

## Git Project (2.5 Hours)

### Objective:

You will work on a project involving a simple website. You will learn and practice various Git concepts including branching, merging, handling merge conflicts, rebasing, pulling, versioning, and rolling back changes. This project is designed to be completed in 1 hour.

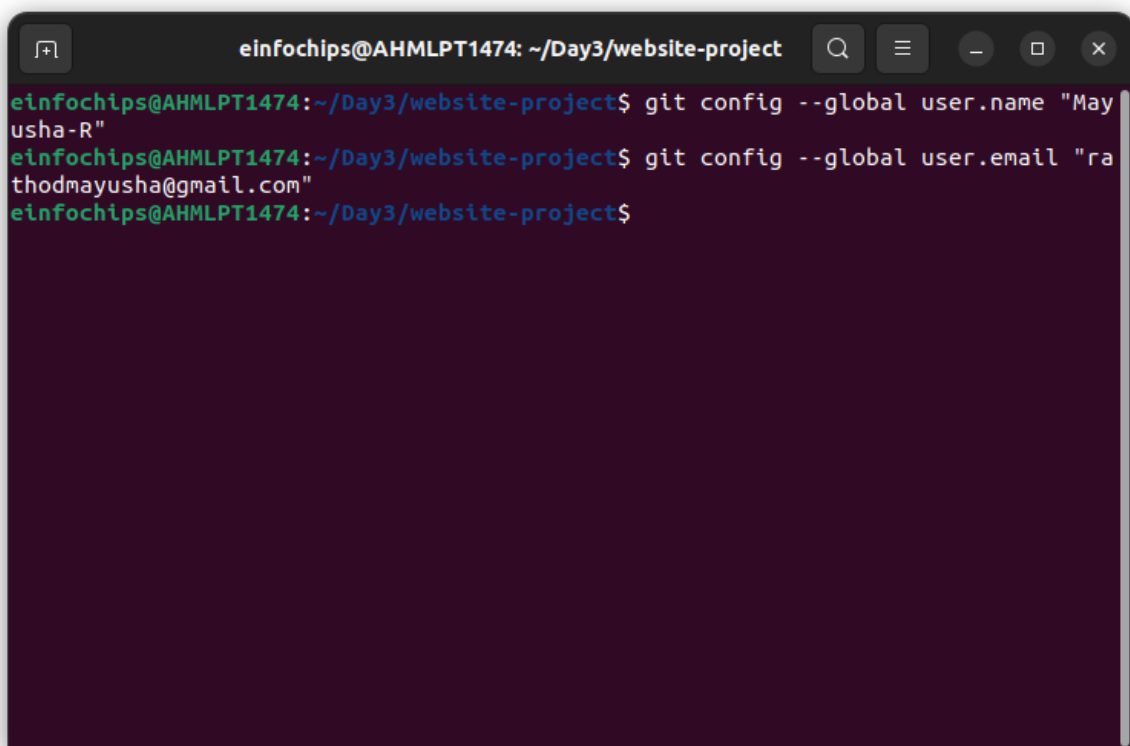
---

### Project Setup (15 minutes)

1. **Install Git:** Ensure Git is installed on your system. Verify with `git --version`.

**Set Up Git:** Configure your Git username and email:

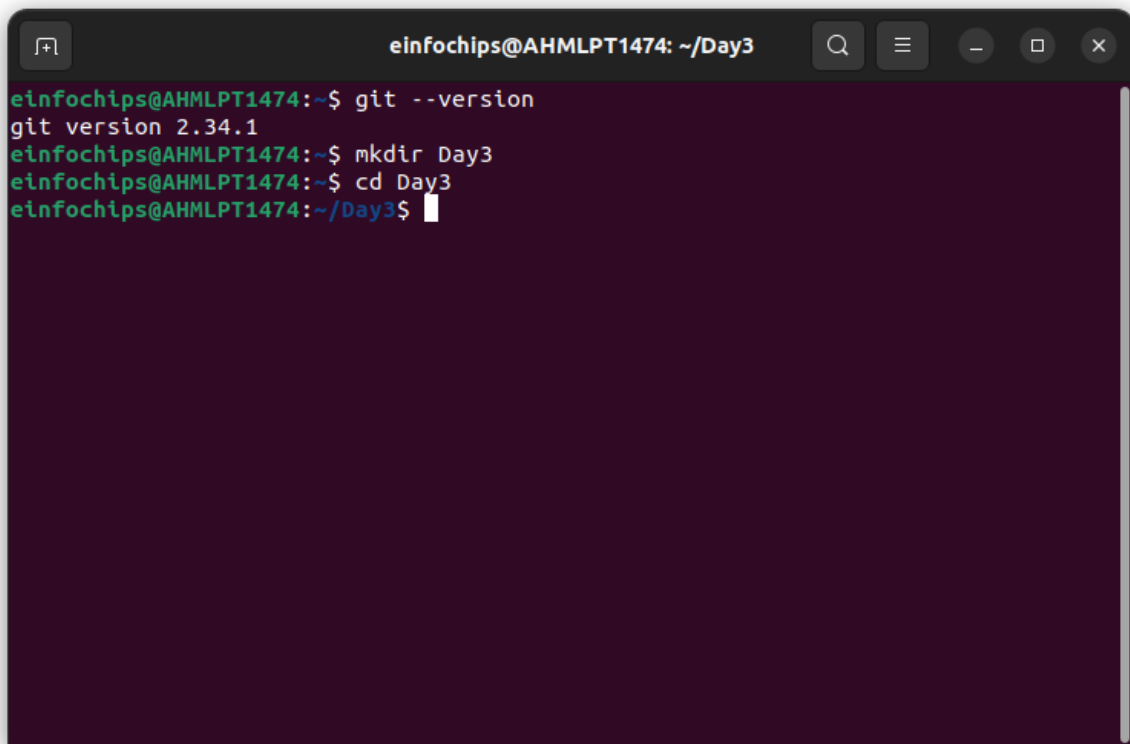
```
git config --global user.name "Your Name"
git config --global user.email "your.email@example.com"
```

A terminal window with a dark background and light green text. The window title is 'einfochips@AHMLPT1474: ~/Day3/website-project'. The terminal shows three lines of commands being executed: 'git config --global user.name "Mayusha-R"', 'git config --global user.email "rathodmayusha@gmail.com"', and a final prompt line. The output of the first command is 'Mayusha-R' on the next line.

```
einfochips@AHMLPT1474: ~/Day3/website-project
einfochips@AHMLPT1474:~/Day3/website-project$ git config --global user.name "Mayusha-R"
einfochips@AHMLPT1474:~/Day3/website-project$ git config --global user.email "rathodmayusha@gmail.com"
einfochips@AHMLPT1474:~/Day3/website-project$
```

2. **Create a GitHub Repository:**

- Go to GitHub and create a new repository named `website-project`.

A terminal window with a dark purple background. The title bar at the top reads 'einfochips@AHMLPT1474: ~/Day3'. The terminal shows the following commands and output: 'einfochips@AHMLPT1474:~\$ git --version' followed by 'git version 2.34.1'; 'einfochips@AHMLPT1474:~\$ mkdir Day3'; 'einfochips@AHMLPT1474:~\$ cd Day3'; and 'einfochips@AHMLPT1474:~/Day3\$' with a cursor. The window has standard Linux window controls (search, menu, zoom, and close) on the right side of the title bar.

```
einfochips@AHMLPT1474:~$ git --version
git version 2.34.1
einfochips@AHMLPT1474:~$ mkdir Day3
einfochips@AHMLPT1474:~$ cd Day3
einfochips@AHMLPT1474:~/Day3$
```

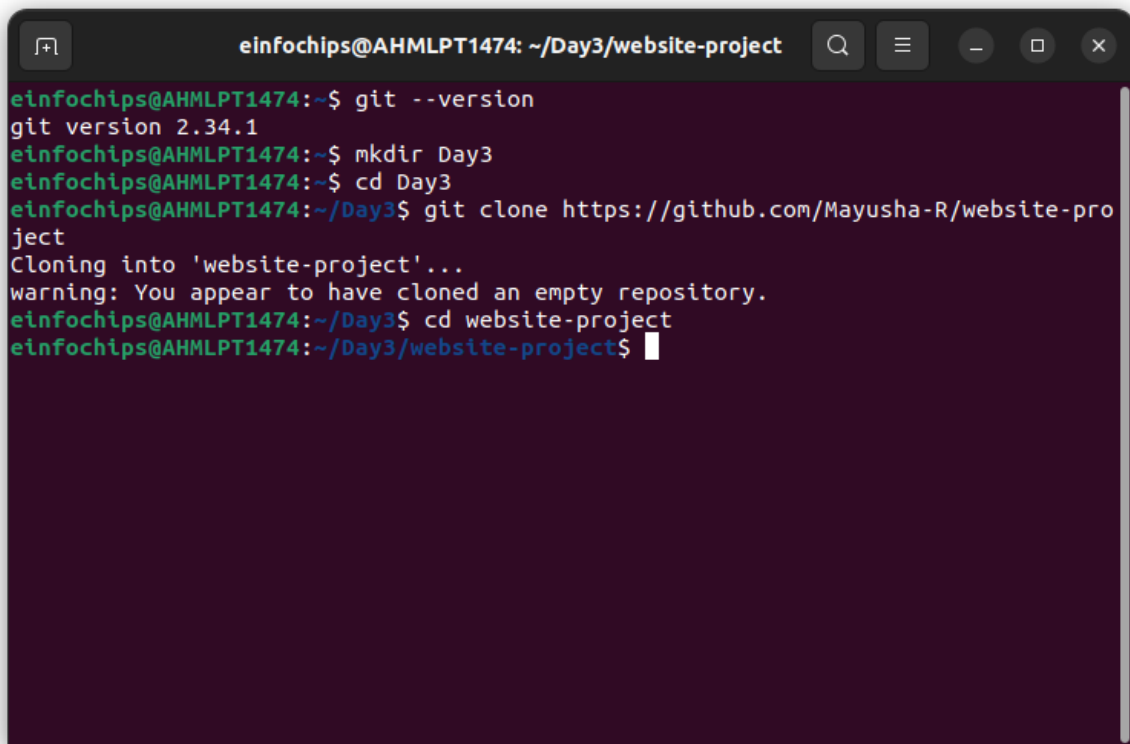
Clone the repository to your local machine:

```
git clone https://github.com/your-username/website-project.git
```

### 3. Initialize the Project:

Navigate to the project directory:

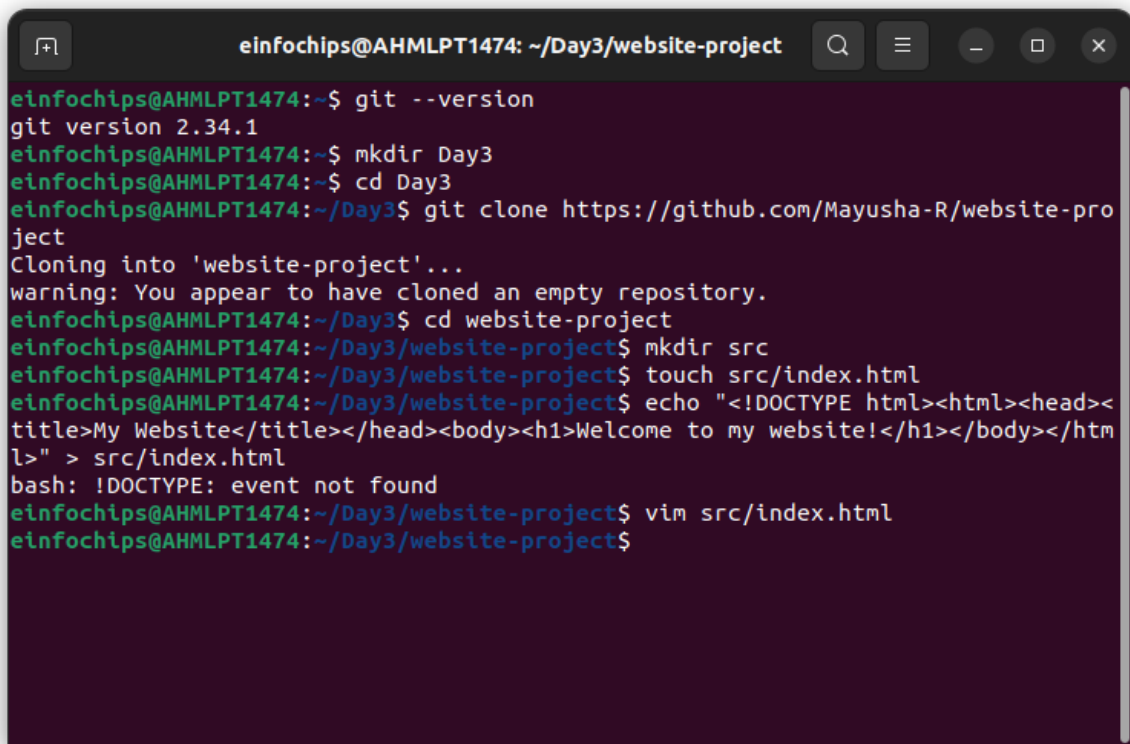
```
cd website-project
```

A terminal window with a dark background and light green text. The window title is 'einfochips@AHMLPT1474: ~/Day3/website-project'. The terminal shows the following commands and output:

```
einfochips@AHMLPT1474:~$ git --version
git version 2.34.1
einfochips@AHMLPT1474:~$ mkdir Day3
einfochips@AHMLPT1474:~$ cd Day3
einfochips@AHMLPT1474:~/Day3$ git clone https://github.com/Mayusha-R/website-project
Cloning into 'website-project'...
warning: You appear to have cloned an empty repository.
einfochips@AHMLPT1474:~/Day3$ cd website-project
einfochips@AHMLPT1474:~/Day3/website-project$
```

Create initial project structure:

```
mkdir src
touch src/index.html
echo "<!DOCTYPE html><html><head><title>My Website</title></head><body><h1>Welcome to
my website!</h1></body></html>" > src/index.html
```

A terminal window with a dark background and light green text. The window title is 'einfochips@AHMLPT1474: ~/Day3/website-project'. The terminal shows the following commands and output: 

```
einfochips@AHMLPT1474:~$ git --version
git version 2.34.1
einfochips@AHMLPT1474:~$ mkdir Day3
einfochips@AHMLPT1474:~$ cd Day3
einfochips@AHMLPT1474:~/Day3$ git clone https://github.com/Mayusha-R/website-project
Cloning into 'website-project'...
warning: You appear to have cloned an empty repository.
einfochips@AHMLPT1474:~/Day3$ cd website-project
einfochips@AHMLPT1474:~/Day3/website-project$ mkdir src
einfochips@AHMLPT1474:~/Day3/website-project$ touch src/index.html
einfochips@AHMLPT1474:~/Day3/website-project$ echo "<!DOCTYPE html><html><head><title>My Website</title></head><body><h1>Welcome to my website!</h1></body></html>" > src/index.html
bash: !DOCTYPE: event not found
einfochips@AHMLPT1474:~/Day3/website-project$ vim src/index.html
einfochips@AHMLPT1474:~/Day3/website-project$
```

Commit and push the initial project structure:

```
git add .
git commit -m "Initial commit: Added project structure and index.html"
git push origin main
```

```
einfochips@AHMLPT1474: ~/Day3/website-project
einfochips@AHMLPT1474:~/Day3/website-project$ git status
On branch main

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
    new file:   src/index.html

einfochips@AHMLPT1474:~/Day3/website-project$ git commit -m "Added project structure and index.html"
[main (root-commit) 9ab4455] Added project structure and index.html
 1 file changed, 9 insertions(+)
 create mode 100644 src/index.html
einfochips@AHMLPT1474:~/Day3/website-project$ git status
On branch main
Your branch is based on 'origin/main', but the upstream is gone.
  (use "git branch --unset-upstream" to fixup)

nothing to commit, working tree clean
einfochips@AHMLPT1474:~/Day3/website-project$ git push origin main
Username for 'https://github.com': ghp_wsr4zby9cEVAYNTCSpYlEgxd0Ufhcw41EW53
Password for 'https://ghp_wsr4zby9cEVAYNTCSpYlEgxd0Ufhcw41EW53@github.com':
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (4/4), 368 bytes | 368.00 KiB/s, done.
Total 4 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/Mayusha-R/website-project
 * [new branch]      main -> main
einfochips@AHMLPT1474:~/Day3/website-project$
```

---

## Exercise 1: Branching and Basic Operations (10 minutes)

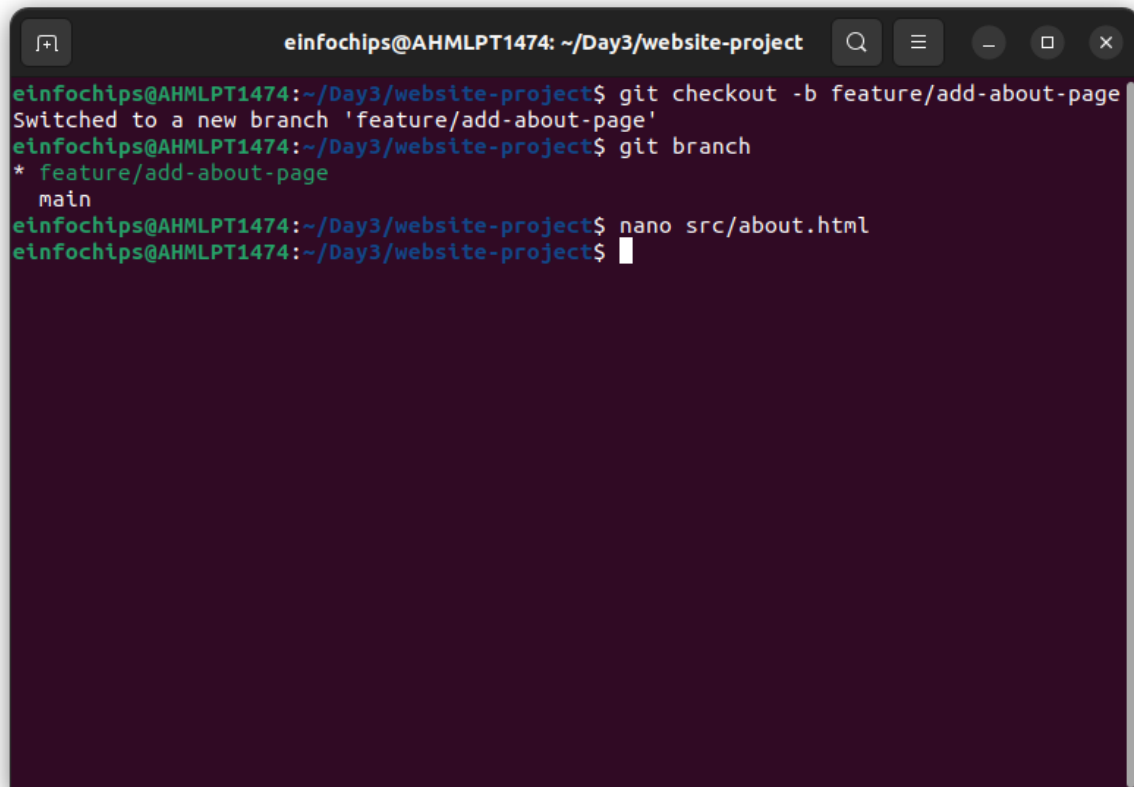
### Create a New Branch:

`git checkout -b feature/add-about-page`

- 1.
2. **Add a New Page:**

Create `about.html`:

```
touch src/about.html
echo "<!DOCTYPE html><html><head><title>About Us</title></head><body><h1>About
Us</h1></body></html>" > src/about.html
```

A terminal window with a dark background and light-colored text. The window title bar shows the user 'einfochips' on machine 'AHMLPT1474' in the directory '~/Day3/website-project'. The terminal content shows a sequence of git commands: 'git checkout -b feature/add-about-page' which switches to a new branch, followed by 'git branch' which lists the current branches 'main' and 'feature/add-about-page'. The final command is 'nano src/about.html', which opens the nano text editor. The prompt returns to the shell after the command is executed.

```
einfochips@AHMLPT1474: ~/Day3/website-project
einfochips@AHMLPT1474:~/Day3/website-project$ git checkout -b feature/add-about-page
Switched to a new branch 'feature/add-about-page'
einfochips@AHMLPT1474:~/Day3/website-project$ git branch
* feature/add-about-page
  main
einfochips@AHMLPT1474:~/Day3/website-project$ nano src/about.html
einfochips@AHMLPT1474:~/Day3/website-project$
```

Commit and push changes:

```
git add src/about.html
git commit -m "Added about page"
git push origin feature/add-about-page
```

```
einfochips@AHMLPT1474: ~/Day3/website-project
einfochips@AHMLPT1474:~/Day3/website-project$ git add src/about.html
einfochips@AHMLPT1474:~/Day3/website-project$ git status
On branch feature/add-about-page
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   src/about.html

einfochips@AHMLPT1474:~/Day3/website-project$ git commit -m "Added about page"
[feature/add-about-page e730b72] Added about page
 1 file changed, 9 insertions(+)
 create mode 100644 src/about.html
einfochips@AHMLPT1474:~/Day3/website-project$ git push origin feature/add-about-page
Username for 'https://github.com': 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
Password for 'https://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@github.com':
Enumerating objects: 6, done.
Counting objects: 100% (6/6), done.
Delta compression using up to 8 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (4/4), 385 bytes | 385.00 KiB/s, done.
Total 4 (delta 0), reused 0 (delta 0), pack-reused 0
remote:
remote: Create a pull request for 'feature/add-about-page' on GitHub by visiting:
remote:   https://github.com/Mayusha-R/website-project/pull/new/feature/add-about
remote:   -page
remote:
To https://github.com/Mayusha-R/website-project
 * [new branch]      feature/add-about-page -> feature/add-about-page
```

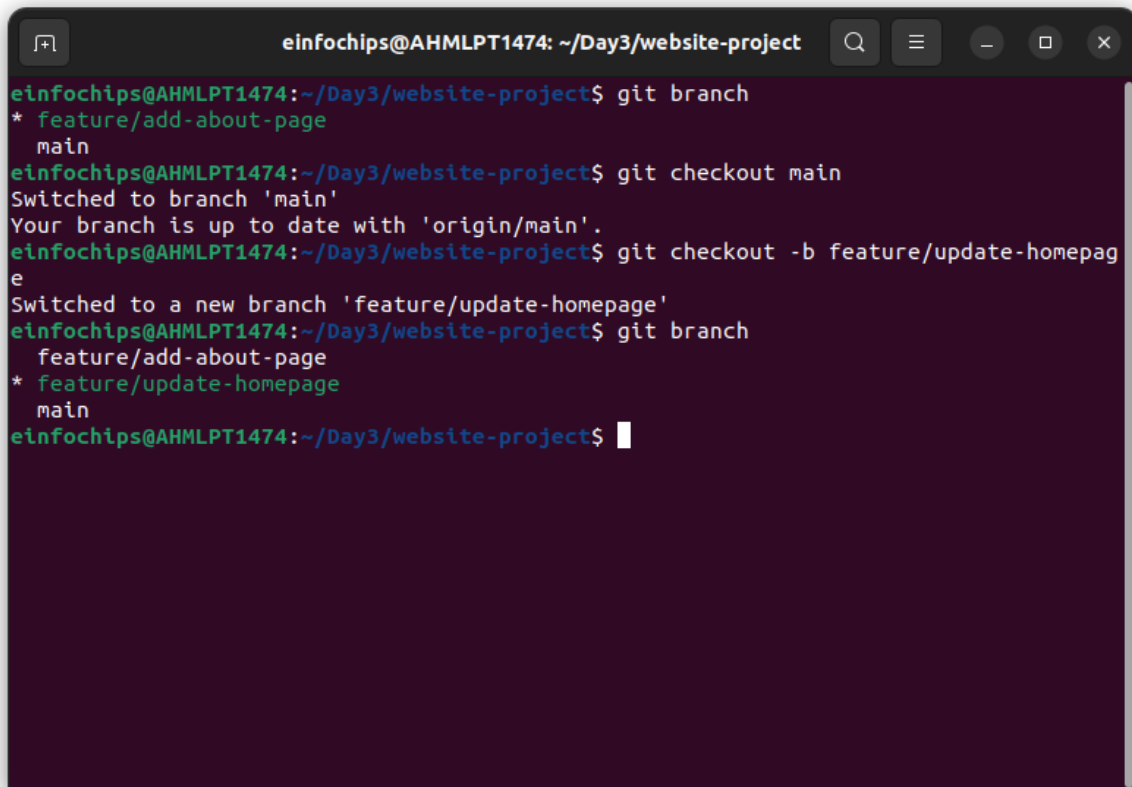
---

## Exercise 2: Merging and Handling Merge Conflicts (15 minutes)

### Create Another Branch:

git checkout main

git checkout -b feature/update-homepage

A terminal window with a dark purple background and light green text. The window title is 'einfochips@AHMLPT1474: ~/Day3/website-project'. The terminal shows the following commands and output: 

```
einfochips@AHMLPT1474:~/Day3/website-project$ git branch
* feature/add-about-page
  main
einfochips@AHMLPT1474:~/Day3/website-project$ git checkout main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.
einfochips@AHMLPT1474:~/Day3/website-project$ git checkout -b feature/update-homepag
e
Switched to a new branch 'feature/update-homepage'
einfochips@AHMLPT1474:~/Day3/website-project$ git branch
  feature/add-about-page
* feature/update-homepage
  main
einfochips@AHMLPT1474:~/Day3/website-project$
```

### 1. Update the Homepage:

Modify `index.html`:

```
echo "<p>Updated homepage content</p>" >> src/index.html
```



```
einfochips@AHMLPT1474: ~/Day3/website-project
einfochips@AHMLPT1474:~/Day3/website-project$ git branch
* feature/add-about-page
  main
einfochips@AHMLPT1474:~/Day3/website-project$ git checkout main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.
einfochips@AHMLPT1474:~/Day3/website-project$ git checkout -b feature/update-homepag
e
Switched to a new branch 'feature/update-homepage'
einfochips@AHMLPT1474:~/Day3/website-project$ git branch
  feature/add-about-page
* feature/update-homepage
  main
einfochips@AHMLPT1474:~/Day3/website-project$ vim src/index.html
einfochips@AHMLPT1474:~/Day3/website-project$ git status
On branch feature/update-homepage
Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
        modified:   src/index.html

no changes added to commit (use "git add" and/or "git commit -a")
einfochips@AHMLPT1474:~/Day3/website-project$
```

Commit and push changes:

```
git add src/index.html
git commit -m "Updated homepage content"
git push origin feature/update-homepage
```

```
einfochips@AHMLPT1474: ~/Day3/website-project
einfochips@AHMLPT1474:~/Day3/website-project$ git add src/index.html
einfochips@AHMLPT1474:~/Day3/website-project$ git status
On branch feature/update-homepage
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        modified:   src/index.html

einfochips@AHMLPT1474:~/Day3/website-project$ git commit -m "Homepage updated"
[feature/update-homepage 7828eb2] Homepage updated
1 file changed, 1 insertion(+)
einfochips@AHMLPT1474:~/Day3/website-project$ git push origin feature/update-homepage
Username for 'https://github.com': ghp_wsr4zby9cEVAYNTCSpyLEgxdOUfhcw41EW53
Password for 'https://ghp_wsr4zby9cEVAYNTCSpyLEgxdOUfhcw41EW53@github.com':
Enumerating objects: 7, done.
Counting objects: 100% (7/7), done.
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (4/4), 365 bytes | 365.00 KiB/s, done.
Total 4 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
remote:
remote: Create a pull request for 'feature/update-homepage' on GitHub by visiting:
remote:   https://github.com/Mayusha-R/website-project/pull/new/feature/update-homepage
remote:
To https://github.com/Mayusha-R/website-project
 * [new branch]      feature/update-homepage -> feature/update-homepage
einfochips@AHMLPT1474:~/Day3/website-project$
```

## 2. Create a Merge Conflict:

Modify `index.html` on the `feature/add-about-page` branch:

```
git checkout feature/add-about-page
echo "<p>Conflict content</p>" >> src/index.html
git add src/index.html
git commit -m "Added conflicting content to homepage"
git push origin feature/add-about-page
```

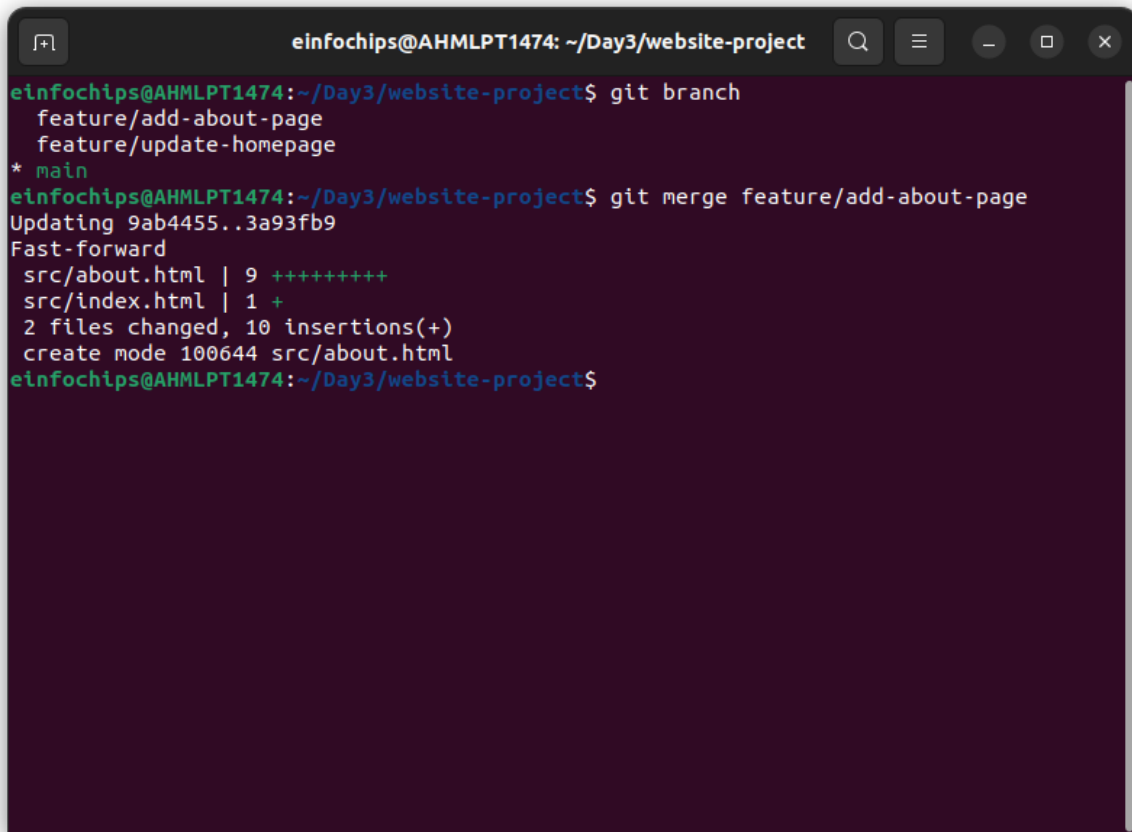
```
einfochips@AHMLPT1474: ~/Day3/website-project
einfochips@AHMLPT1474:~/Day3/website-project$ git branch
  feature/add-about-page
* feature/update-homepage
  main
einfochips@AHMLPT1474:~/Day3/website-project$ git checkout feature/add-about-page
Switched to branch 'feature/add-about-page'
einfochips@AHMLPT1474:~/Day3/website-project$ vim src/index.html
einfochips@AHMLPT1474:~/Day3/website-project$ git add src/index.html
einfochips@AHMLPT1474:~/Day3/website-project$ git commit -m "Conflict content added"
[feature/add-about-page 3a93fb9] Conflict content added
 1 file changed, 1 insertion(+)
einfochips@AHMLPT1474:~/Day3/website-project$ git push origin feature/add-about-page
Username for 'https://github.com': ghp_wsr4zby9cEVAYNTCSpYLEgxd0Ufhcw41EW53
Password for 'https://ghp_wsr4zby9cEVAYNTCSpYLEgxd0Ufhcw41EW53@github.com':
Enumerating objects: 7, done.
Counting objects: 100% (7/7), done.
Delta compression using up to 8 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (4/4), 395 bytes | 395.00 KiB/s, done.
Total 4 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/Mayusha-R/website-project
   e730b72..3a93fb9  feature/add-about-page -> feature/add-about-page
einfochips@AHMLPT1474:~/Day3/website-project$
```

### 3. Merge and Resolve Conflict:

Attempt to merge `feature/add-about-page` into `main`:

```
git checkout main
```

```
git merge feature/add-about-page
```

A terminal window with a dark purple background. The title bar shows the user 'einfochips@AHMLPT1474' and the directory '~/Day3/website-project'. The terminal output shows the following commands and results:

```
einfochips@AHMLPT1474:~/Day3/website-project$ git branch
feature/add-about-page
feature/update-homepage
* main
einfochips@AHMLPT1474:~/Day3/website-project$ git merge feature/add-about-page
Updating 9ab4455..3a93fb9
Fast-forward
 src/about.html | 9 ++++++++
 src/index.html | 1 +
 2 files changed, 10 insertions(+)
 create mode 100644 src/about.html
einfochips@AHMLPT1474:~/Day3/website-project$
```

there was no conflict here. Fast-forwarding used instead.

Resolve the conflict in `src/index.html`, then:

```
git add src/index.html
git commit -m "Resolved merge conflict in homepage"
git push origin main
```

---

### Exercise 3: Rebasing (10 minutes)

#### 1. **Rebase a Branch:**

Rebase `feature/update-homepage` onto `main`:

```
git checkout feature/update-homepage
git rebase main
```

```
einfochips@AHMLPT1474: ~/Day3/website-project
einfochips@AHMLPT1474:~/Day3/website-project$ git checkout feature/update-homepage
Switched to branch 'feature/update-homepage'
einfochips@AHMLPT1474:~/Day3/website-project$ git branch
  feature/add-about-page
* feature/update-homepage
  main
einfochips@AHMLPT1474:~/Day3/website-project$ git rebase main
Auto-merging src/index.html
CONFLICT (content): Merge conflict in src/index.html
error: could not apply 7828eb2... Homepage updated
hint: Resolve all conflicts manually, mark them as resolved with
hint: "git add/rm <conflicted_files>", then run "git rebase --continue".
hint: You can instead skip this commit: run "git rebase --skip".
hint: To abort and get back to the state before "git rebase", run "git rebase --abort".
Could not apply 7828eb2... Homepage updated
einfochips@AHMLPT1474:~/Day3/website-project$ git rebase --abort
einfochips@AHMLPT1474:~/Day3/website-project$
```

- Resolve any conflicts that arise during rebase.

```
einfochips@AHMLPT1474: ~/Day3/website-project
einfochips@AHMLPT1474:~/Day3/website-project$ git rebase main
Auto-merging src/index.html
CONFLICT (content): Merge conflict in src/index.html
error: could not apply 7828eb2... Homepage updated
hint: Resolve all conflicts manually, mark them as resolved with
hint: "git add/rm <conflicted_files>", then run "git rebase --continue".
hint: You can instead skip this commit: run "git rebase --skip".
hint: To abort and get back to the state before "git rebase", run "git rebase --abort
".
Could not apply 7828eb2... Homepage updated
einfochips@AHMLPT1474:~/Day3/website-project$ git rm src/index.html
rm 'src/index.html'
einfochips@AHMLPT1474:~/Day3/website-project$ git rebase --continue
[detached HEAD b06f6e7] Rebased branch
1 file changed, 10 deletions(-)
delete mode 100644 src/index.html
CONFLICT (modify/delete): src/index.html deleted in HEAD and modified in 1f1638f (Resolving conflict). Version 1f1638f (Resolving conflict) of src/index.html left in tree.
error: could not apply 1f1638f... Resolving conflict
hint: Resolve all conflicts manually, mark them as resolved with
hint: "git add/rm <conflicted_files>", then run "git rebase --continue".
hint: You can instead skip this commit: run "git rebase --skip".
hint: To abort and get back to the state before "git rebase", run "git rebase --abort
".
Could not apply 1f1638f... Resolving conflict
einfochips@AHMLPT1474:~/Day3/website-project$ git rebase --skip
Successfully rebased and updated refs/heads/feature/update-homepage.
einfochips@AHMLPT1474:~/Day3/website-project$
```

### Push the Rebased Branch:

`git push -f origin feature/update-homepage`

```
einfochips@AHMLPT1474: ~/Day3/website-project
einfochips@AHMLPT1474:~/Day3/website-project$ git branch
  feature/add-about-page
* feature/update-homepage
  main
einfochips@AHMLPT1474:~/Day3/website-project$ git status
On branch feature/update-homepage
nothing to commit, working tree clean
einfochips@AHMLPT1474:~/Day3/website-project$ ls
src
einfochips@AHMLPT1474:~/Day3/website-project$ ls src
about.html
einfochips@AHMLPT1474:~/Day3/website-project$ git push -f origin feature/update-homepage
Username for 'https://github.com': ghp_wsr4zby9cEVAYNTCSpYLgxd0Ufhcw41EW53
Password for 'https://ghp_wsr4zby9cEVAYNTCSpYLgxd0Ufhcw41EW53@github.com':
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 8 threads
Compressing objects: 100% (1/1), done.
Writing objects: 100% (3/3), 282 bytes | 282.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/Mayusha-R/website-project
+ 1f1638f...b06f6e7 feature/update-homepage -> feature/update-homepage (forced update)
einfochips@AHMLPT1474:~/Day3/website-project$
```

---

## Exercise 4: Pulling and Collaboration (10 minutes)

### 1. Pull Changes from Remote:

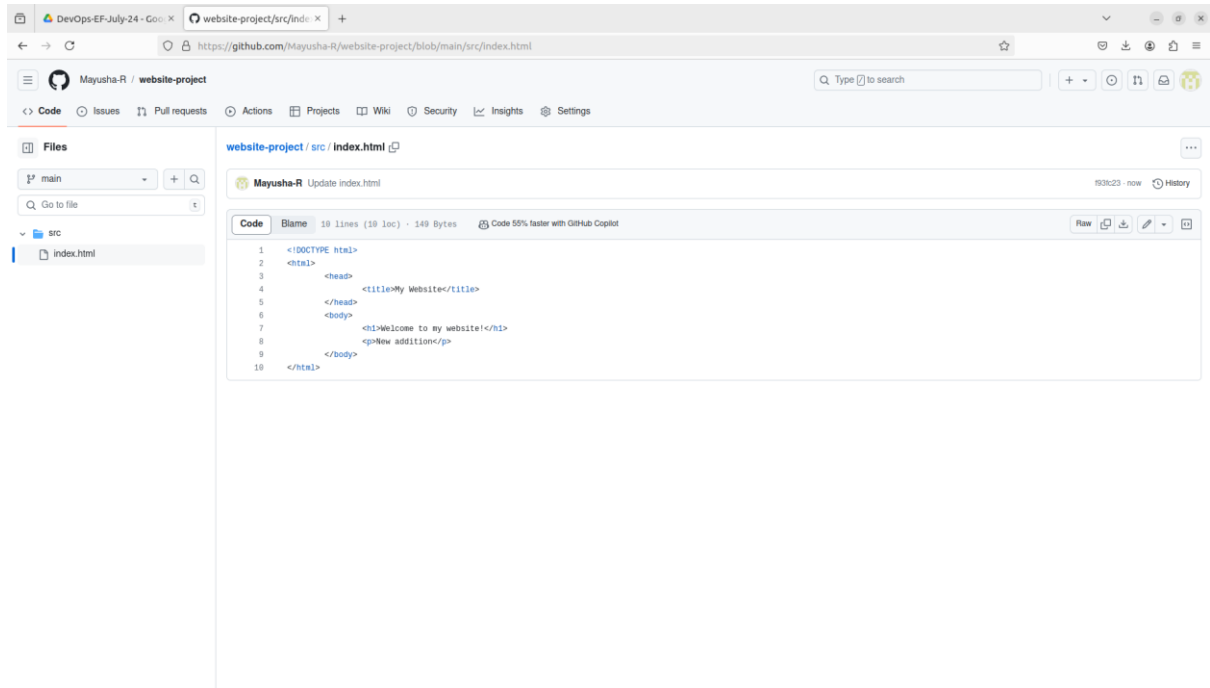
Ensure the `main` branch is up-to-date:

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

○

### 2. Simulate a Collaborator's Change:

- Make a change on GitHub directly (e.g., edit `index.html`).



### 3. Pull Collaborator's Changes:

Pull the changes made by the collaborator:

```
git pull origin main
```



```
einfochips@AHMLPT1474: ~/Day3/website-project
1 file changed, 10 deletions(-)
delete mode 100644 src/index.html
einfochips@AHMLPT1474:~/Day3/website-project$ git merge feature/add-about-page
Already up to date.
einfochips@AHMLPT1474:~/Day3/website-project$ git pull origin main
From https://github.com/Mayusha-R/website-project
* branch          main      -> FETCH_HEAD
hint: You have divergent branches and need to specify how to reconcile them.
hint: You can do so by running one of the following commands sometime before
hint: your next pull:
hint:
hint:   git config pull.rebase false  # merge (the default strategy)
hint:   git config pull.rebase true   # rebase
hint:   git config pull.ff only       # fast-forward only
hint:
hint: You can replace "git config" with "git config --global" to set a default
hint: preference for all repositories. You can also pass --rebase, --no-rebase,
hint: or --ff-only on the command line to override the configured default per
hint: invocation.
fatal: Need to specify how to reconcile divergent branches.
einfochips@AHMLPT1474:~/Day3/website-project$ git config pull.rebase false
einfochips@AHMLPT1474:~/Day3/website-project$ git pull origin main
From https://github.com/Mayusha-R/website-project
* branch          main      -> FETCH_HEAD
CONFLICT (modify/delete): src/index.html deleted in HEAD and modified in f93fc23dccc0
f6385b09ab9bad4a9fa20b59eac7.  Version f93fc23dccc0f6385b09ab9bad4a9fa20b59eac7 of sr
c/index.html left in tree.
Automatic merge failed; fix conflicts and then commit the result.
einfochips@AHMLPT1474:~/Day3/website-project$
```

---

## Exercise 5: Versioning and Rollback (15 minutes)

### 1. Tagging a Version:

Tag the current commit as `v1.0`:

```
git tag -a v1.0 -m "Version 1.0: Initial release"
git push origin v1.0
```

```
einfochips@AHMLPT1474: ~/Day3/website-project
einfochips@AHMLPT1474:~/Day3/website-project$ git tag -a v1.0 -m "Version 1.0: Initial release"
einfochips@AHMLPT1474:~/Day3/website-project$ git push origin v1.0
Username for 'https://github.com': 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
Password for 'https://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@github.com':
Enumerating objects: 1, done.
Counting objects: 100% (1/1), done.
Writing objects: 100% (1/1), 178 bytes | 178.00 KiB/s, done.
Total 1 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/Mayusha-R/website-project
 * [new tag]          v1.0 -> v1.0
einfochips@AHMLPT1474:~/Day3/website-project$
```

## 2. Make a Change that Needs Reversion:

Modify `index.html`:

```
echo "<p>Incorrect update</p>" >> src/index.html
git add src/index.html
git commit -m "Incorrect update"
git push origin main
```

```
einfochips@AHMLPT1474: ~/Day3/website-project
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 342 bytes | 342.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/Mayusha-R/website-project
   f93fc23..12621e8  main -> main
einfochips@AHMLPT1474:~/Day3/website-project$ git revert HEAD
error: commit 12621e8d1fb8be465ed0f504413066f82b04aacf is a merge but no -m option was given.
fatal: revert failed
einfochips@AHMLPT1474:~/Day3/website-project$ ^C
einfochips@AHMLPT1474:~/Day3/website-project$ git branch
  feature/add-about-page
  feature/update-homepage
* main
einfochips@AHMLPT1474:~/Day3/website-project$ git status
On branch main
Your branch is up to date with 'origin/main'.

Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
        modified:   src/index.html

no changes added to commit (use "git add" and/or "git commit -a")
einfochips@AHMLPT1474:~/Day3/website-project$ git add src/index.html
einfochips@AHMLPT1474:~/Day3/website-project$ git commit -m "Incorrect update final"
[main a215465] Incorrect update final
 1 file changed, 1 insertion(+)
einfochips@AHMLPT1474:~/Day3/website-project$
```

### 3. Revert to a Previous Version:

Use `git revert` to undo the last commit:

```
git revert HEAD
```

```
git push origin main
```

```
einfochips@AHMLPT1474: ~/Day3/website-project
On branch main
Your branch is up to date with 'origin/main'.

Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
        modified:   src/index.html

no changes added to commit (use "git add" and/or "git commit -a")
einfochips@AHMLPT1474:~/Day3/website-project$ git add src/index.html
einfochips@AHMLPT1474:~/Day3/website-project$ git commit -m "Incorrect update final"
[main a215465] Incorrect update final
 1 file changed, 1 insertion(+)
einfochips@AHMLPT1474:~/Day3/website-project$ git revert HEAD
[main 6f956f7] Revert "Incorrect update final"
 1 file changed, 1 deletion(-)
einfochips@AHMLPT1474:~/Day3/website-project$ git push origin main
Username for 'https://github.com': ghp_wsr4zby9cEVAYNTCSpYlEgxd0Ufhcw41EW53
Password for 'https://ghp_wsr4zby9cEVAYNTCSpYlEgxd0Ufhcw41EW53@github.com':
Enumerating objects: 8, done.
Counting objects: 100% (8/8), done.
Delta compression using up to 8 threads
Compressing objects: 100% (4/4), done.
Writing objects: 100% (5/5), 566 bytes | 566.00 KiB/s, done.
Total 5 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/Mayusha-R/website-project
   12621e8..6f956f7  main -> main
einfochips@AHMLPT1474:~/Day3/website-project$
```

Alternatively, reset to a specific commit (use with caution):

sh

Copy code

git reset --hard v1.0

git push -f origin main

```
einfochips@AHMLPT1474: ~/Day3/website-project
no changes added to commit (use "git add" and/or "git commit -a")
einfochips@AHMLPT1474:~/Day3/website-project$ git add src/index.html
einfochips@AHMLPT1474:~/Day3/website-project$ git commit -m "Incorrect update final"
[main a215465] Incorrect update final
1 file changed, 1 insertion(+)
einfochips@AHMLPT1474:~/Day3/website-project$ git revert HEAD
[main 6f956f7] Revert "Incorrect update final"
1 file changed, 1 deletion(-)
einfochips@AHMLPT1474:~/Day3/website-project$ git push origin main
Username for 'https://github.com': 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
Password for 'https://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@github.com':
Enumerating objects: 8, done.
Counting objects: 100% (8/8), done.
Delta compression using up to 8 threads
Compressing objects: 100% (4/4), done.
Writing objects: 100% (5/5), 566 bytes | 566.00 KiB/s, done.
Total 5 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To https://github.com/Mayusha-R/website-project
12621e8..6f956f7 main -> main
einfochips@AHMLPT1474:~/Day3/website-project$ git reset --hard v1.0
HEAD is now at b06f6e7 Rebased branch
einfochips@AHMLPT1474:~/Day3/website-project$ git push -f origin main
Username for 'https://github.com': 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
Password for 'https://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@github.com':
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/Mayusha-R/website-project
+ 6f956f7...b06f6e7 main -> main (forced update)
einfochips@AHMLPT1474:~/Day3/website-project$
```

---

## Extra Activities (10 minutes)

### 1. Stashing Changes:

Make some local changes without committing:

```
echo "<p>Uncommitted changes</p>" >> src/index.html
```

○

Stash the changes:

```
git stash
```

○

Apply the stashed changes:

```
git stash apply
```

```
einfochips@AHMLPT1474: ~/Day3/website-project
einfochips@AHMLPT1474:~/Day3/website-project$ git branch
  feature/add-about-page
  feature/update-homepage
* main
einfochips@AHMLPT1474:~/Day3/website-project$ vim src/index.html
einfochips@AHMLPT1474:~/Day3/website-project$ git stash
Saved working directory and index state WIP on main: ef3e995 Revert "Rebased branch"
einfochips@AHMLPT1474:~/Day3/website-project$ git stash apply
On branch main
Your branch is ahead of 'origin/main' by 1 commit.
(use "git push" to publish your local commits)

Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
        modified:   src/index.html

no changes added to commit (use "git add" and/or "git commit -a")
einfochips@AHMLPT1474:~/Day3/website-project$ git add src/index.html
einfochips@AHMLPT1474:~/Day3/website-project$ git stash apply
On branch main
Your branch is ahead of 'origin/main' by 1 commit.
(use "git push" to publish your local commits)

Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        modified:   src/index.html

einfochips@AHMLPT1474:~/Day3/website-project$
```

## 2. Viewing Commit History:

Use `git log` to view commit history:

`git log --oneline`

```
einfochips@AHMLPT1474: ~/Day3/website-project
einfochips@AHMLPT1474:~/Day3/website-project$ git log --oneline
ef3e995 (HEAD -> main) Revert "Rebased branch"
b06f6e7 (tag: v1.0, origin/main, origin/feature/update-homepage, feature/update-homepage) Rebased branch
3a93fb9 (origin/feature/add-about-page, feature/add-about-page) Conflict content added
e730b72 Added about page
9ab4455 Added project structure and index.html
einfochips@AHMLPT1474:~/Day3/website-project$
```