

SELF LEARNING BATCH 2025

Version Control using Git

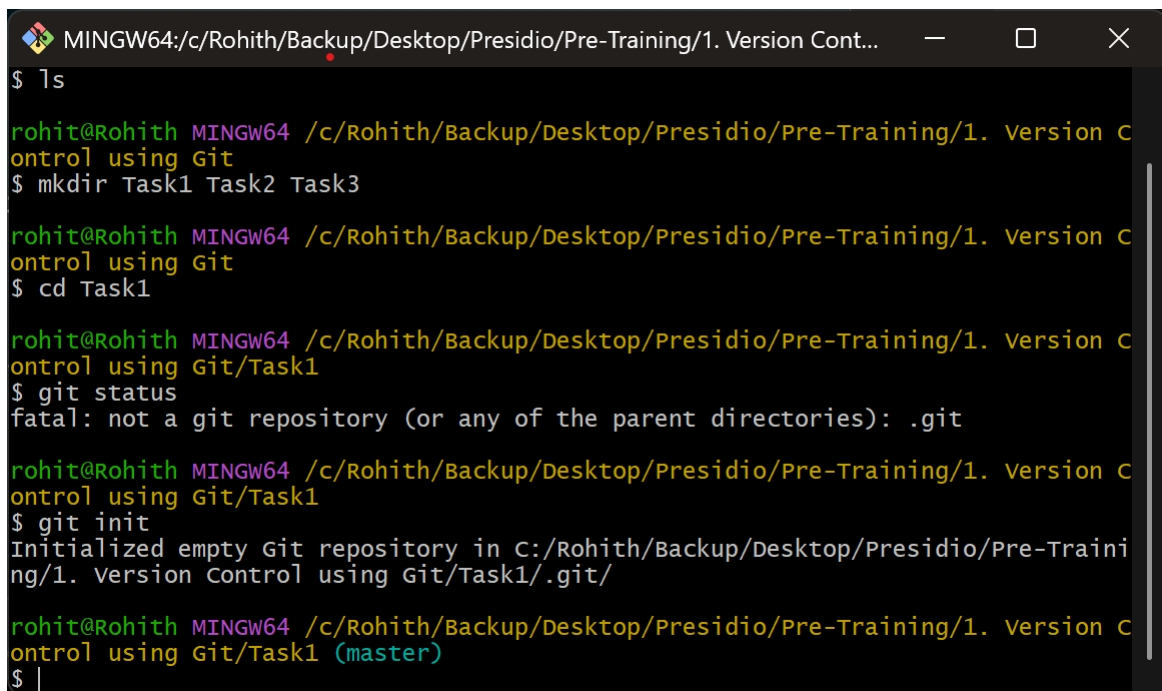
1. Initialize, Commit, and Branch Basics

Objective:

- Initialize a new Git repository.
- Create a few files and commit them.
- Create a new branch, make changes, and merge it back to the main branch.

Requirements:

- Use git init, git add, and git commit to start your repository.
- Create a branch using git branch or git checkout -b and switch between branches.
- Merge the branch back to the main branch and verify the commit history.

A screenshot of a Windows command prompt window titled "MINGW64:/c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version Cont...". The window shows a series of commands and their outputs. The user starts by listing the directory contents, then creates three subdirectories named Task1, Task2, and Task3. They then navigate into the Task1 directory. An attempt to run 'git status' fails with a fatal error because it's not a git repository. Finally, they run 'git init', which successfully initializes an empty git repository in the current directory. The prompt then shows the user is on the 'master' branch.

```
MINGW64:/c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version Cont...
$ ls
rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git
$ mkdir Task1 Task2 Task3
rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git
$ cd Task1
rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task1
$ git status
fatal: not a git repository (or any of the parent directories): .git
rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task1
$ git init
Initialized empty Git repository in C:/Rohith/Backup/Desktop/Presidio/Pre-Traini
ng/1. Version Control using Git/Task1/.git/
rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task1 (master)
$ |
```

```
MINGW64:/c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version Cont...
ontrol using Git/Task1 (master)
$ git status
On branch master

No commits yet

nothing to commit (create/copy files and use "git add" to track)

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task1 (master)
$ touch index.html

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task1 (master)
$ ls
index.html

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task1 (master)
$ touch readme.md

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task1 (master)
$ |
```

```
MINGW64:/c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version Cont...
ontrol using Git/Task1 (master)
$ touch readme.md

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task1 (master)
$ git status
On branch master

No commits yet

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

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

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task1 (master)
$ git add index.html readme.md

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task1 (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/Task1 (master)
$ git status
On branch master

No commits yet

changes to be committed:
  (use "git rm --cached <file>..." to unstage)
        new file:   index.html
        new file:   readme.md

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task1 (master)
$ git commit
[master (root-commit) 6858866] Add index.html and readme.md to code base
 2 files changed, 11 insertions(+)
 create mode 100644 index.html
 create mode 100644 readme.md

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task1 (master)
$
```

```
MINGW64:/c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version Cont...
create mode 100644 index.html
create mode 100644 readme.md

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task1 (master)
$ git branch
* master

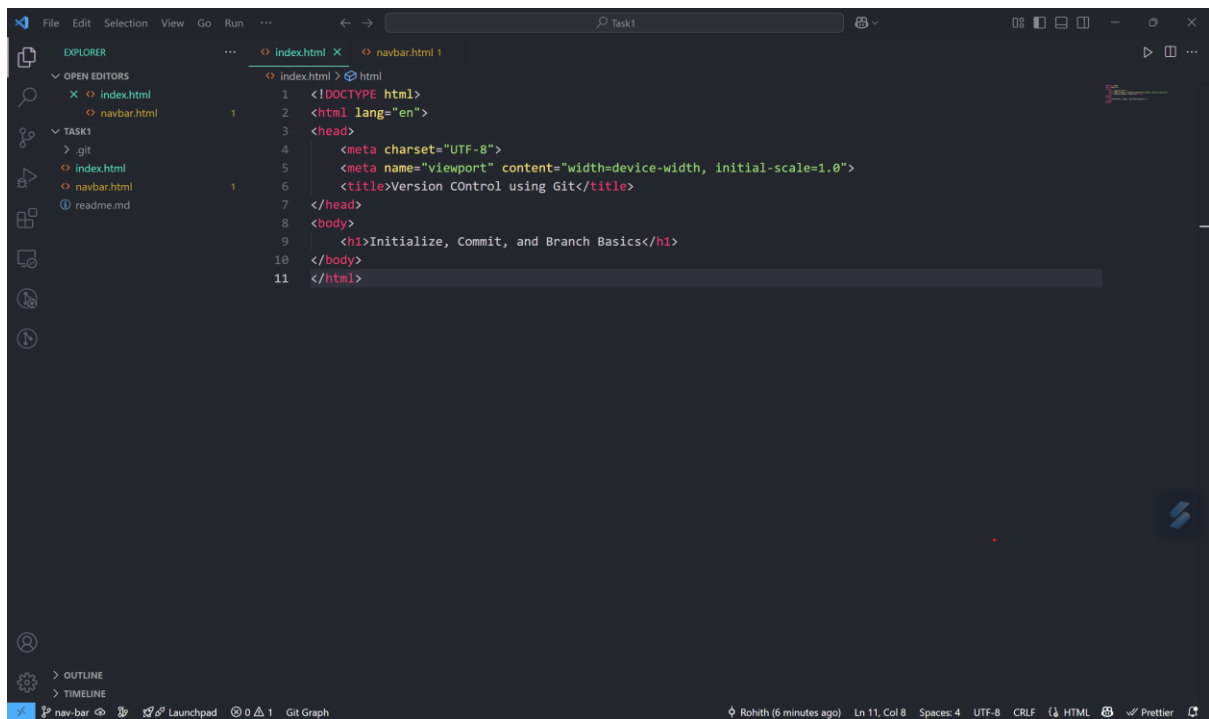
rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task1 (master)
$ git branch nav-bar

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task1 (master)
$ git checkout nav-bar
Switched to branch 'nav-bar'

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task1 (nav-bar)
$ touch navbar.html

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task1 (nav-bar)
$
```

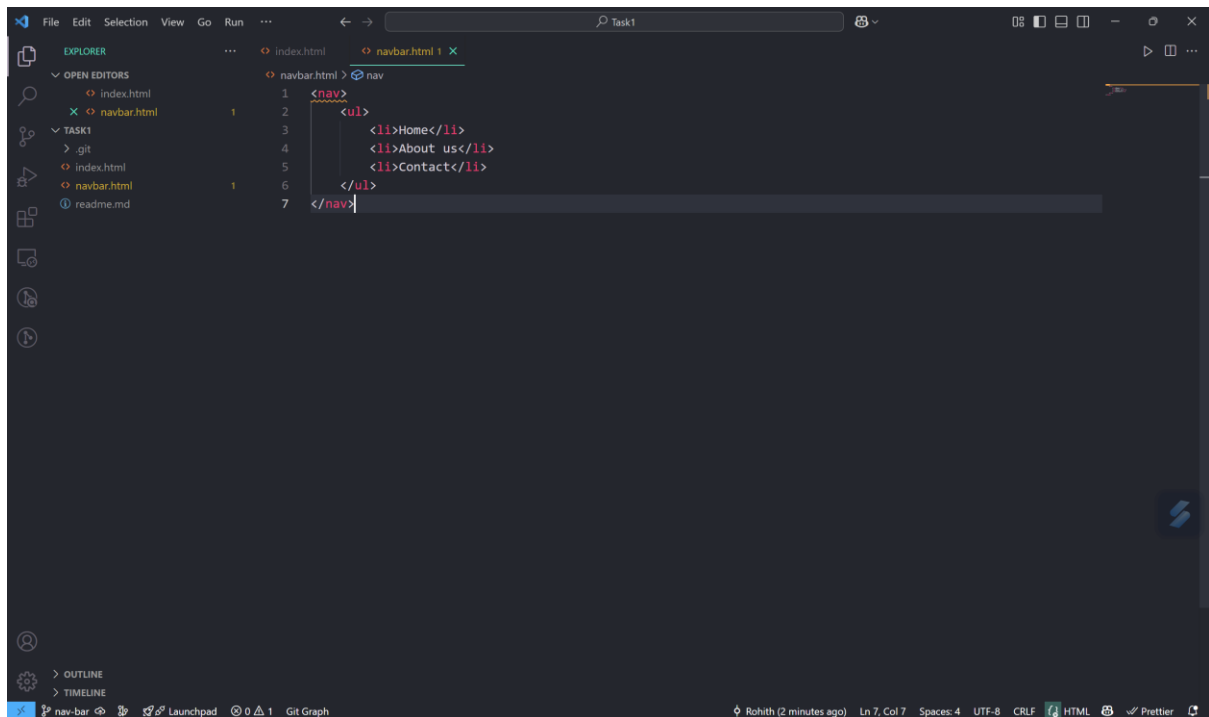
At branch nav-bar:



This screenshot shows the Visual Studio Code editor with the 'index.html' file open. The Explorer sidebar on the left shows the project structure with 'index.html' and 'navbar.html' under the 'TASK1' folder. The main editor area 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>Version Control using Git</title>
7 </head>
8 <body>
9   <h1>Initialize, Commit, and Branch Basics</h1>
10 </body>
11 </html>
```

The status bar at the bottom indicates the file is 'nav-bar', edited by 'Rohith' 6 minutes ago, at line 11, column 8, with 4 spaces, in UTF-8 encoding with CRLF line endings. The language mode is set to HTML, and Prettier is configured for formatting.



This screenshot shows the Visual Studio Code editor with the 'navbar.html' file open. The Explorer sidebar on the left shows the project structure with 'index.html' and 'navbar.html' under the 'TASK1' folder. The main editor area displays the following HTML code:

```
1 <nav>
2   <ul>
3     <li>Home</li>
4     <li>About us</li>
5     <li>Contact</li>
6   </ul>
7 </nav>
```

The status bar at the bottom indicates the file is 'nav-bar', edited by 'Rohith' 2 minutes ago, at line 7, column 7, with 4 spaces, in UTF-8 encoding with CRLF line endings. The language mode is set to HTML, and Prettier is configured for formatting.

```
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/Task1 (nav-bar)
$ touch navbar.html

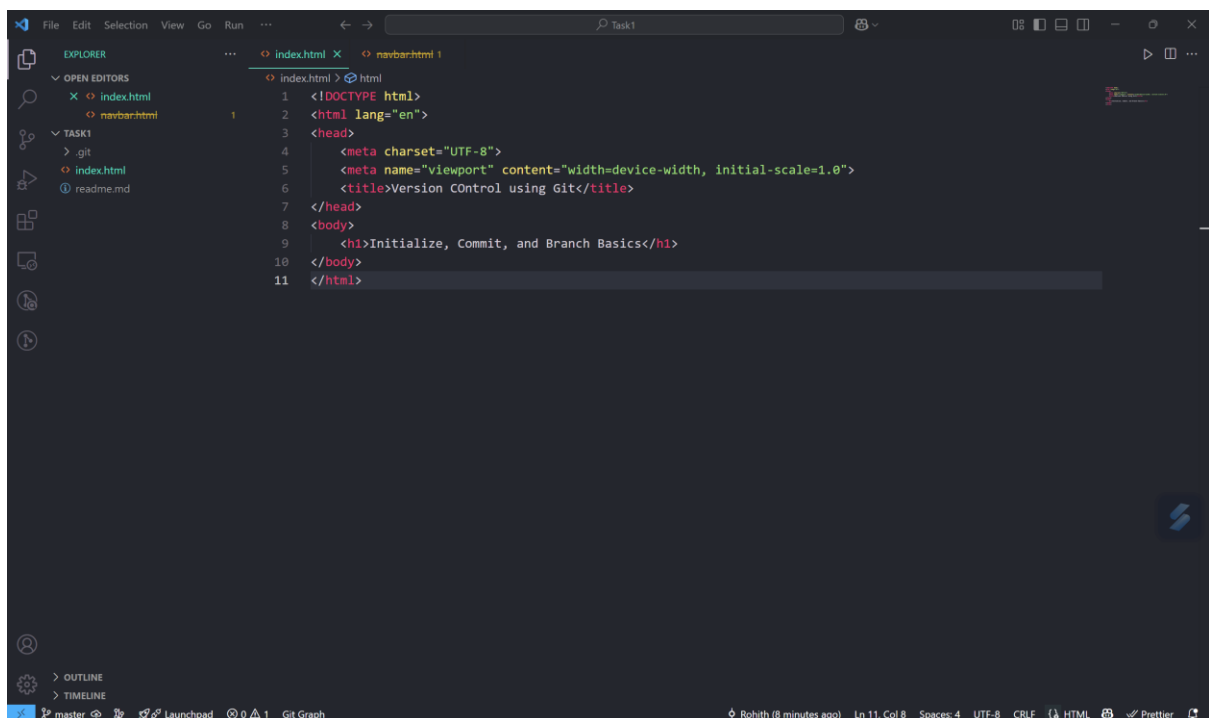
rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task1 (nav-bar)
$ git add navbar.html

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task1 (nav-bar)
$ git commit -m "add navbar.html"
[nav-bar 14fa897] add navbar.html
1 file changed, 7 insertions(+)
create mode 100644 navbar.html

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task1 (nav-bar)
$ git checkout master
Switched to branch 'master'

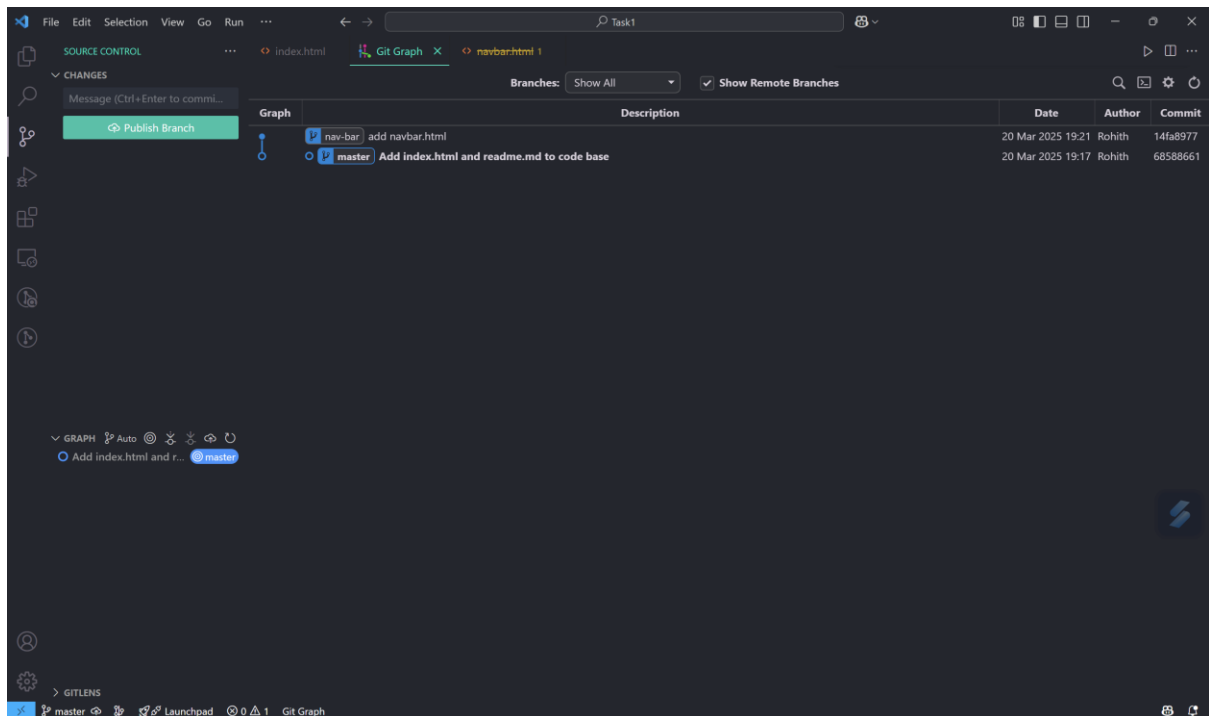
rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version C
ontrol using Git/Task1 (master)
$
```

At master branch



The screenshot shows the Visual Studio Code editor interface. The Explorer sidebar on the left displays the file structure with 'index.html' and 'navbar.html' selected. The main editor area shows the content of 'index.html', which is an HTML document. The code includes a DOCTYPE declaration, a head section with a charset and viewport meta tag, and a body section with a title and a heading. The status bar at the bottom indicates the current file is 'index.html' and the branch is 'master'.

```
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>Version Control using Git</title>
7 </head>
8 <body>
9   <h1>Initialize, Commit, and Branch Basics</h1>
10 </body>
11 </html>
```



```
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 checkout master
Switched to branch 'master'

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version Cont...
$ git merge nav-bar
Updating 6858866..14fa897
Fast-forward
 navbar.html | 7 ++++++
 1 file changed, 7 insertions(+)
 create mode 100644 navbar.html

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version Cont...
$ git status
On branch master
nothing to commit, working tree clean

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

```
1 # git init
2
3 initialize an existing directory as a Git repository
4
5 ...
6 git init
7 ...
8
9 # git add
10
11 add a file as it looks now to your next commit (stage)
12
13 ...
14 git add [file]
15 ...
16
17 # git commit
18
19 commit your staged content as a new commit snapshot
20
21 ...
22 git commit -m "[descriptive message]"
23 ...
24
25 # git branch
26
27 list your branches. a \* will appear next to the currently active branch
28
29 ...
30 git branch
31 ...
32
33 create a new branch at the current commit
```

```
rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version Cont...
$ git commit -am "Update readme file"
[master 90266c6] Update readme file
1 file changed, 69 insertions(+)

rohit@Rohith MINGW64 /c/Rohith/Backup/Desktop/Presidio/Pre-Training/1. Version Cont...
$ git status
On branch master
nothing to commit, working tree clean

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

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

FileEditSelectionViewGoRun...Task1

EXPLORER

OPEN EDITORS

TASK1

index.html

readme.md

Git Graph

navbar.html 1

Graph

Description

Date

Author

Commit

master

Update readme file

20 Mar 2025 19:46

Rohith

90266c6e

nav-bar

add navbar.html

20 Mar 2025 19:21

Rohith

14fa8977

Add index.html and readme.md to code base

20 Mar 2025 19:17

Rohith

68588661

OUTLINE

TIMELINE

master

Launchpad

0 0 1

Git Graph