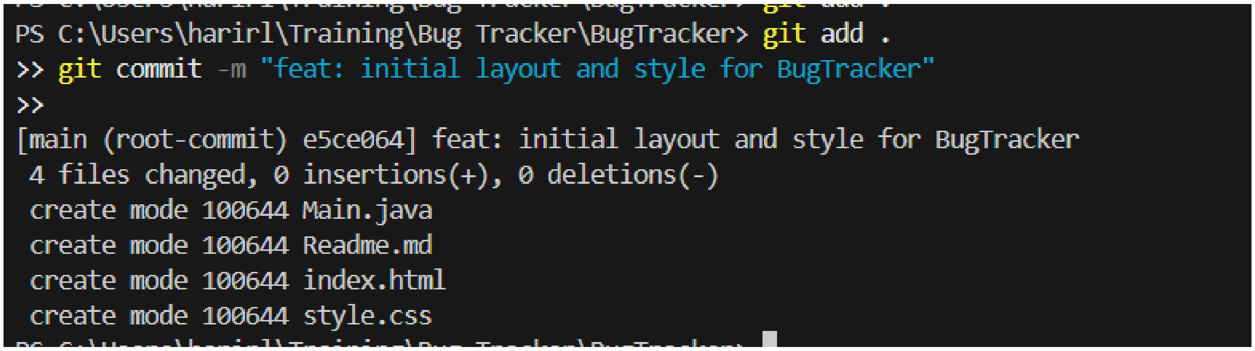


```
PS C:\Users\harirl> ls


    Directory: C:\Users\harirl


Mode                 LastWriteTime         Length Name
----                 -------------         ------ ----
d-----         7/21/2025   9:50 AM                .vscode
d-r---         7/14/2025  10:18 AM                Contacts
d-----         7/14/2025  10:34 AM                Documents
d-r---         7/21/2025  11:59 AM                Downloads
d-r---         7/14/2025  10:18 AM                Favorites
d-r---         7/14/2025  10:18 AM                Links
d-r---         7/14/2025  10:18 AM                Music
d-r---         7/14/2025  10:34 AM                OneDrive
dar--l         7/21/2025   2:16 PM                OneDrive - EPS US, LLC
d-r---         7/14/2025  10:18 AM                Saved Games
d-r---         7/14/2025  10:20 AM                Searches
d-----         7/21/2025   2:18 PM                Training
d-----         7/18/2025   3:06 PM                Udemy Courses
d-r---         7/14/2025  10:18 AM                Videos
-a----         7/21/2025   2:19 PM             58 .gitconfig
-a----         7/21/2025  12:11 PM             20 .lesshst
-a----         7/21/2025  12:12 PM           1467 .viminfo
```

6) Create Basic Files

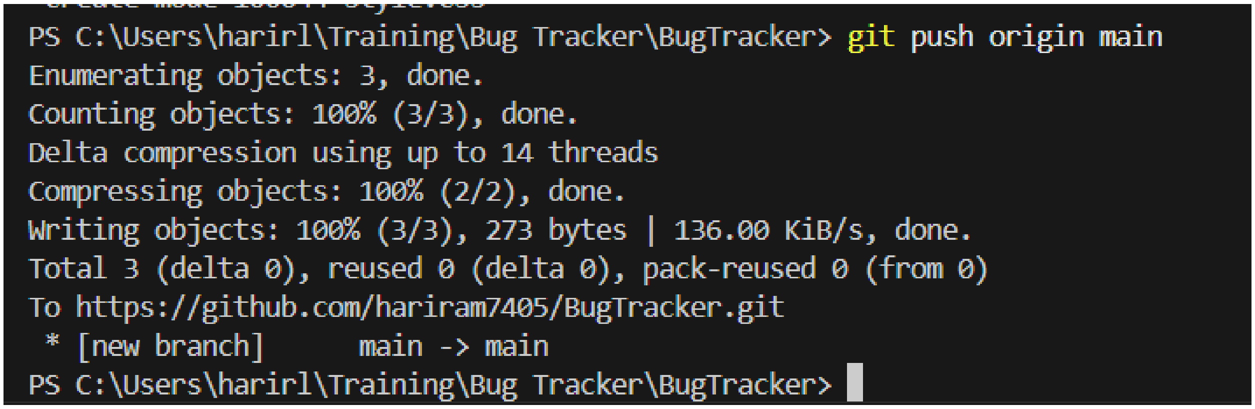


7) Track your work



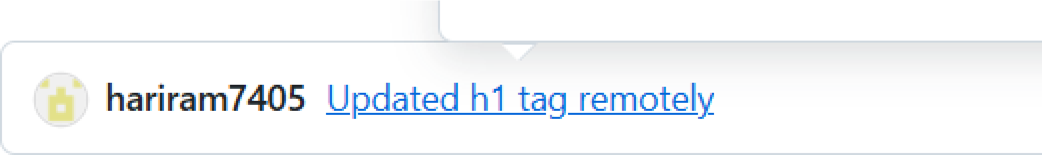
```
PS C:\Users\harirl\Training\Bug Tracker\BugTracker> git add .
>> git commit -m "feat: initial layout and style for BugTracker"
>>
[main (root-commit) e5ce064] feat: initial layout and style for BugTracker
 4 files changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 Main.java
 create mode 100644 Readme.md
 create mode 100644 index.html
 create mode 100644 style.css
```

8) Push your work



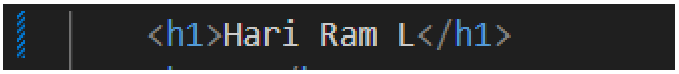
```
PS C:\Users\harirl\Training\Bug Tracker\BugTracker> git push origin main
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Delta compression using up to 14 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 273 bytes | 136.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/hariram7405/BugTracker.git
 * [new branch]      main -> main
PS C:\Users\harirl\Training\Bug Tracker\BugTracker>
```

9)Edit Remotely



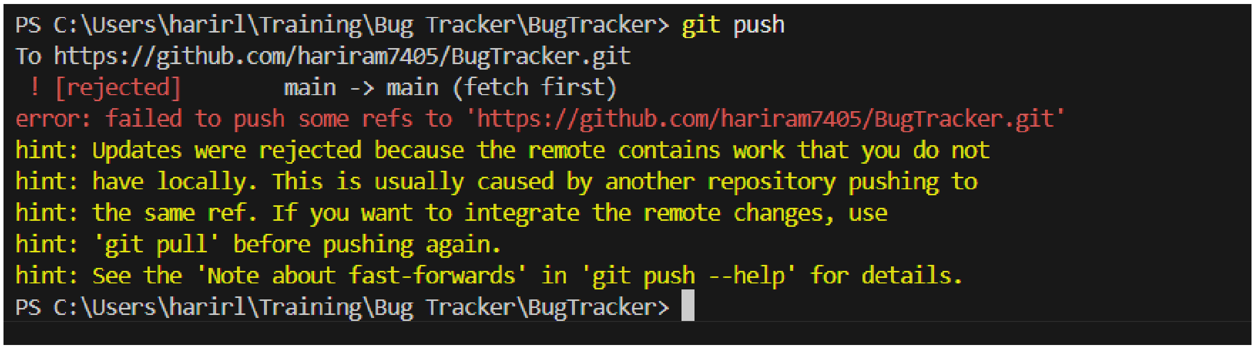
hariram7405 Updated h1 tag remotely

10) Change the same line locally



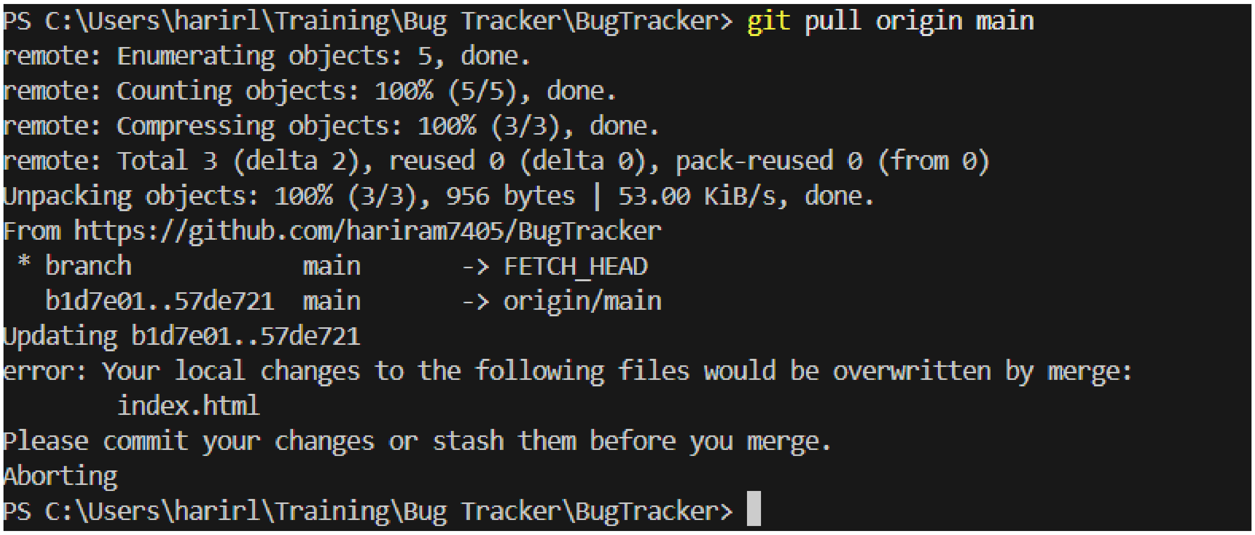
```
<h1>Hari Ram L</h1>
```

11) Trigger Merge Conflict

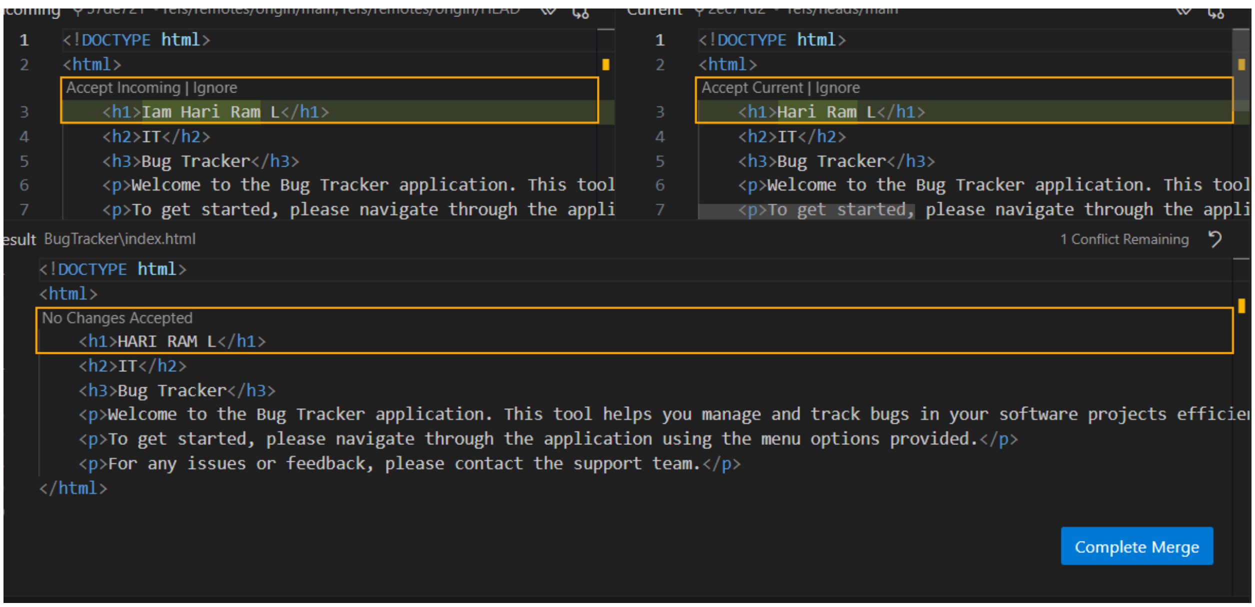


```
PS C:\Users\harirl\Training\Bug Tracker\BugTracker> git push
To https://github.com/hariram7405/BugTracker.git
 ! [rejected]        main -> main (fetch first)
error: failed to push some refs to 'https://github.com/hariram7405/BugTracker.git'
hint: Updates were rejected because the remote contains work that you do not
hint: have locally. This is usually caused by another repository pushing to
hint: the same ref. If you want to integrate the remote changes, use
hint: 'git pull' before pushing again.
hint: See the 'Note about fast-forwards' in 'git push --help' for details.
PS C:\Users\harirl\Training\Bug Tracker\BugTracker>
```

12) Resolve Conflict



```
PS C:\Users\harirl\Training\Bug Tracker\BugTracker> git pull origin main
remote: Enumerating objects: 5, done.
remote: Counting objects: 100% (5/5), done.
remote: Compressing objects: 100% (3/3), done.
remote: Total 3 (delta 2), reused 0 (delta 0), pack-reused 0 (from 0)
Unpacking objects: 100% (3/3), 956 bytes | 53.00 KiB/s, done.
From https://github.com/hariram7405/BugTracker
 * branch            main       -> FETCH_HEAD
   b1d7e01..57de721  main       -> origin/main
Updating b1d7e01..57de721
error: Your local changes to the following files would be overwritten by merge:
        index.html
Please commit your changes or stash them before you merge.
Aborting
PS C:\Users\harirl\Training\Bug Tracker\BugTracker>
```

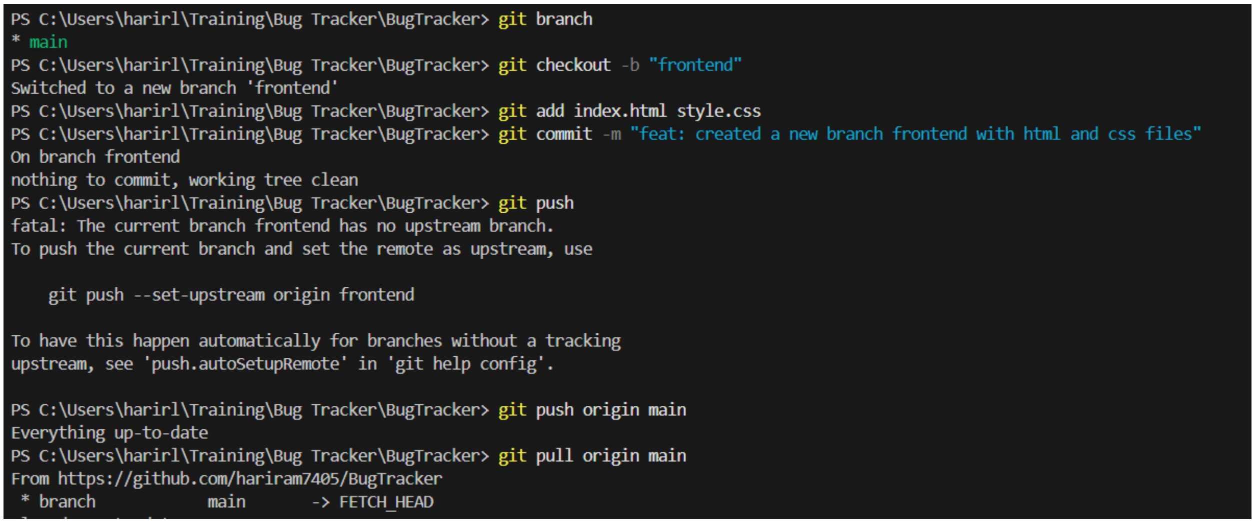

coming 37de721 • refs/remotes/origin/main, refs/remotes/origin/HEAD
Current 2ec71d2 • refs/heads/main
Accept Incoming | Ignore
Accept Current | Ignore
esult BugTracker\index.html
1 Conflict Remaining
No Changes Accepted
Complete Merge

```
<!DOCTYPE html>
<html>
    <h1>Iam Hari Ram L</h1>
    <h2>IT</h2>
    <h3>Bug Tracker</h3>
    <p>Welcome to the Bug Tracker application. This tool
    <p>To get started, please navigate through the appli
```

```
<!DOCTYPE html>
<html>
    <h1>Hari Ram L</h1>
    <h2>IT</h2>
    <h3>Bug Tracker</h3>
    <p>Welcome to the Bug Tracker application. This tool
    <p>To get started, please navigate through the appli
```

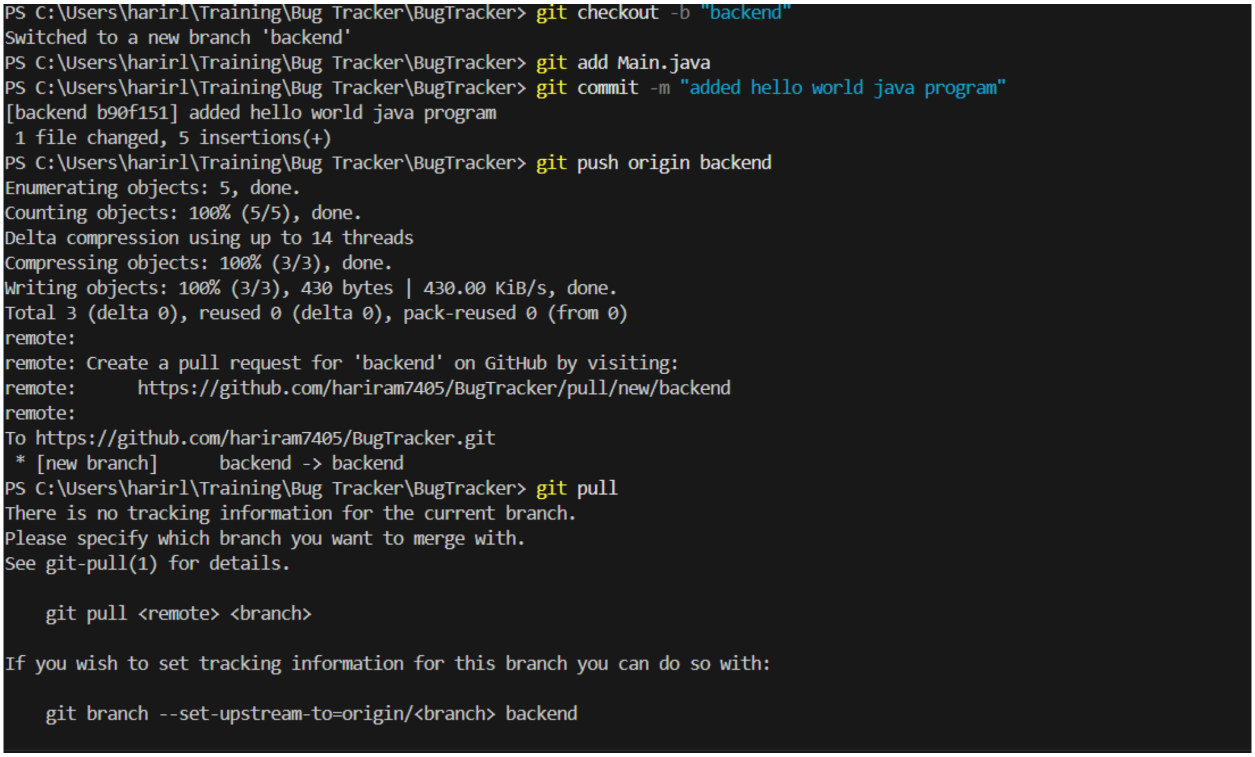
```
<!DOCTYPE html>
<html>
    <h1>HARI RAM L</h1>
    <h2>IT</h2>
    <h3>Bug Tracker</h3>
    <p>Welcome to the Bug Tracker application. This tool helps you manage and track bugs in your software projects efficie
    <p>To get started, please navigate through the application using the menu options provided.</p>
    <p>For any issues or feedback, please contact the support team.</p>
</html>
```

13) Branch for Frontend



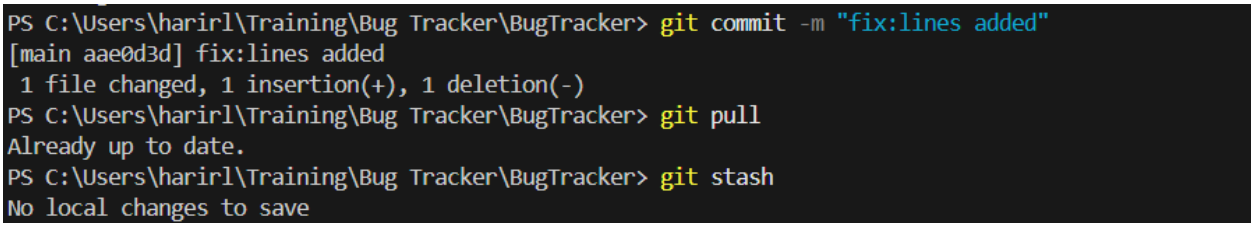
```
PS C:\Users\harirl\Training\Bug Tracker\BugTracker> git branch
* main
PS C:\Users\harirl\Training\Bug Tracker\BugTracker> git checkout -b "frontend"
Switched to a new branch 'frontend'
PS C:\Users\harirl\Training\Bug Tracker\BugTracker> git add index.html style.css
PS C:\Users\harirl\Training\Bug Tracker\BugTracker> git commit -m "feat: created a new branch frontend with html and css files"
On branch frontend
nothing to commit, working tree clean
PS C:\Users\harirl\Training\Bug Tracker\BugTracker> git push
fatal: The current branch frontend has no upstream branch.
To push the current branch and set the remote as upstream, use

    git push --set-upstream origin frontend

To have this happen automatically for branches without a tracking
upstream, see 'push.autoSetupRemote' in 'git help config'.

PS C:\Users\harirl\Training\Bug Tracker\BugTracker> git push origin main
Everything up-to-date
PS C:\Users\harirl\Training\Bug Tracker\BugTracker> git pull origin main
From https://github.com/hariram7405/BugTracker
 * branch            main       -> FETCH_HEAD
```

14) Branch for Backend

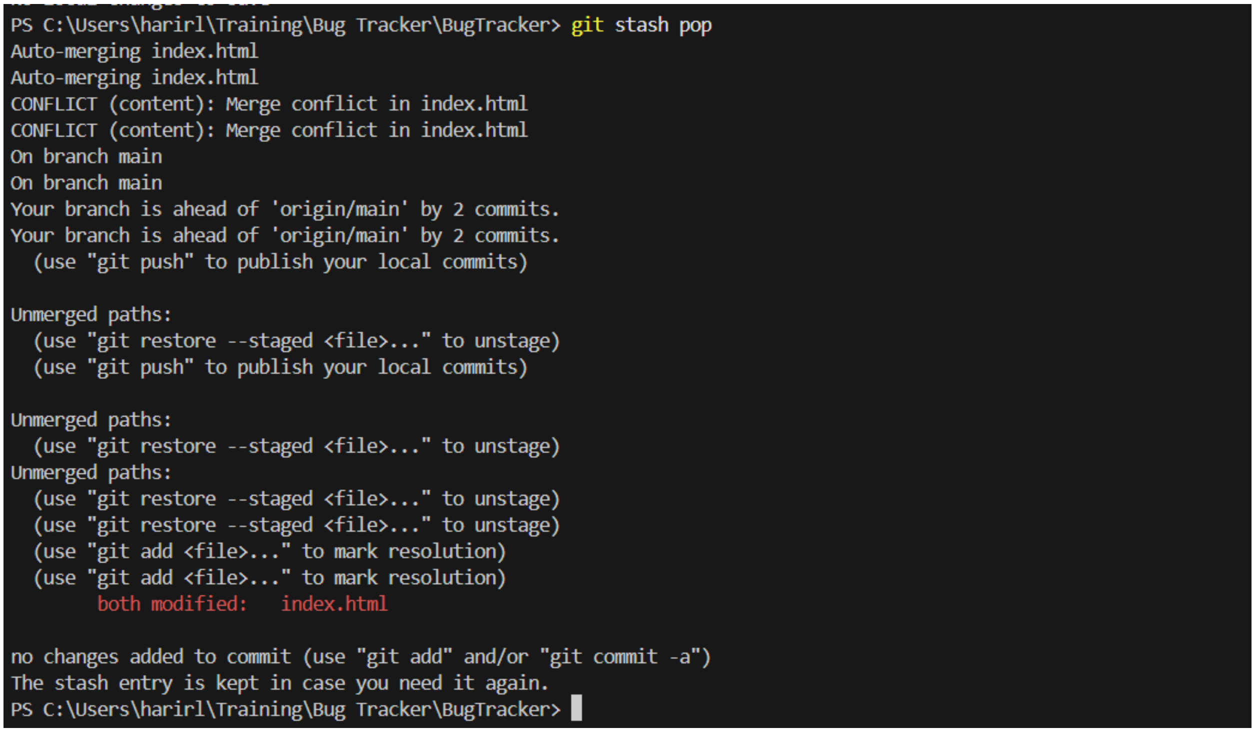


```
PS C:\Users\harirl\Training\Bug Tracker\BugTracker> git checkout -b "backend"
Switched to a new branch 'backend'
PS C:\Users\harirl\Training\Bug Tracker\BugTracker> git add Main.java
PS C:\Users\harirl\Training\Bug Tracker\BugTracker> git commit -m "added hello world java program"
[backend b90f151] added hello world java program
 1 file changed, 5 insertions(+)
PS C:\Users\harirl\Training\Bug Tracker\BugTracker> git push origin backend
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 14 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 430 bytes | 430.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: Create a pull request for 'backend' on GitHub by visiting:
remote:      https://github.com/hariram7405/BugTracker/pull/new/backend
remote:
To https://github.com/hariram7405/BugTracker.git
 * [new branch]      backend -> backend
PS C:\Users\harirl\Training\Bug Tracker\BugTracker> git pull
There is no tracking information for the current branch.
Please specify which branch you want to merge with.
See git-pull(1) for details.

    git pull <remote> <branch>

If you wish to set tracking information for this branch you can do so with:

    git branch --set-upstream-to=origin/<branch> backend
```

15) Stash Scenario

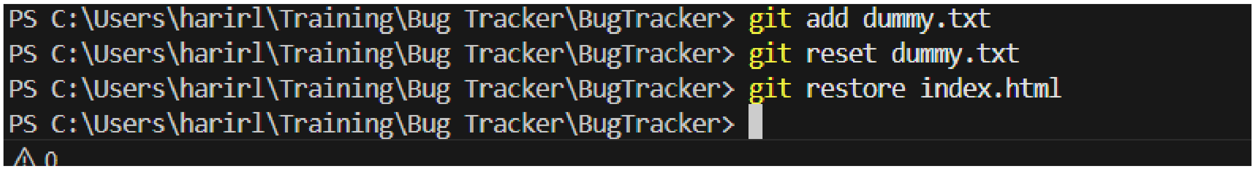


```
PS C:\Users\harirl\Training\Bug Tracker\BugTracker> git commit -m "fix:lines added"
[main aae0d3d] fix:lines added
 1 file changed, 1 insertion(+), 1 deletion(-)
PS C:\Users\harirl\Training\Bug Tracker\BugTracker> git pull
Already up to date.
PS C:\Users\harirl\Training\Bug Tracker\BugTracker> git stash
No local changes to save
```



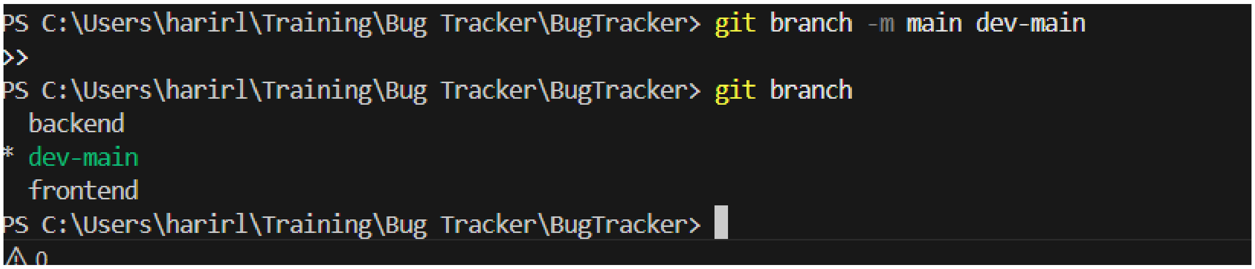
```
PS C:\Users\harirl\Training\Bug Tracker\BugTracker> git stash pop
Auto-merging index.html
Auto-merging index.html
CONFLICT (content): Merge conflict in index.html
CONFLICT (content): Merge conflict in index.html
On branch main
On branch main
Your branch is ahead of 'origin/main' by 2 commits.
Your branch is ahead of 'origin/main' by 2 commits.
  (use "git push" to publish your local commits)

Unmerged paths:
  (use "git restore --staged <file>..." to unstage)
  (use "git push" to publish your local commits)

Unmerged paths:
  (use "git restore --staged <file>..." to unstage)
Unmerged paths:
  (use "git restore --staged <file>..." to unstage)
  (use "git restore --staged <file>..." to unstage)
  (use "git add <file>..." to mark resolution)
  (use "git add <file>..." to mark resolution)
        both modified:   index.html

no changes added to commit (use "git add" and/or "git commit -a")
The stash entry is kept in case you need it again.
PS C:\Users\harirl\Training\Bug Tracker\BugTracker>
```

16)Reset and Restore



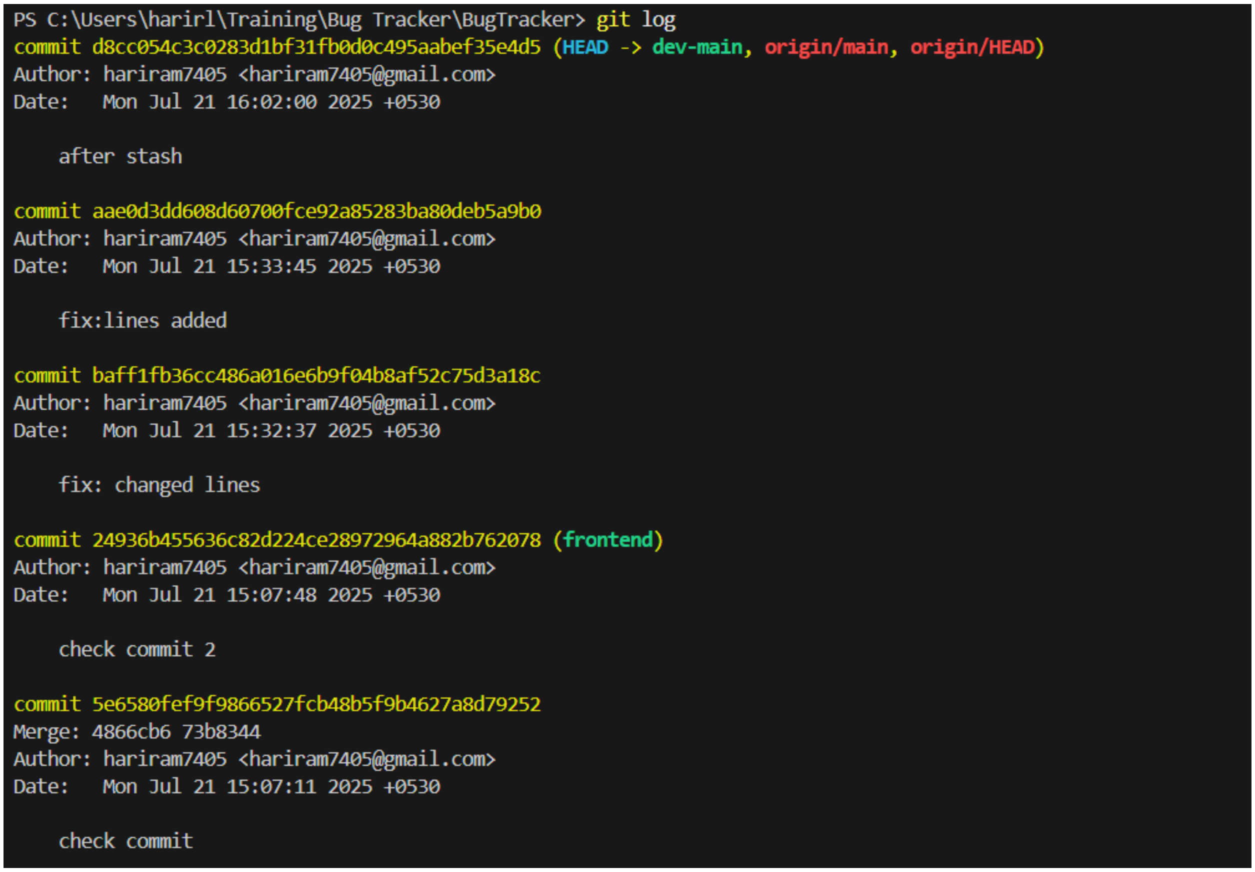
```
PS C:\Users\harirl\Training\Bug Tracker\BugTracker> git add dummy.txt
PS C:\Users\harirl\Training\Bug Tracker\BugTracker> git reset dummy.txt
PS C:\Users\harirl\Training\Bug Tracker\BugTracker> git restore index.html
PS C:\Users\harirl\Training\Bug Tracker\BugTracker>
⚠ 0
```

17) Rename Branch



```
PS C:\Users\harirl\Training\Bug Tracker\BugTracker> git branch -m main dev-main
>>
PS C:\Users\harirl\Training\Bug Tracker\BugTracker> git branch
  backend
* dev-main
  frontend
PS C:\Users\harirl\Training\Bug Tracker\BugTracker>
⚠ 0
```

18) Git Commit



```
PS C:\Users\harirl\Training\Bug Tracker\BugTracker> git log
commit d8cc054c3c0283d1bf31fb0d0c495aabef35e4d5 (HEAD -> dev-main, origin/main, origin/HEAD)
Author: hariram7405 <hariram7405@gmail.com>
Date:   Mon Jul 21 16:02:00 2025 +0530

    after stash

commit aae0d3dd608d60700fce92a85283ba80deb5a9b0
Author: hariram7405 <hariram7405@gmail.com>
Date:   Mon Jul 21 15:33:45 2025 +0530

    fix:lines added

commit baff1fb36cc486a016e6b9f04b8af52c75d3a18c
Author: hariram7405 <hariram7405@gmail.com>
Date:   Mon Jul 21 15:32:37 2025 +0530

    fix: changed lines

commit 24936b455636c82d224ce28972964a882b762078 (frontend)
Author: hariram7405 <hariram7405@gmail.com>
Date:   Mon Jul 21 15:07:48 2025 +0530

    check commit 2

commit 5e6580fef9f9866527fcb48b5f9b4627a8d79252
Merge: 4866cb6 73b8344
Author: hariram7405 <hariram7405@gmail.com>
Date:   Mon Jul 21 15:07:11 2025 +0530

    check commit
```