

## SELF LEARNING BATCH 2025

### Version Control using Git

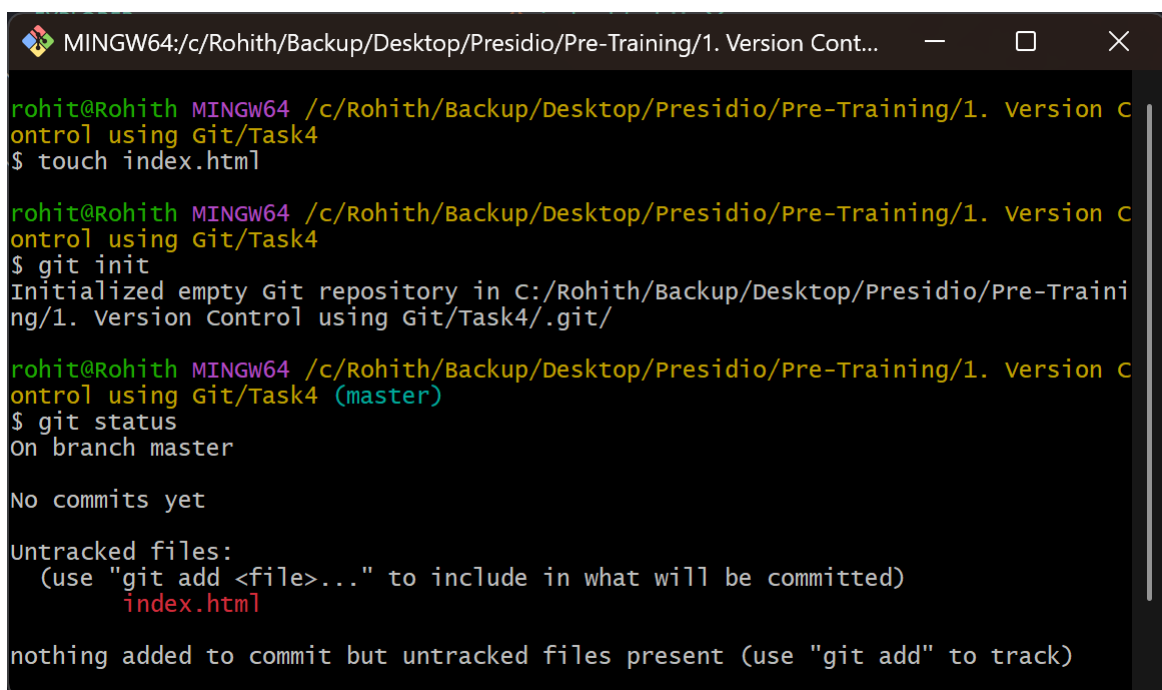
#### Simulating and Resolving Merge Conflicts

##### Objective:

- Create a scenario that produces a merge conflict and resolve it.

##### Requirements:

- Create two branches from the same commit.
- Modify the same line(s) of code in a common file in both branches.
- Attempt to merge the branches, observe the conflict, and resolve it manually.
- Use git status and git diff to identify and resolve the conflicting changes.



```
MINGW64:/c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version Cont...
rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4
$ touch index.html

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4
$ git init
Initialized empty Git repository in C:/Rohith/Backup/Desktop/Presidio/Pre-Traini
ng/1. Version Control using Git/Task4/.git/

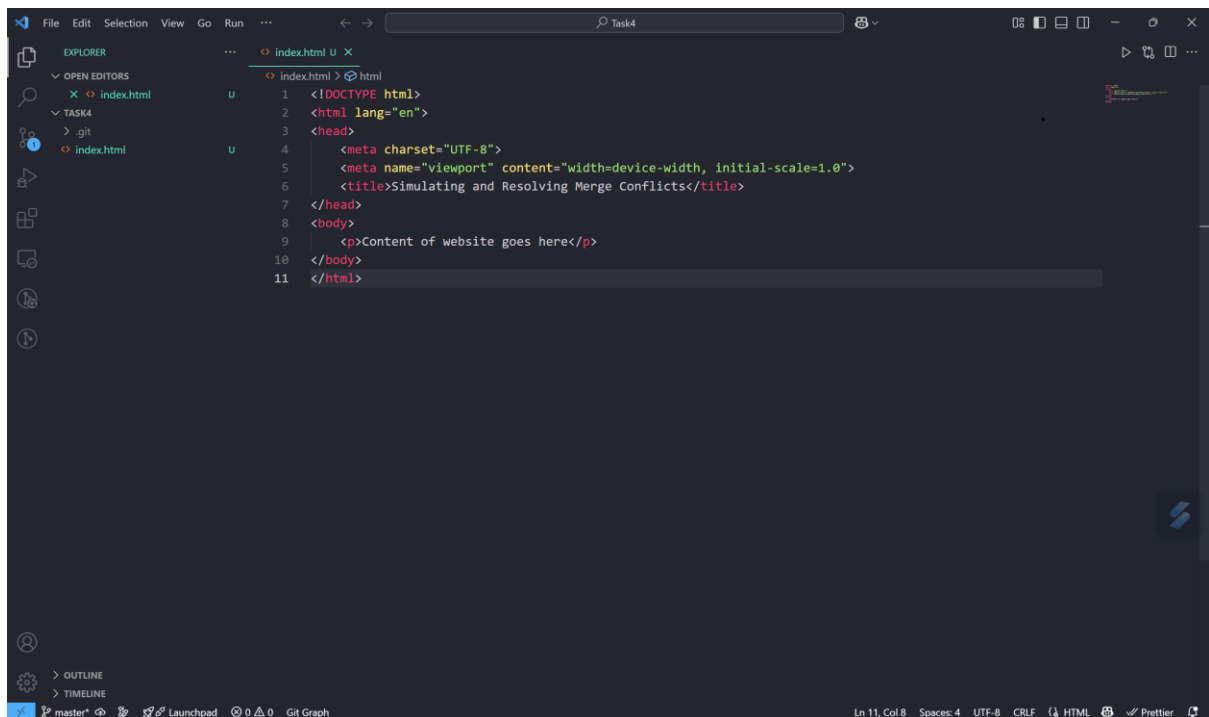
rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (master)
$ git status
On branch master

No commits yet

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        index.html

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

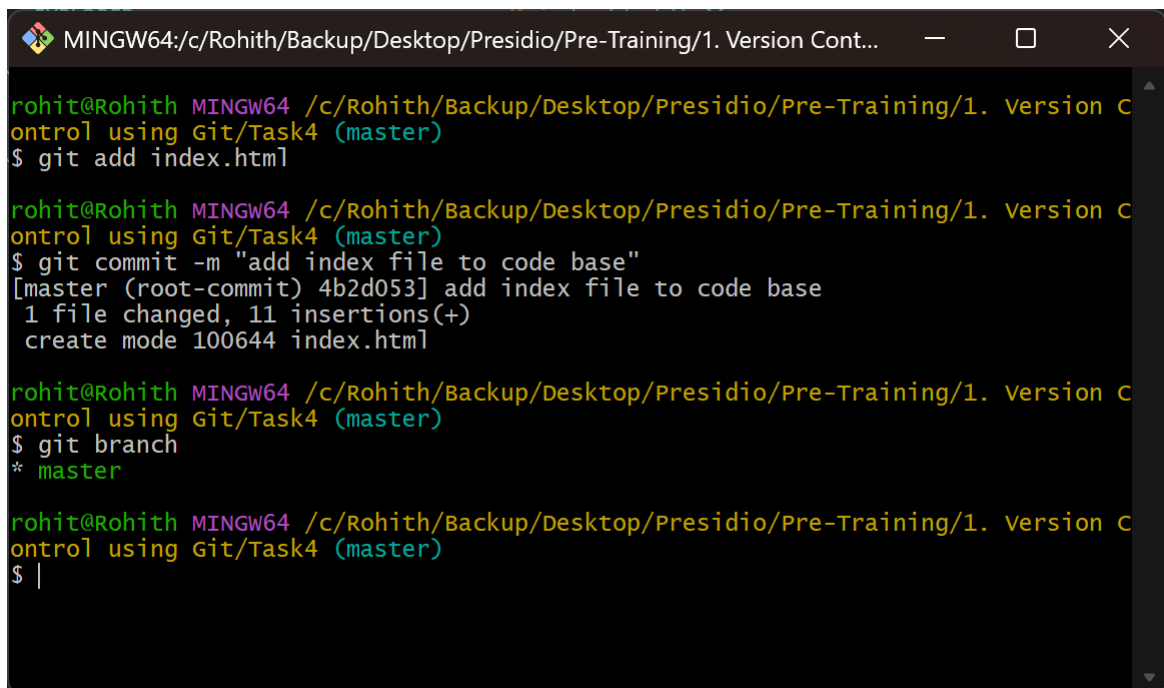
At master branch



The screenshot shows the Visual Studio Code interface with the Explorer sidebar on the left. The 'TASK4' folder is expanded, showing 'index.html'. The main editor displays the content of 'index.html' with line numbers 1 through 11. The code is as follows:

```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4   <meta charset="UTF-8">
5   <meta name="viewport" content="width=device-width, initial-scale=1.0">
6   <title>Simulating and Resolving Merge Conflicts</title>
7 </head>
8 <body>
9   <p>Content of website goes here</p>
10 </body>
11 </html>
```

The status bar at the bottom indicates the file is on the 'master' branch, line 11, column 8, with 4 spaces, UTF-8 encoding, CRLF line endings, and HTML language. The Prettier extension is also active.



The screenshot shows a Windows Command Prompt window with the following commands and output:

```
rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version Cont...
$ git add index.html

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version Cont...
$ git commit -m "add index file to code base"
[master (root-commit) 4b2d053] add index file to code base
1 file changed, 11 insertions(+)
create mode 100644 index.html

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version Cont...
$ git branch
* master
```

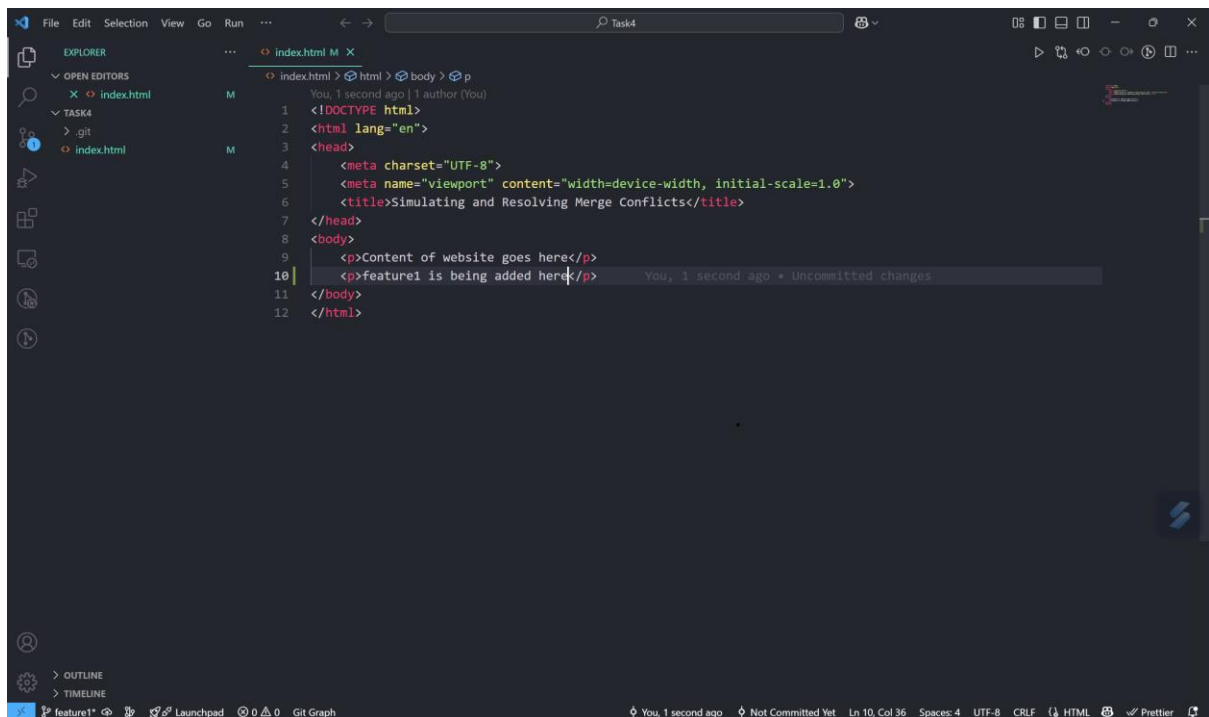
```
MINGW64:/c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version Cont...
rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (master)
$ git branch feature1

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (master)
$ git branch
feature1
* master

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (master)
$ git checkout feature1
Switched to branch 'feature1'

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (feature1)
$
```

At branch feature1



The screenshot shows the Visual Studio Code editor interface. The Explorer sidebar on the left shows the file structure with 'index.html' selected. The main editor area displays the content of 'index.html'. The code is an HTML document with a head section containing meta tags for charset, viewport, and title. The body section contains two paragraphs. The second paragraph, which is highlighted, reads 'feature1 is being added here'. A status bar at the bottom indicates 'feature1\*' and 'You, 1 second ago \* Uncommitted changes'.

```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4   <meta charset="UTF-8">
5   <meta name="viewport" content="width=device-width, initial-scale=1.0">
6   <title>Simulating and Resolving Merge Conflicts</title>
7 </head>
8 <body>
9   <p>Content of website goes here</p>
10  <p>feature1 is being added here</p>
11 </body>
12 </html>
```

```
MINGW64:/c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version Cont...
rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (feature1)
$ git add index.html

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (feature1)
$ git commit -m "Feature 1 is being added"
[feature1 5bf3e9c] Feature 1 is being added
1 file changed, 1 insertion(+)

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (feature1)
$ git branch
* feature1
  master

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (feature1)
$
```

```
MINGW64:/c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version Cont...
rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (feature1)
$ git branch feature2

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (feature1)
$ git checkout feature2
Switched to branch 'feature2'

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (feature2)
$ git branch
  feature1
* feature2
  master

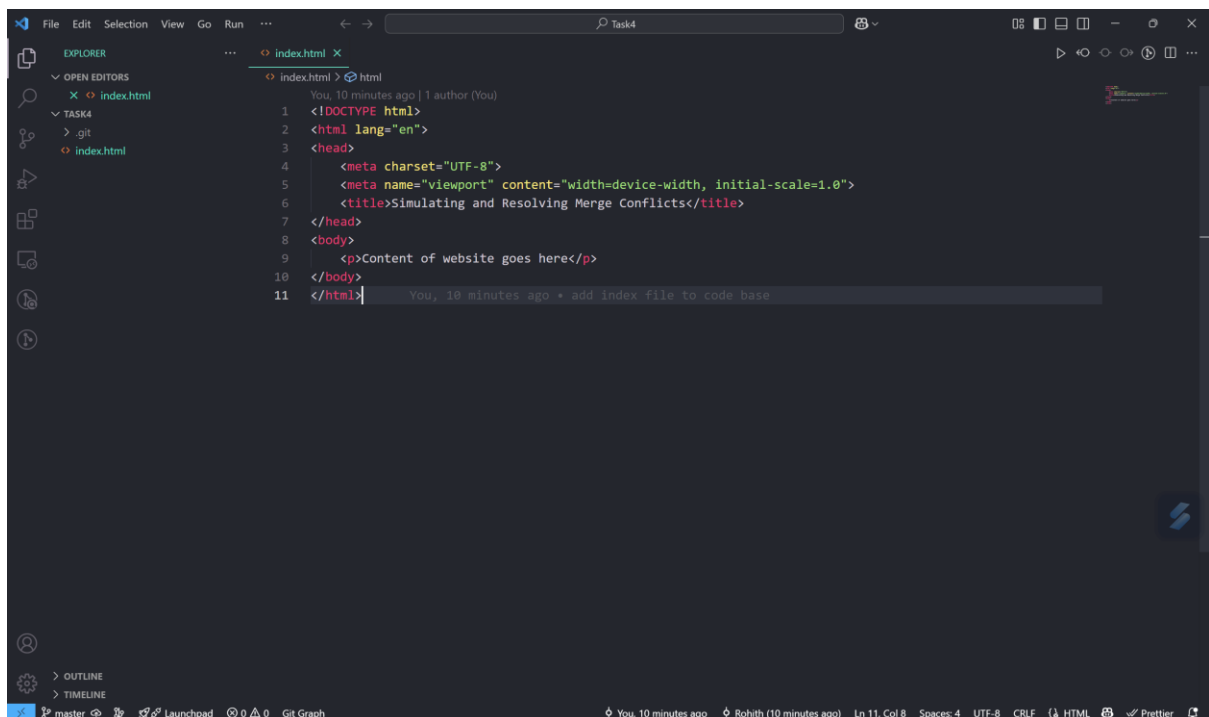
rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (feature2)
$ |
```

```
MINGW64:/c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version Cont...
rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (master)
$ git checkout master
Already on 'master'

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (master)
$ git branch
  feature1
  feature2
* master

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (master)
$ |
```

At master branch



The screenshot shows the Visual Studio Code editor interface. The Explorer sidebar on the left shows the file structure with 'index.html' selected. The main editor area displays the content of 'index.html', which is an HTML document. The code includes a DOCTYPE declaration, a head section with meta tags for charset and viewport, and a title 'Simulating and Resolving Merge Conflicts'. The body contains a paragraph 'Content of website goes here'. The status bar at the bottom indicates the file is on the 'master' branch, was last modified 10 minutes ago, and is currently on line 11, column 8.

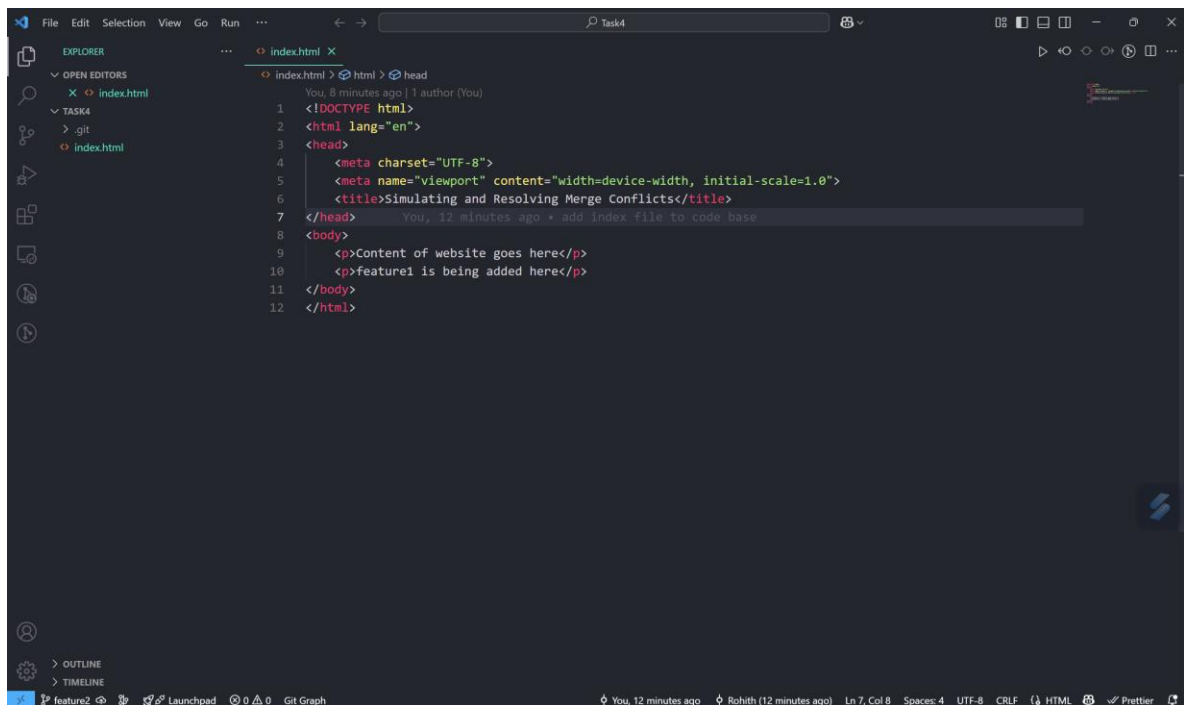
```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4   <meta charset="UTF-8">
5   <meta name="viewport" content="width=device-width, initial-scale=1.0">
6   <title>Simulating and Resolving Merge Conflicts</title>
7 </head>
8 <body>
9   <p>Content of website goes here</p>
10 </body>
11 </html>
```

At feature2 branch

```
MINGW64:/c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version Cont...
rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (master)
$ git checkout feature2
Switched to branch 'feature2'

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (feature2)
$ git branch
  feature1
* feature2
  master

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (feature2)
$ |
```



```
File Edit Selection View Go Run ... Task4
EXPLORER
  index.html X
  TASK4
    .git
    index.html
  OUTLINE
  TIMELINE
  feature2 Launchpad 0 0 Git Graph
  You, 12 minutes ago Rohith (12 minutes ago) Ln 7, Col 8 Spaces: 4 UTF-8 CRLF HTML Prettier

index.html > html > head
You, 8 minutes ago | 1 author (You)
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4   <meta charset="UTF-8">
5   <meta name="viewport" content="width=device-width, initial-scale=1.0">
6   <title>Simulating and Resolving Merge Conflicts</title>
7 </head> You, 12 minutes ago • add index file to code base
8 <body>
9   <p>Content of website goes here</p>
10  <p>feature1 is being added here</p>
11 </body>
12 </html>
```

```
MINGW64:/c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version Cont...
ontrol using Git/Task4 (master)
$ git checkout feature2
Switched to branch 'feature2'

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (feature2)
$ git branch
  feature1
* feature2
  master

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (feature2)
$ git add index.html

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (feature2)
$ git commit -m "feature2 is being added"
[feature2 be74dc8] feature2 is being added
 1 file changed, 1 insertion(+)

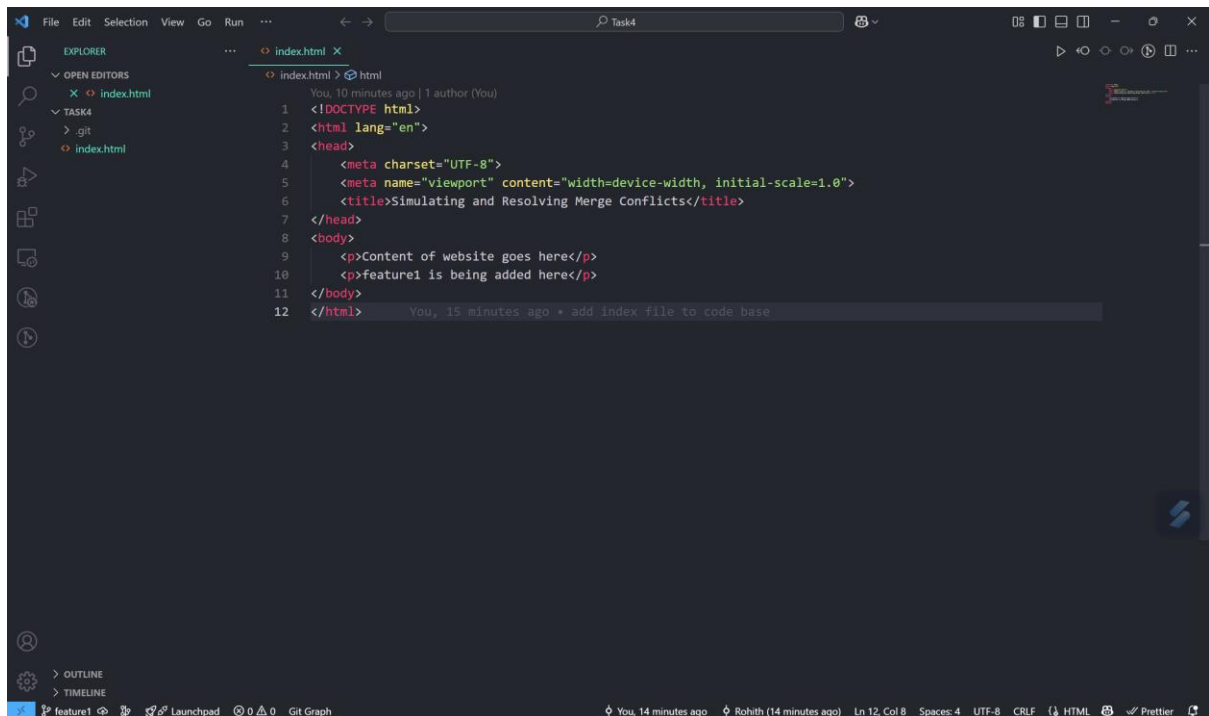
rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (feature2)
$ |
```

Now moving to feature1 branch

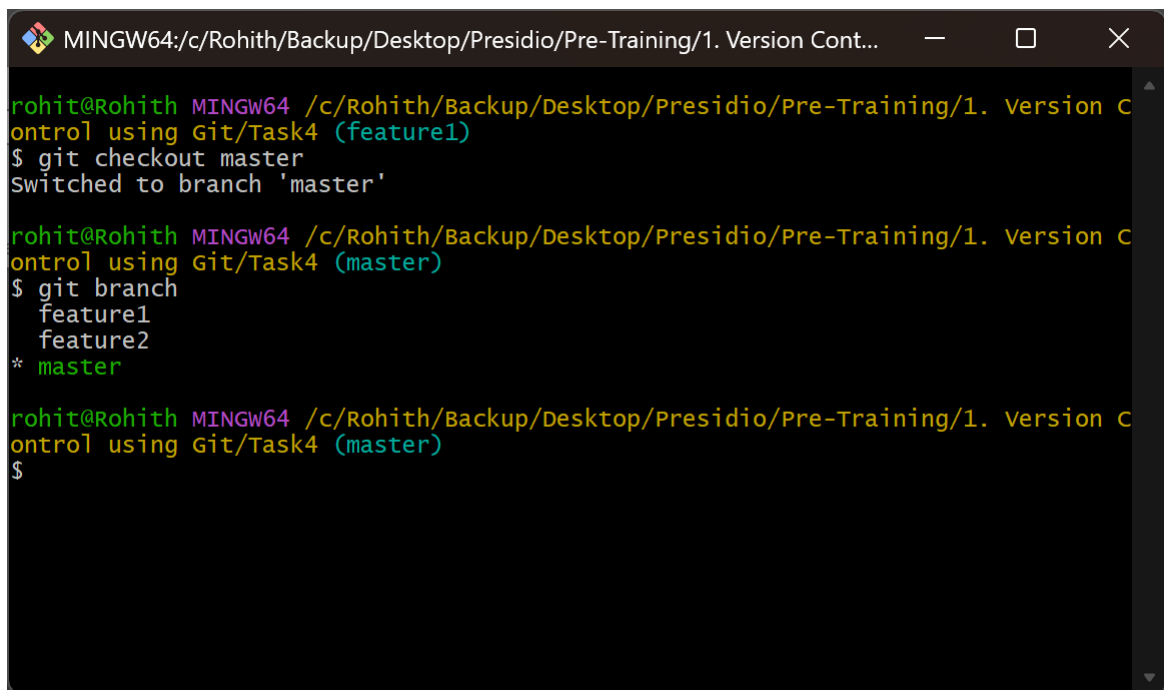
```
MINGW64:/c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version Cont...
rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (feature2)
$ git checkout feature1
Switched to branch 'feature1'

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (feature1)
$ git branch
* feature1
  feature2
  master

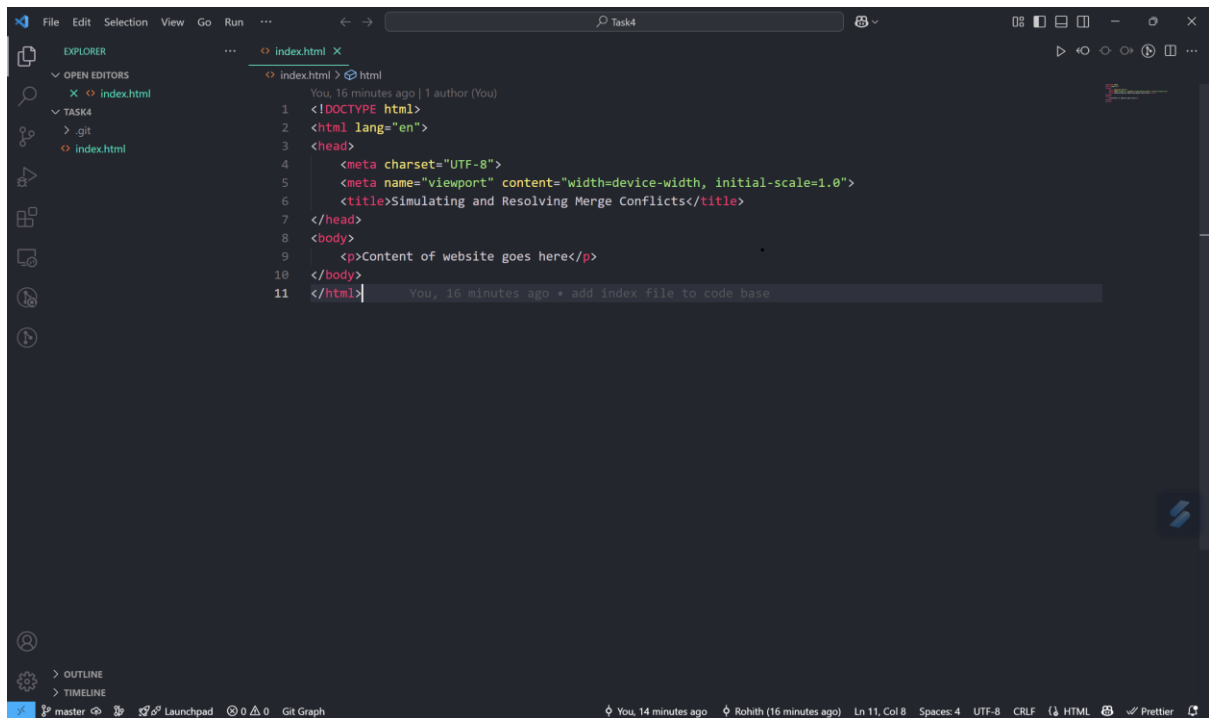
rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (feature1)
$
```



Now moving to master branch





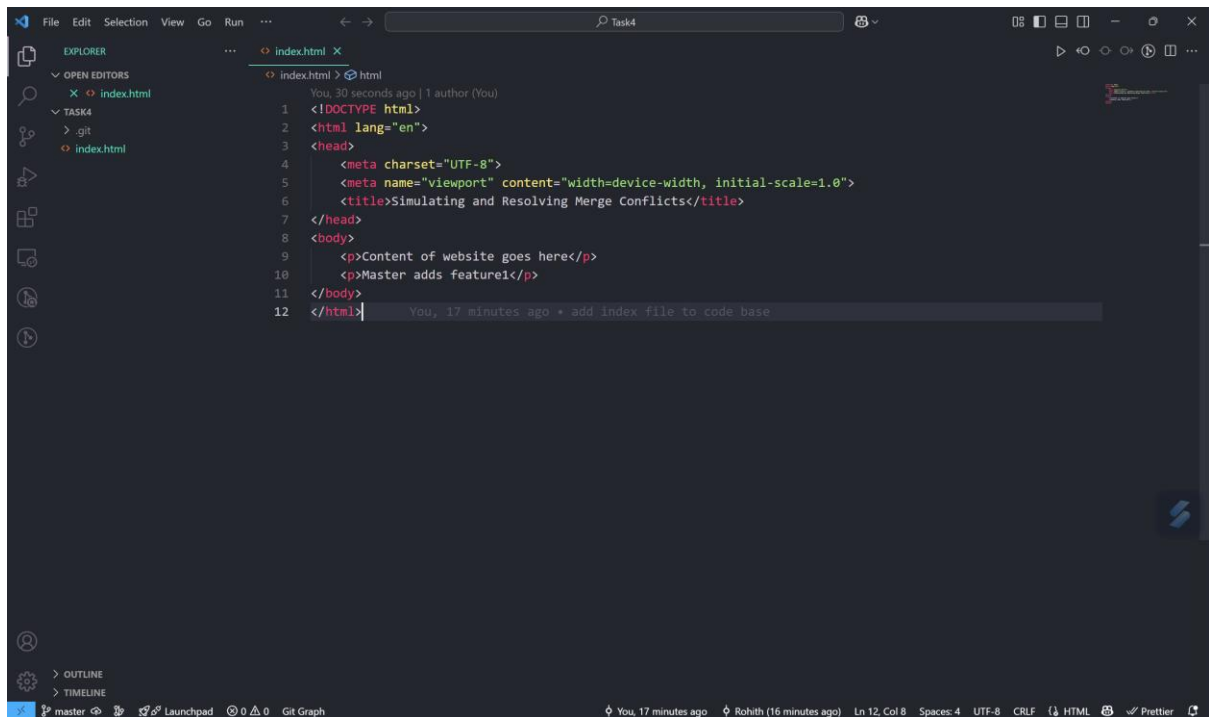


This screenshot shows the Visual Studio Code editor with a file named `index.html` open. The Explorer sidebar on the left shows the project structure with `index.html` selected. The editor window displays the following HTML code:

```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4   <meta charset="UTF-8">
5   <meta name="viewport" content="width=device-width, initial-scale=1.0">
6   <title>Simulating and Resolving Merge Conflicts</title>
7 </head>
8 <body>
9   <p>Content of website goes here</p>
10 </body>
11 </html>
```

The status bar at the bottom indicates the file is on line 11, column 8, with UTF-8 encoding and CRLF line endings. The bottom right corner shows the Prettier formatter is active.

## Modify index.html



This screenshot shows the Visual Studio Code editor with the same `index.html` file. The code has been modified to include a second paragraph in the body:

```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4   <meta charset="UTF-8">
5   <meta name="viewport" content="width=device-width, initial-scale=1.0">
6   <title>Simulating and Resolving Merge Conflicts</title>
7 </head>
8 <body>
9   <p>Content of website goes here</p>
10  <p>Master adds feature1</p>
11 </body>
12 </html>
```

The status bar at the bottom now indicates the file is on line 12, column 8. The Prettier formatter remains active.

```
MINGW64:/c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version Cont...
ontrol using Git/Task4 (feature1)
$ git checkout master
Switched to branch 'master'

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (master)
$ git branch
  feature1
  feature2
* master

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (master)
$ git add index.html

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (master)
$ git commit -m "master adds feature1"
[master 3e3df2f] master adds feature1
1 file changed, 1 insertion(+)

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (master)
$
```

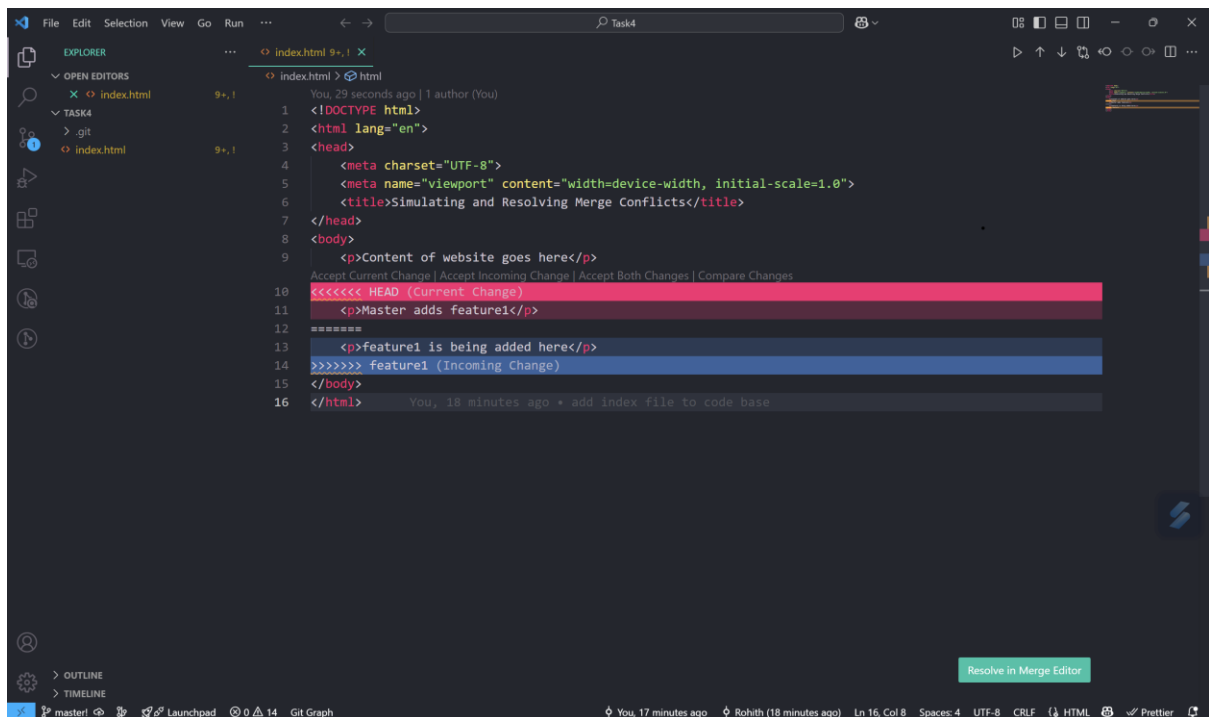
Now merge feature1 with master

```
MINGW64:/c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version Cont...
rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (master)
$ git branch
  feature1
  feature2
* master

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (master)
$ git merge feature1
Auto-merging index.html
CONFLICT (content): Merge conflict in index.html
Automatic merge failed; fix conflicts and then commit the result.

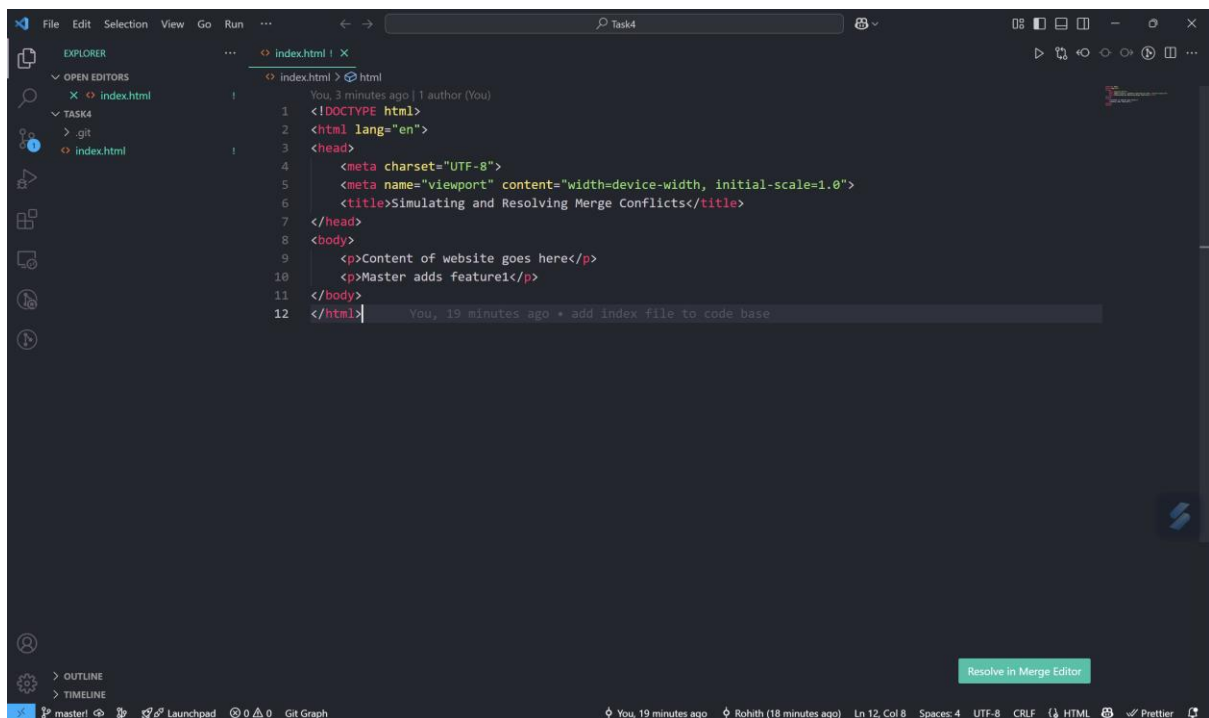
rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (master|MERGING)
$
```

## Conflict occurs



```
File Edit Selection View Go Run ... Task4
EXPLORER
  OPEN EDITORS
    index.html 9+,1 X
  TASK4
    .git
    index.html 9+,1
  index.html 9+,1
  You, 29 seconds ago | 1 author (You)
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4   <meta charset="UTF-8">
5   <meta name="viewport" content="width=device-width, initial-scale=1.0">
6   <title>Simulating and Resolving Merge Conflicts</title>
7 </head>
8 <body>
9   <p>Content of website goes here</p>
10 <==== HEAD (Current Change)
11 <p>Master adds feature1</p>
12 =====
13 <p>feature1 is being added here</p>
14 >====> feature1 (Incoming Change)
15 </body>
16 </html> You, 18 minutes ago * add index file to code base
Resolve in Merge Editor
master! Launchpad 0 14 Git Graph
You, 17 minutes ago Rohith (18 minutes ago) Ln 16, Col 8 Spaces: 4 UTF-8 CRLF HTML Prettier
```

## Accept current change option "Master adds feature1"



```
File Edit Selection View Go Run ... Task4
EXPLORER
  OPEN EDITORS
    index.html 1 X
  TASK4
    .git
    index.html 1
  index.html 1
  You, 3 minutes ago | 1 author (You)
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4   <meta charset="UTF-8">
5   <meta name="viewport" content="width=device-width, initial-scale=1.0">
6   <title>Simulating and Resolving Merge Conflicts</title>
7 </head>
8 <body>
9   <p>Content of website goes here</p>
10   <p>Master adds feature1</p>
11 </body>
12 </html> You, 19 minutes ago * add index file to code base
Resolve in Merge Editor
master! Launchpad 0 0 Git Graph
You, 19 minutes ago Rohith (18 minutes ago) Ln 12, Col 8 Spaces: 4 UTF-8 CRLF HTML Prettier
```

```
MINGW64:/c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version Cont...
Auto-merging index.html
CONFLICT (content): Merge conflict in index.html
Automatic merge failed; fix conflicts and then commit the result.

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (master|MERGING)
$ git add index.html

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (master|MERGING)
$ git status
On branch master
All conflicts fixed but you are still merging.
(use "git commit" to conclude merge)

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (master|MERGING)
$ git commit -m "Merged master and feature1"
[master 802129c] Merged master and feature1

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (master)
$
```

The screenshot displays the Git GUI interface with the following components:

- Source Control Panel:** Includes a 'Publish Branch' button and a 'Message (Ctrl+Enter to commit)' field.
- Git Graph:** A visual representation of the commit history showing branches (master, feature1, feature2) and their relationships.
- Commit History Table:** A table listing recent commits with columns for Date, Author, and Commit ID.

Date	Author	Commit
21 Mar 2025 18:39	Rohith	802129ce
21 Mar 2025 18:33	Rohith	3e3df2f5
21 Mar 2025 18:30	Rohith	be74dc84
21 Mar 2025 18:21	Rohith	5bf3e9c9
21 Mar 2025 18:16	Rohith	4b2d0532

The bottom of the interface shows the 'GITLENS' section with a 'master' branch selected and a 'Launchpad' button.

```
MINGW64:/c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version Cont...
rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (master)
$ git log --oneline
802129c (HEAD -> master) Merged master and feature1
3e3df2f master adds feature1
5bf3e9c (feature1) Feature 1 is being added
4b2d053 add index file to code base

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (master)
$ git branch -d feature1
Deleted branch feature1 (was 5bf3e9c).

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (master)
$ git branch
feature2
* master

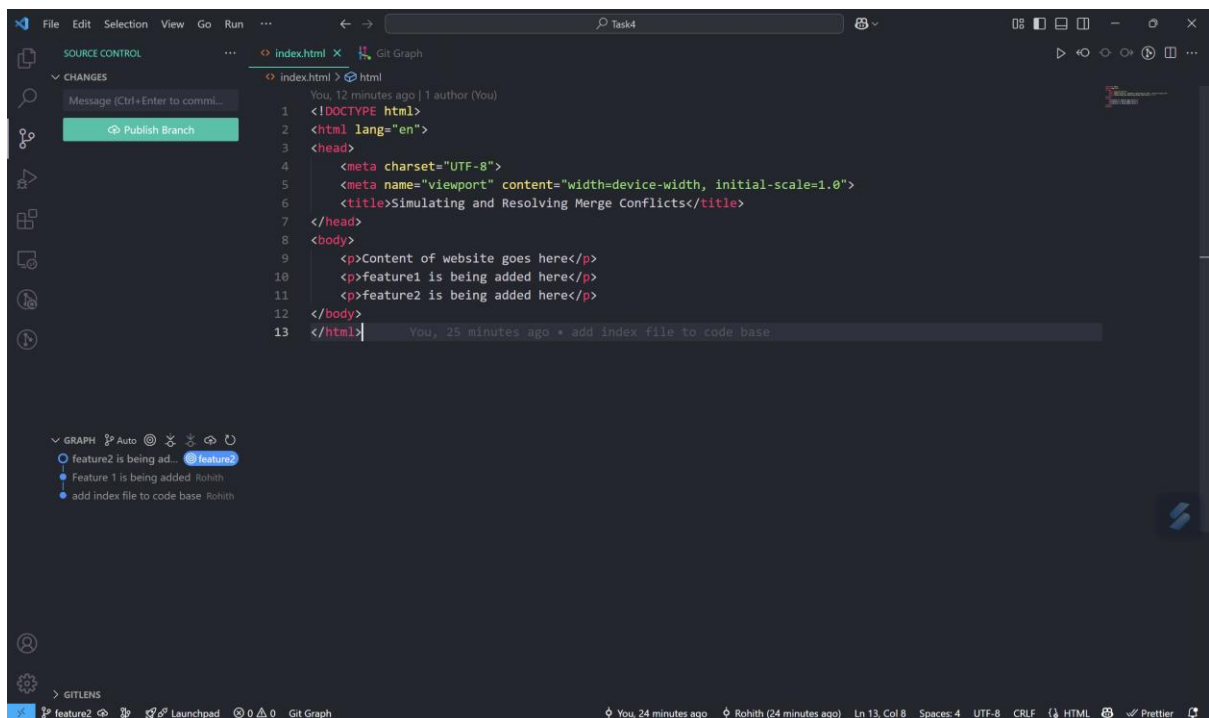
rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (master)
$
```

Moving to feature2

```
MINGW64:/c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version Cont...
rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (master)
$ git checkout feature2
Switched to branch 'feature2'

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (feature2)
$ git branch
feature2
* master

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (feature2)
$ |
```

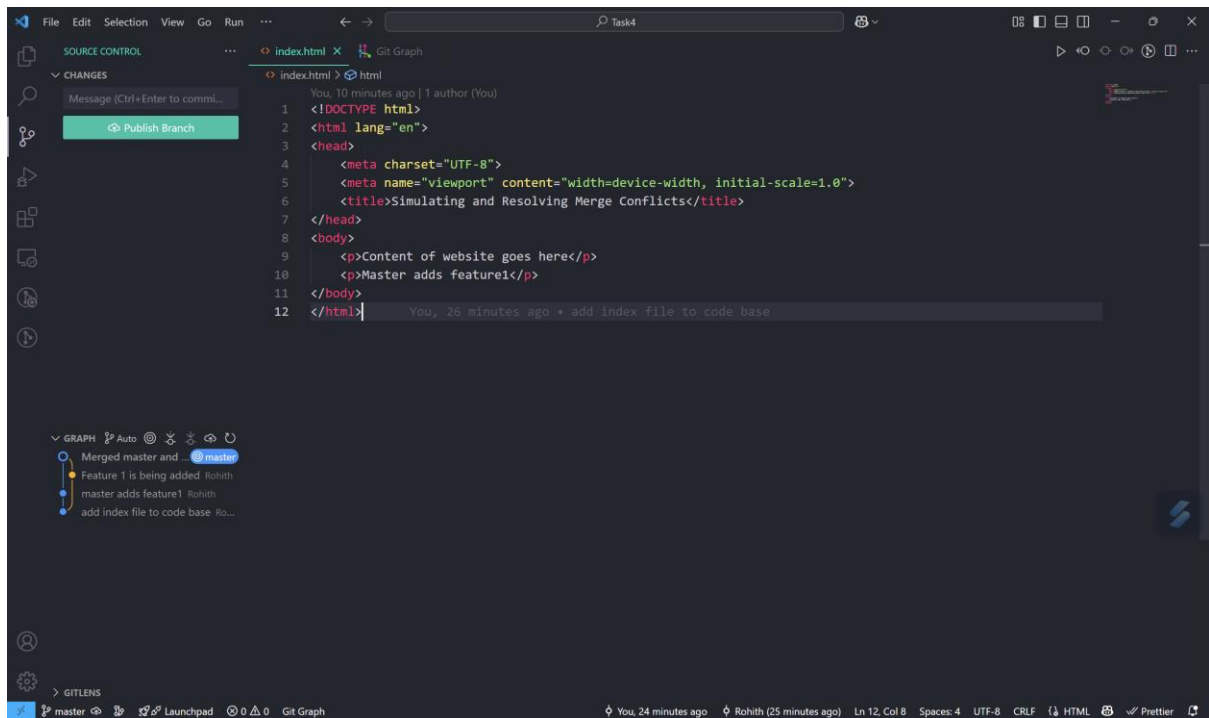


Moving to master

```
MINGW64:/c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version Cont...
rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (feature2)
$ git checkout master
Switched to branch 'master'

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (master)
$ git branch
feature2
* master

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (master)
$ |
```



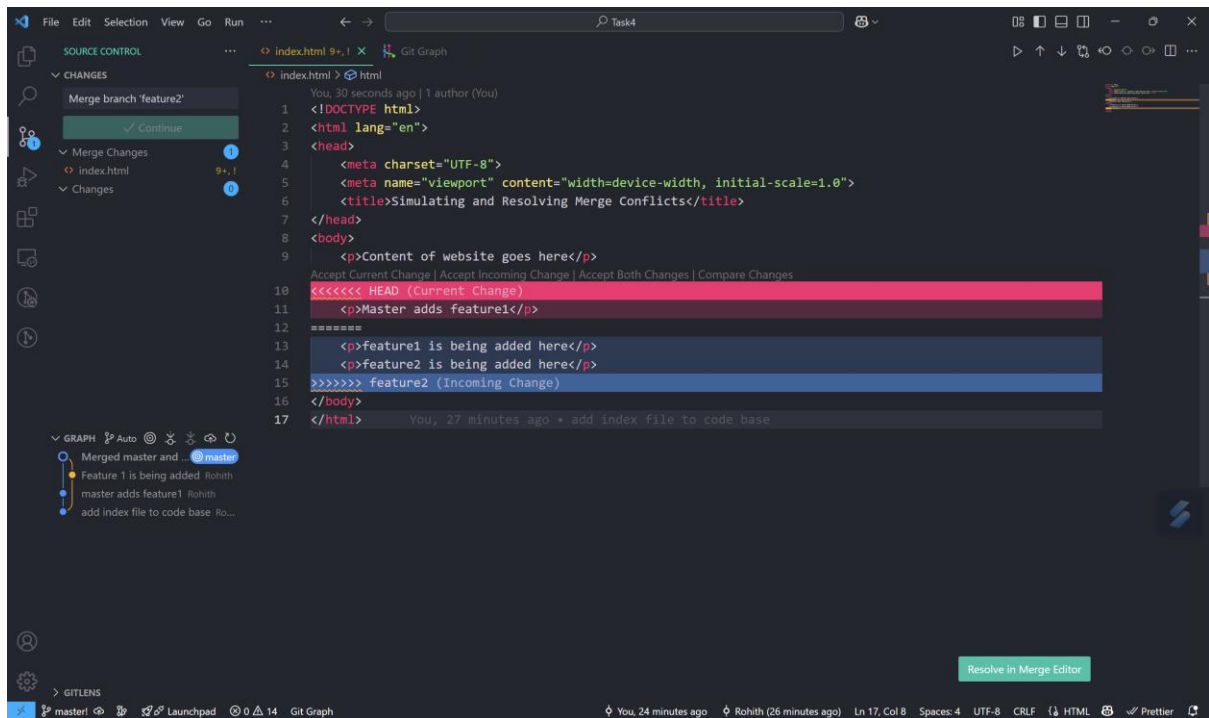
Merge conflict occurs

```
MINGW64:/c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version Cont...
rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (feature2)
$ git checkout master
Switched to branch 'master'

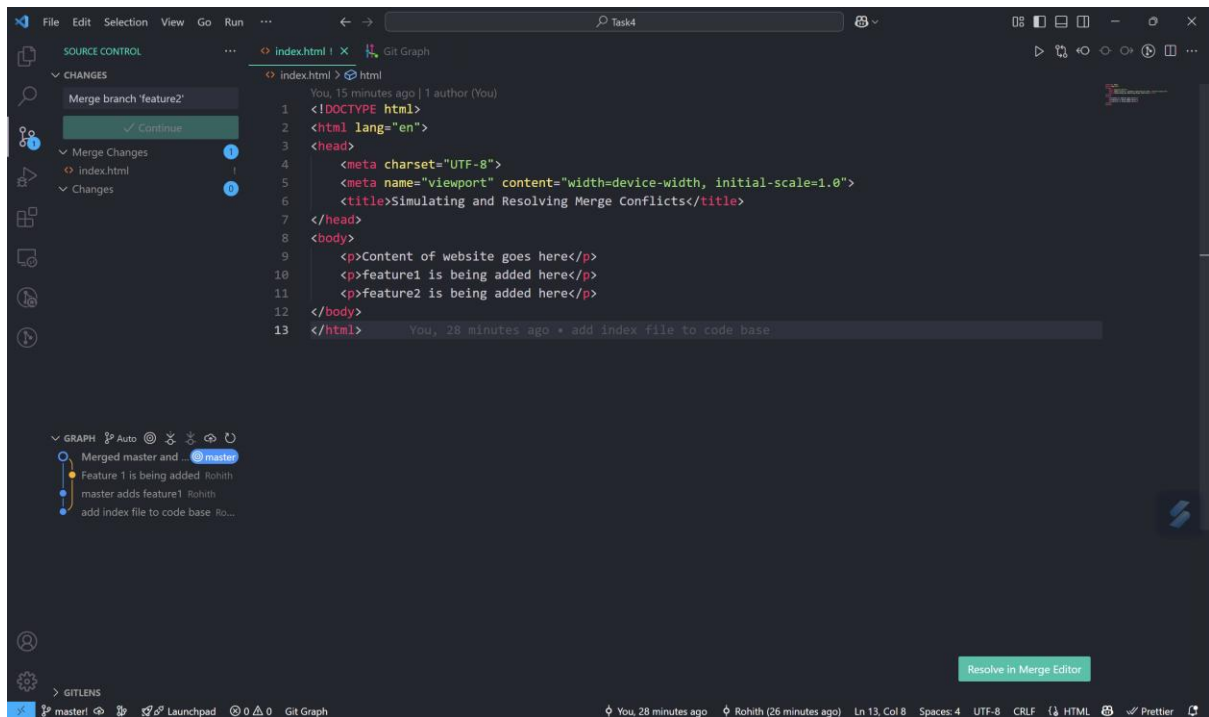
rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (master)
$ git branch
feature2
* master

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (master)
$ git merge feature2
Auto-merging index.html
CONFLICT (content): Merge conflict in index.html
Automatic merge failed; fix conflicts and then commit the result.

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (master|MERGING)
$
```



Accept the incoming change





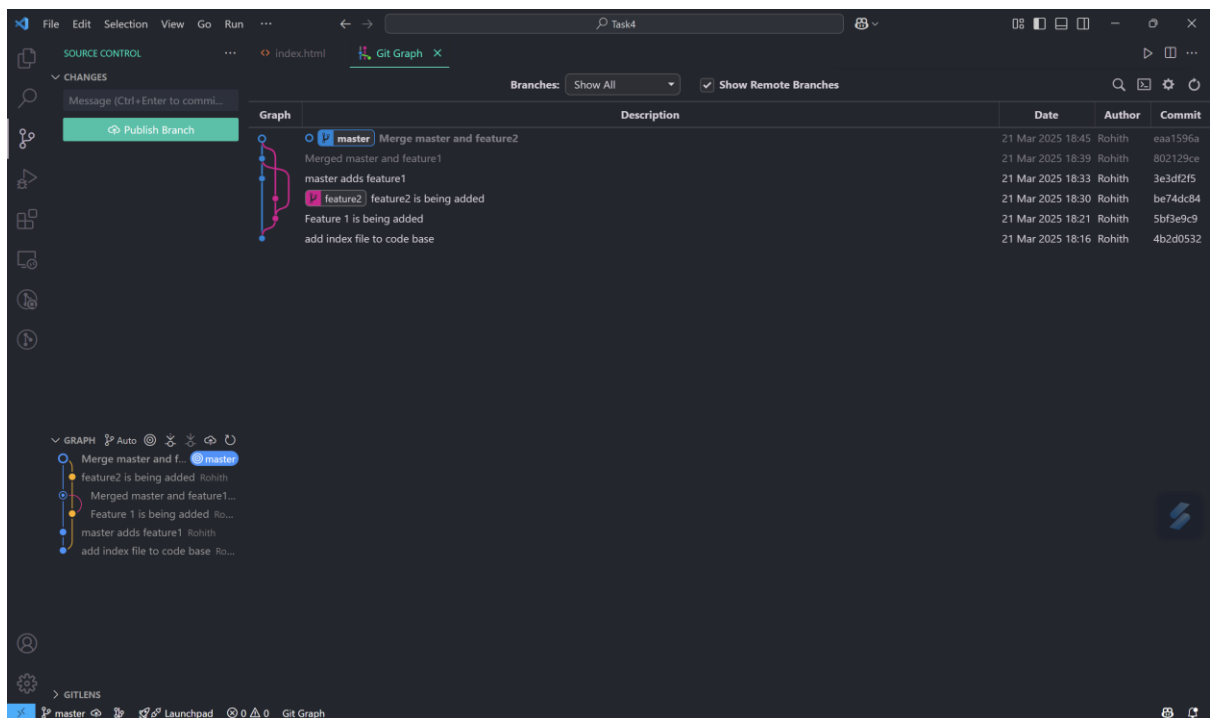
```
MINGW64:/c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version Cont...
rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (master|MERGING)
$ git status
On branch master
You have unmerged paths.
  (fix conflicts and run "git commit")
  (use "git merge --abort" to abort the merge)

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

no changes added to commit (use "git add" and/or "git commit -a")

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (master|MERGING)
$ git add index.html

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (master|MERGING)
$ git commit -m "Merge master and feature2"
[master eaa1596] Merge master and feature2
```



```
MINGW64:/c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version Cont...
rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version Cont...
$ git branch -d feature2
Deleted branch feature2 (was be74dc8).

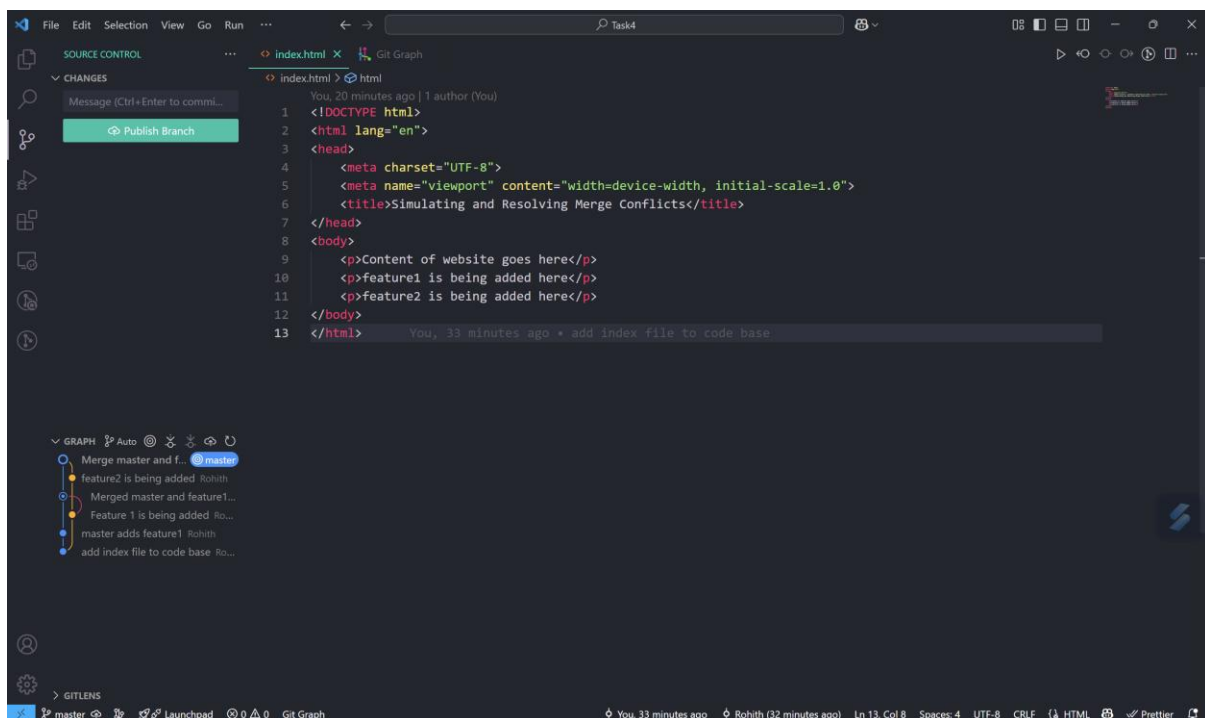
rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version Cont...
$ git branch
* master

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version Cont...
$ git log --oneline
eaa1596 (HEAD -> master) Merge master and feature2
802129c Merged master and feature1
3e3df2f master adds feature1
be74dc8 feature2 is being added
5bf3e9c Feature 1 is being added
4b2d053 add index file to code base

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version Cont...
$
```

git diff --staged

Now current index.html



The screenshot shows the Visual Studio Code editor with the 'index.html' file open. The file content is as follows:

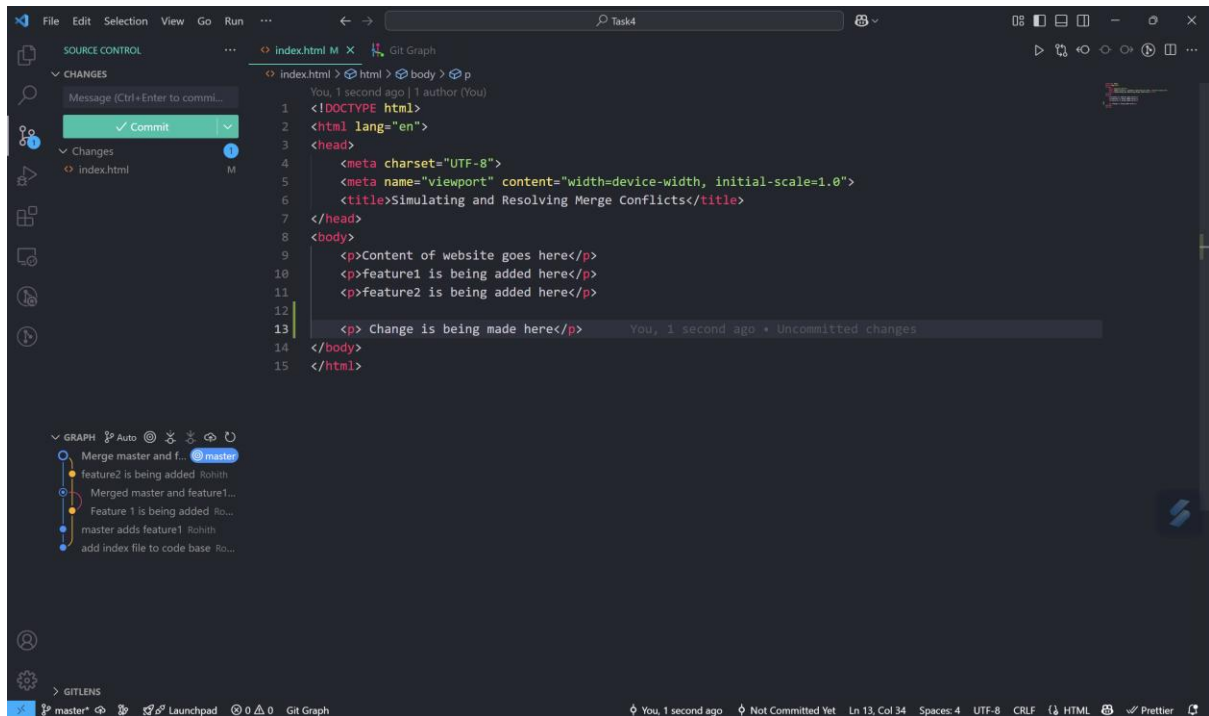
```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4   <meta charset="UTF-8">
5   <meta name="viewport" content="width=device-width, initial-scale=1.0">
6   <title>Simulating and Resolving Merge Conflicts</title>
7 </head>
8 <body>
9   <p>Content of website goes here</p>
10  <p>feature1 is being added here</p>
11  <p>feature2 is being added here</p>
12 </body>
13 </html>
```

The Git Graph view on the left shows the commit history for the 'master' branch:

- 4b2d053 add index file to code base Rohith
- 5bf3e9c Feature 1 is being added Rohith
- 802129c Merged master and feature1...
- 3e3df2f master adds feature1 Rohith
- eaa1596 Merge master and feature2 Rohith

The status bar at the bottom indicates the current file is 'index.html' and the active branch is 'master'.

Modify the index.html



```
MINGW64:/c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version Cont...
rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (master)
$ git status
On branch master
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:   index.html

no changes added to commit (use "git add" and/or "git commit -a")

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (master)
$ git add index.html

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (master)
$
```

git diff --staged provides the changes made in the file present in the work area and the staging area and if there are multiple files, it shows the block of output changes in each file.

```
MINGW64:/c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version Cont...
rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (master)
$ git diff --staged
diff --git a/index.html b/index.html
index edfd233..08cd59e 100644
--- a/index.html
+++ b/index.html
@@ -9,5 +9,7 @@
     <p>Content of website goes here</p>
     <p>feature1 is being added here</p>
     <p>feature2 is being added here</p>
+
+   <p> Change is being made here</p>
 </body>
</html>
\ No newline at end of file

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (master)
$ |
```

```
MINGW64:/c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version Cont...
$ git diff --staged
diff --git a/index.html b/index.html
index edfd233..08cd59e 100644
--- a/index.html
+++ b/index.html
@@ -9,5 +9,7 @@
     <p>Content of website goes here</p>
     <p>feature1 is being added here</p>
     <p>feature2 is being added here</p>
+
+   <p> Change is being made here</p>
 </body>
</html>
\ No newline at end of file

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (master)
$ git commit -m "update index file"
[master 7ce626e] update index file
1 file changed, 2 insertions(+)

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (master)
$
```

In order to find git diff between two commit ids or branch names:

```
MINGW64:/c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version Cont...
rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (master)
$ git log --oneline
7ce626e (HEAD -> master) update index file
eaa1596 Merge master and feature2
802129c Merged master and feature1
3e3df2f master adds feature1
be74dc8 feature2 is being added
5bf3e9c Feature 1 is being added
4b2d053 add index file to code base

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (master)
$ git diff 7ce626e 5bf3e9c
diff --git a/index.html b/index.html
index 08cd59e..6c256a7 100644
--- a/index.html
+++ b/index.html
@@ -8,8 +8,5 @@
<body>
  <p>Content of website goes here</p>
  <p>feature1 is being added here</p>
-  <p>feature2 is being added here</p>
```

```
MINGW64:/c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version Cont...
5bf3e9c Feature 1 is being added
4b2d053 add index file to code base

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (master)
$ git diff 7ce626e 5bf3e9c
diff --git a/index.html b/index.html
index 08cd59e..6c256a7 100644
--- a/index.html
+++ b/index.html
@@ -8,8 +8,5 @@
<body>
  <p>Content of website goes here</p>
  <p>feature1 is being added here</p>
-  <p>feature2 is being added here</p>
-
-  <p> change is being made here</p>
</body>
</html>
\ No newline at end of file

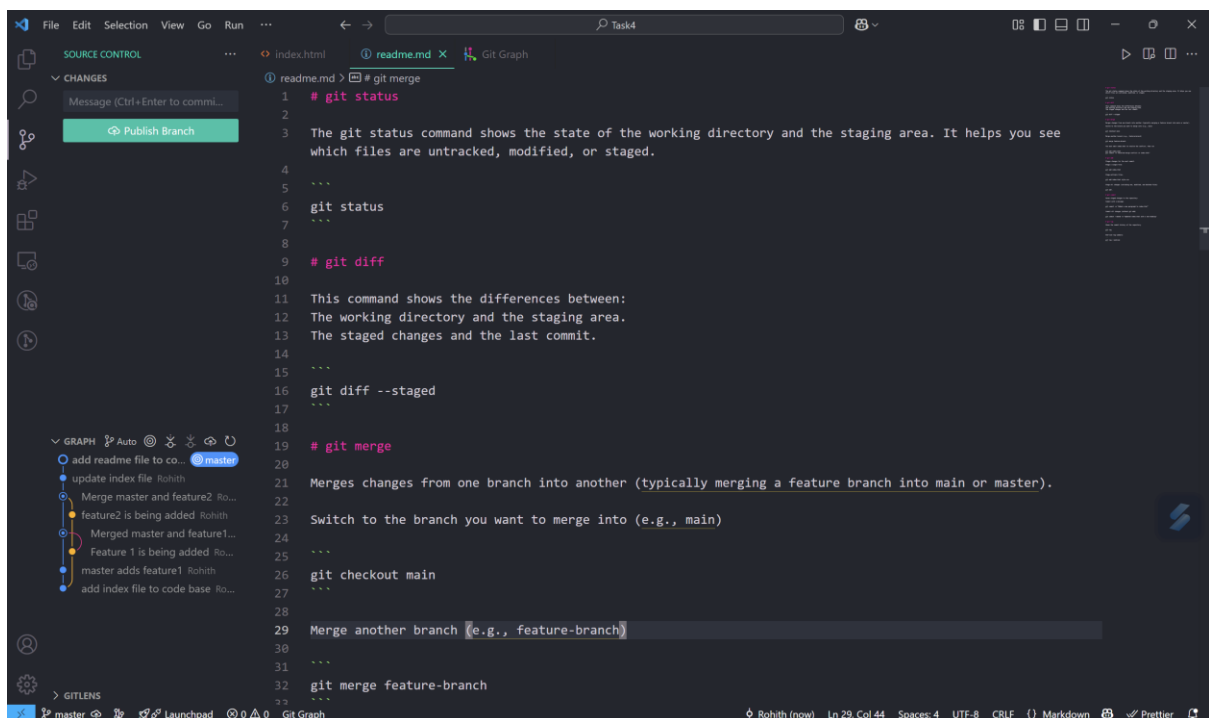
rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (master)
$ |
```

Alternate way

```
MINGW64:/c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version Cont...
rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (master)
$ git diff 7ce626e..5bf3e9c
diff --git a/index.html b/index.html
index 08cd59e..6c256a7 100644
--- a/index.html
+++ b/index.html
@@ -8,8 +8,5 @@
<body>
  <p>Content of website goes here</p>
  <p>feature1 is being added here</p>
-  <p>feature2 is being added here</p>
-
-  <p> change is being made here</p>
</body>
</html>
\ No newline at end of file

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (master)
$
```

## Add readme.md



The screenshot shows the VS Code editor with a README.md file open. The file contains the following content:

```
1 # git status
2
3 The git status command shows the state of the working directory and the staging area. It helps you see
4 which files are untracked, modified, or staged.
5
6 ***
7 git status
8 ***
9
10 # git diff
11
12 This command shows the differences between:
13 The working directory and the staging area.
14 The staged changes and the last commit.
15
16 ***
17 git diff --staged
18 ***
19
20 # git merge
21
22 Merges changes from one branch into another (typically merging a feature branch into main or master).
23
24 Switch to the branch you want to merge into (e.g., main)
25
26 ***
27 git checkout main
28 ***
29 Merge another branch (e.g., feature-branch)
30
31 ***
32 git merge feature-branch
33 ***
```

The Git Graph sidebar on the left shows the commit history:

- add readme file to co... (master)
- update index file Rohith
- Merge master and feature2 Rohith
- feature2 is being added Rohith
- Merged master and feature1...
- Feature 1 is being added Rohith
- master adds feature1 Rohith
- add index file to code base Rohith

```
MINGW64:/c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version Cont...
- <p> change is being made here</p>
</body>
</html>
\ No newline at end of file

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (master)
$ touch add readme.md

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (master)
$ git add .

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (master)
$ git commit -m "add readme file to code base"
[master 1a05996] add readme file to code base
2 files changed, 92 insertions(+)
create mode 100644 add
create mode 100644 readme.md

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task4 (master)
$
```

The screenshot displays the Git GUI interface. The top section shows the 'CHANGES' panel with a 'Publish Branch' button. The main area is divided into a 'Graph' view on the left and a commit list table on the right. The 'Graph' view shows a series of commits connected by lines, with the 'master' branch highlighted. The commit list table provides details for each commit, including the description, date, author, and commit hash.

Description	Date	Author	Commit
add readme file to code base	21 Mar 2025 19:10	Rohith	1a059969
update index file	21 Mar 2025 18:57	Rohith	7ce626ef
Merge master and feature2	21 Mar 2025 18:45	Rohith	eea1596a
Merged master and feature1	21 Mar 2025 18:39	Rohith	802129ce
master adds feature1	21 Mar 2025 18:33	Rohith	3e3df2f5
feature2 is being added	21 Mar 2025 18:30	Rohith	be74dc84
Feature 1 is being added	21 Mar 2025 18:21	Rohith	5bf3e9c9
add index file to code base	21 Mar 2025 18:16	Rohith	4b2d0532