SOURCE CODE MANAGEMENT LAB FILE

COURSE CODE: CSE 2015

LAB SLOT: L14-L15

NAME: NIVEDITHA BHAGATH
SEN NO: A866185924020
FACULTY: DR. MONIT KAPOOR

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GIT FUNDAMENTALS

Computer:

A computer is any device capable of performing calculations, whether they are logical or mathematical.

Program/Code :

A program (or code) is a set of instructions, often organised as an algorithm, that directs a computer to perform a specific task.

Need for Managing Source Code :

Modern applications, such as Spotify, consist of multiple programs working together on both the frontend and backend to deliver a smooth user experience.

Regular updates are essential for:

- Fixing Bugs: Quickly resolving errors that may occur.
- Improving UI/UX: Enhancing the user interface and overall experience.
- Optimising Performance**:** Addressing and refining issues for better performance.

For programmers, effective management of source code is crucial because:

- It ensures that all files remain in context throughout the lifecycle of the program.
- It facilitates collaboration, allowing multiple developers to work together on a shared codebase.

Tools for Source Code Management :

1. **Git:**
   A version control system that runs locally on your computer. Git helps track changes and manage versions of your project.
2. **GitHub:**
   A global, cloud-based platform that hosts Git repositories, enabling developers to share, collaborate, and contribute to projects from anywhere in the world.

Version:

A version in version control represents a snapshot of your project at a specific moment in time. This snapshot allows you to review, revert, or compare changes made throughout the development process.

Lab Session 1 – Git Fundamentals

1. Installing Git for windows

Download for Windows

Click here to download the latest **(2.47.1(2)) 64-bit** version of **Git for Windows**. This is the most recent maintained build. It was released **17 days ago**, on 2025-01-14.

Other Git for Windows downloads

Standalone Installer
32-bit Git for Windows Setup.

64-bit Git for Windows Setup.

Portable ("thumbdrive edition")
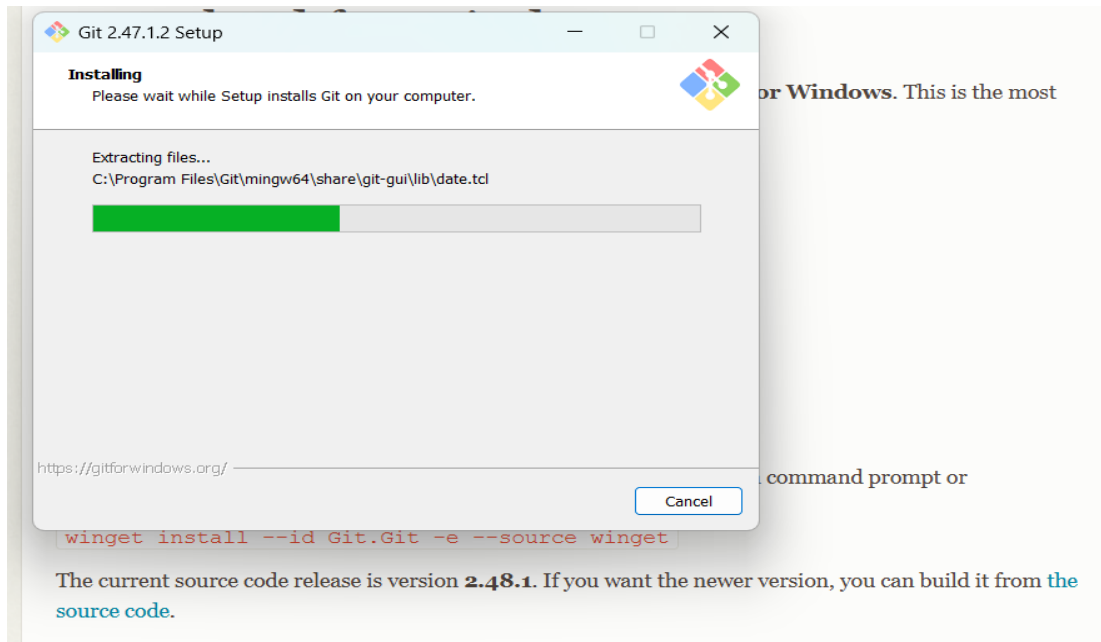**32-bit Git for Windows Portable.**

64-bit Git for Windows Portable.

Using winget tool
Install winget tool if you don't already have it, then type this command in command prompt or Powershell.

```
winget install --id Git.Git -e --source winget
```

The current source code release is version **2.48.1**. If you want the newer version, you can build it from the source code.

Step 2: let Git Bash install in your device.

Git 2.47.1.2 Setup

Installing
Please wait while Setup installs Git on your computer.

Extracting files...
C:\Program Files\Git\mingw64\share\git-gui\lib\date.tcl

https://gitforwindows.org/

Cancel

```
winget install --id Git.Git -e --source winget
```

The current source code release is version **2.48.1**. If you want the newer version, you can build it from the source code.

2. Basic CLI Commands

1) Command: ls

Description: Lists all files and directories in the current directory.

```
Niveditha Bhagath@niveditha MINGW64 ~
$ ls
'3D Objects'/
 AppData/
'Application Data'@
 Contacts/
 Cookies@
 Desktop/
 Documents/
 Downloads/
 Favorites/
 Jedi/
 Links/
'Local Settings'@
 Music/
```

2) Command: date

Description: shows the current date and time in a standard format

```
Niveditha Bhagath@niveditha MINGW64 ~
$ date
Mon May 26 22:39:53 IST 2025
```

3) Command: clear

Description: The `clear` command in the CLI is used to clear all the current text and output   displayed in the terminal window.

```
MINGW64:/c/Users/Niveditha Bhagath

Niveditha Bhagath@niveditha MINGW64 ~
$ |
```

4) Command: time

Description: The `time` command in the CLI is used to measure the execution time of a command or program.

```
Niveditha Bhagath@niveditha MINGW64 ~
$ time

real    0m0.006s
user    0m0.000s
sys     0m0.000s
```

5) Command: rm hello.txt

Description: Removes the file `hello.txt` from the current directory.

6) Command: cat hello.txt

Description: The `cat` command (short for **concatenate**) is used to display the contents of a file.

```
Niveditha Bhagath@niveditha MINGW64 ~
$ cat hello.txt
Hi, My name is Niveditha Bhagath
```

7)Command: cd Desktop

Description: Changes the current working directory to the desktop directory.

```
Niveditha Bhagath@niveditha MINGW64 ~
$ cd desktop

Niveditha Bhagath@niveditha MINGW64 ~/desktop
$ |
```

3. Vim Text Editor

1) Command: vi hi.txt

Description: Opens (or creates) the file `hi.txt` in the Vim text editor.

```
~
~
~
~
~
~
~
~
~
~
~
hi.txt [unix] (05:29 01/01/1970)
"hi.txt" [New]
```

2) Command: i (Insert Mode)

Description: Enters insert mode in Vim to allow text input.

```
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
hi.txt [unix] (05:29 01/01/1970)
-- INSERT --
```

```
Hi, My name is Niveditha Bhagath.|
~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
hi.txt[+] [unix] (05:29 01/01/1970)
-- INSERT --
```

3) Command: esc

Description: Used to exit insert mode

```
Hi, My name is Niveditha Bhagath.
~
~
~
~
~
~
~
~
~
~
~
~
~
hi.txt[+] [unix] (05:29 01/01/1970)
```

4) Command: `:wq`

Description: Saves the changes and exits the Vim editor.

```
Hi, My name is Niveditha Bhagath.
~
~
~
~
~
~
~
~
~
~
~
~
~
hi.txt[+] [unix] (05:29 01/01/1970)
:wq
```

4. Git Commands

1. Command: git-- version

Description: The `git --version` command is used to check the installed version of Git on your system.

```
Niveditha Bhagath@niveditha MINGW64 ~
$ git --version
git version 2.49.0.windows.1
```

2. Command: git init

Description: Initializes a new Git repository in the current directory.

```
Niveditha Bhagath@niveditha MINGW64 ~
$ git init
Initialized empty Git repository in C:/Users/Niveditha Bhagath/.git/
```

3.Command: git add hello.txt

Description: Adds `hello.txt` to the staging area in preparation for a commit.

```
Niveditha Bhagath@niveditha MINGW64 ~ (master)
$ git add hello.txt
warning: in the working copy of 'hello.txt', LF will be replaced by CRLF the next time Git touches it
```

4. Command: git status

Description: Displays the current status of the working directory and staging area.

```
On branch master

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
        new file:   hello.txt
```

5. Command: git commit-m "add file one"

Description: Commits the staged changes with the message "add file one"

```
Niveditha Bhagath@niveditha MINGW64 ~ (master)
$ git commit -m "add one file"
[master (root-commit) 73028a0] add one file
 1 file changed, 1 insertion(+)
 create mode 100644 hello.txt
```

6.Command: git log

Description: Displays the commit history of the repository.

```
Niveditha Bhagath@niveditha MINGW64 ~ (master)
$ git log
commit 73028a022fc4988a67ea3ec55cee48bdeef845df (HEAD -> master)
Author: Niveditha <niveditha.bhagath@s.amity.edu>
Date:   Mon May 26 23:17:45 2025 +0530

    add one file
```

7. Command: git clone

Description: to obtain a copy of an existing Git repository.

```
Niveditha Bhagath@niveditha MINGW64 ~ (master)
$ git clone
fatal: You must specify a repository to clone.

usage: git clone [<options>] [--] <repo> [<dir>]

    -v, --[no-]verbose      be more verbose
    -q, --[no-]quiet        be more quiet
    --[no-]progress         force progress reporting
    --[no-]reject-shallow   don't clone shallow repository
    -n, --no-checkout       don't create a checkout
    --checkout              opposite of --no-checkout
    --[no-]bare             create a bare repository
    --[no-]mirror           create a mirror repository (implies --bare)
    -l, --[no-]local        to clone from a local repository
    --no-hardlinks          don't use local hardlinks, always copy
    --hardlinks             opposite of --no-hardlinks
    -s, --[no-]shared       setup as shared repository
    --[no-]recurse-submodules[=<pathspec>]
                            initialize submodules in the clone
    --[no-]recursive ...    alias of --recurse-submodules
    -j, --[no-]jobs <n>     number of submodules cloned in parallel
    --[no-]template <template-directory>
                            directory from which templates will be used
    --[no-]reference <repo>
                            reference repository
    --[no-]reference-if-able <repo>
                            reference repository
    --[no-]dissociate       use --reference only while cloning
    -o, --[no-]origin <name>
                            use <name> instead of 'origin' to track upstream
    -b, --[no-]branch <branch>
                            checkout <branch> instead of the remote's HEAD
    --[no-]revision <rev> clone single revision <rev> and check out
    -u, --[no-]upload-pack <path>
                            path to git-upload-pack on the remote
```

8. Command: git config--global user.name "Niveditha Bhagath"

Description: used to set up username which will be linked to future commits.

```
Niveditha Bhagath@niveditha MINGW64 ~ (master)
$ git config --global user.name "Niveditha Bhagath"
```

9. Command: git config--global email.id "niveditha.bhagath@s.amity.edu"

Description: used to set up email Id which will be linked to future commits.

```
Niveditha Bhagath@niveditha MINGW64 ~ (master)
$ git config --global email.id "niveditha.bhagath@s.amity.edu"
```

10. Command: git config-- list

Description: used to view all the settings.

```
Niveditha Bhagath@niveditha MINGW64 ~ (master)
$ git config --list
diff.astextplain.textconv=astextplain
filter.lfs.clean=git-lfs clean -- %f
filter.lfs.smudge=git-lfs smudge -- %f
filter.lfs.process=git-lfs filter-process
filter.lfs.required=true
http.sslbackend=schannel
core.autocrlf=true
core.fscache=true
core.symlinks=false
pull.rebase=false
credential.helper=manager
credential.https://dev.azure.com.usehttppath=true
init.defaultbranch=master
user.email=niveditha.bhagath@s.amity.edu
user.name=Niveditha
user.name=Niveditha
user.name=Niveditha
user.name="Niveditha
user.name=Niveditha
user.name="Niveditha
email.id="niveditha.bhagath@s.amity.edu"
core.repositoryformatversion=0
core.filemode=false
core.bare=false
core.logallrefupdates=true
core.symlinks=false
core.ignorecase=true
```

Lab Session 2: Git Commands

1. Command: pwd

Description: returns the present working directory.

```
Niveditha Bhagath@niveditha MINGW64 ~ (master)
$ pwd
/c/Users/Niveditha Bhagath
```

2. Command: ls

Description: lists all files and folders in the current directory.

```
Niveditha Bhagath@niveditha MINGW64 ~ (master)
$ ls
'3D Objects'/        Documents/        Music/                                                                    NetHood@      'Saved Games'/  Videos/      merging/              scm/
AppData/             Downloads/        'My Documents'@                                                            'New folder'/  Searches/      abc/         'niveditha bhagath'/  spyder/
'Application Data'@   Favorites/        NTUSER.DAT                                                                 Niveditha/    SendTo@         file/        ntuser.dat.LOG1
Contacts/            Jedi/             NTUSER.DAT{dd11466b-0809-11f0-a7f1-87f33d2fffe3}.TM.blf                     OneDrive/     'Start Menu'@   hello.txt    ntuser.dat.LOG2
Cookies@             Links/            NTUSER.DAT{dd11466b-0809-11f0-a7f1-87f33d2fffe3}.TMContainer0000000000000000001.regtrans-ms   PrintHood@    TEAM_VNCS/     l15/         ntuser.ini
Desktop/             'Local Settings'@ NTUSER.DAT{dd11466b-0809-11f0-a7f1-87f33d2fffe3}.TMContainer0000000000000000002.regtrans-ms   Recent@       Templates@     merge/       potato/
```

3. Command: mkdir

Description: used to to make new directory/folder.

```
Niveditha Bhagath@niveditha MINGW64 /c
$ mkdir source_code
```

4 .Command: rmdir

Description: used to remove a directory.

```
Niveditha Bhagath@niveditha MINGW64 /c
$ rmdir source_code
```

5. Command: cd

Description: used to change current directory.

```
Niveditha Bhagath@niveditha MINGW64 /
$ cd c:

Niveditha Bhagath@niveditha MINGW64 /c
$
```

6. Command: cd ..

Description: used to exit the current sub directory.

```
Niveditha Bhagath@niveditha MINGW64 /c
$ cd ..

Niveditha Bhagath@niveditha MINGW64 /
$
```

Git commit

Step 1: create a file in the present working directory and add content

```
Niveditha Bhagath@niveditha MINGW64 /c/source_code
$ vi trial.txt

Niveditha Bhagath@niveditha MINGW64 /c/source_code
$ cat trial.txt
This is a trial page
```

Step 2: using git init initialise a hidden git repository for tracking the files

```
Niveditha Bhagath@niveditha MINGW64 /c/source_code
$ git init
Initialized empty Git repository in C:/source_code/.git/
```

Step 3: using git add move the file to staging area

```
Niveditha Bhagath@niveditha MINGW64 /c/source_code (master)
$ git add trial.txt
warning: in the working copy of 'trial.txt', LF will be replaced by CRLF the next time Git touches it
```

Step 4: check git status for confirmation

```
Niveditha Bhagath@niveditha MINGW64 /c/source_code (master)
$ git status
On branch master

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
        new file:   trial.txt
```

Step 5: commit the file to a local repository

```
Niveditha Bhagath@niveditha MINGW64 /c/source_code (master)
$ git commit -m "add trial.txt"
[master (root-commit) 7f70a73] add trial.txt
 1 file changed, 2 insertions(+)
 create mode 100644 trial.txt
```

Command ls-ah

Description: used to check hidden files in a directory

```
Niveditha Bhagath@niveditha MINGW64 /c/source_code (master)
$ ls -ah
./  ../  .git/  hi.txt  trial.txt
```

Command git rm--cached <file>

Description: used to remove file from staging area

```
Niveditha Bhagath@niveditha MINGW64 /c/source_code (master)
$ git rm --cached trial.txt
rm 'trial.txt'

Niveditha Bhagath@niveditha MINGW64 /c/source_code (master)
$ git status
On branch master
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
        deleted:    trial.txt
```

Lab Session 3: Git Diff

Command touch <file_name>

Used to create a file without any content

```
Niveditha Bhagath@niveditha MINGW64 /c/source_code (master)
$ touch hi.txt

Niveditha Bhagath@niveditha MINGW64 /c/source_code (master)
$ touch trial.txt

Niveditha Bhagath@niveditha MINGW64 /c/source_code (master)
$ ls
hi.txt  trial.txt
```

Command git rm-rf <file_name>

Used to remove a file from git tracking

```
Niveditha Bhagath@niveditha MINGW64 /c/source_code (master)
$ git rm -rf hi.txt
rm 'hi.txt'

Niveditha Bhagath@niveditha MINGW64 /c/source_code (master)
$ git rm -rf trial.txt
rm 'trial.txt'
```

Task 1: make two commits in a directory

Step 1: create two files with content in a directory

```
Niveditha Bhagath@niveditha MINGW64 /c/source_code (master)
$ ls
file1.txt  file2.txt

Niveditha Bhagath@niveditha MINGW64 /c/source_code (master)
$ cat file1.txt file2.txt
This is the first file
This is the second file
```

Step 2: use git add. Command to add both files in the staging area

```
Niveditha Bhagath@niveditha MINGW64 /c/source_code (master)
$ git add .
warning: in the working copy of 'file1.txt', LF will be replaced by CRLF the next time Git touches it
warning: in the working copy of 'file2.txt', LF will be replaced by CRLF the next time Git touches it
```

Step 3: use git commit -m to commit both files to local repository

```
Niveditha Bhagath@niveditha MINGW64 /c/source_code (master)
$ git commit -m "Add file1.txt" file1.txt
warning: in the working copy of 'file1.txt', LF will be replaced by CRLF the next time Git touches it
[master 38dbb87] Add file1.txt
 1 file changed, 1 insertion(+), 1 deletion(-)

Niveditha Bhagath@niveditha MINGW64 /c/source_code (master)
$ git commit -m "Add file2.txt" file2.txt
warning: in the working copy of 'file2.txt', LF will be replaced by CRLF the next time Git touches it
[master e4a0ea5] Add file2.txt
 1 file changed, 1 insertion(+), 1 deletion(-)
```

Step 4: use git log command to verify the commit history

```
Niveditha Bhagath@niveditha MINGW64 /c/source_code (master)
$ git log
commit e4a0ea536be6778bd66cea5fe69e3261acd1b6e0 (HEAD -> master)
Author: "Niveditha <niveditha.bhagath@s.amity.edu>
Date:   Tue May 27 13:43:06 2025 +0530

    Add file2.txt

commit 38dbb875ee3248a560fddc04fa6a25361648d040
Author: "Niveditha <niveditha.bhagath@s.amity.edu>
Date:   Tue May 27 13:42:55 2025 +0530

    Add file1.txt
```

Step 5: use git log - -oneline for generating shorter commit id

```
Niveditha Bhagath@niveditha MINGW64 /c/source_code (master)
$ git log --oneline
e4a0ea5 (HEAD -> master) Add file2.txt
38dbb87 Add file1.txt
```

Task 2: compare two commits in a directory

 Use git diff along with the commit id generated from git log - - online

```
Niveditha Bhagath@niveditha MINGW64 /c/source_code (master)
$ git diff e4a0ea5 8874222
diff --git a/file1.txt b/file1.txt
index 5495a4f..7fbf76e 100644
--- a/file1.txt
+++ b/file1.txt
@@ -1 +1 @@
-This is the first file.
+This is the first file
diff --git a/file2.txt b/file2.txt
index 578b181..da20684 100644
--- a/file2.txt
+++ b/file2.txt
@@ -1 +1 @@
-This is the second file.
+This is the second file
```

Lab Session 4: git remote

Make 4 commits and compare them using git diff

```
Niveditha Bhagath@niveditha MINGW64 /c/source_code (master)
$ git log --oneline
c218f8e (HEAD -> master) testing1.txt
b1e2d80 testing.txt
e4a0ea5 Add file2.txt
38dbb87 Add file1.txt
```

```
Niveditha Bhagath@niveditha MINGW64 /c/source_code (master)
$ git diff c218f8e b1e2d80
diff --git a/testing1.txt b/testing1.txt
index af33430..f10a30f 100644
--- a/testing1.txt
+++ b/testing1.txt
@@ -1 +1 @@
-4th commit.
+4th commit
```

Use git remote command to establish a connection between local Git repository and a remote repository

```
Niveditha Bhagath@niveditha MINGW64 /c/source_code (master)
$ git remote add source_code https://github.com/nivedithabhagathamity/source_code
```

Use The git push command to transfer commits from a local Git repository to a remote repository

```
Niveditha Bhagath@niveditha MINGW64 /c/source_code (master)
$ git push source_code master
Enumerating objects: 20, done.
Counting objects: 100% (20/20), done.
Delta compression using up to 4 threads
Compressing objects: 100% (11/11), done.
Writing objects: 100% (20/20), 1.60 KiB | 116.00 KiB/s, done.
Total 20 (delta 1), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (1/1), done.
To https://github.com/nivedithabhagathamity/source_code
 * [new branch]      master -> master
```

Confirming the remote connection with git remote

```
Niveditha Bhagath@niveditha MINGW64 /c/source_code (master)
$ git remote
source_code
```

Checking the commits made on GitHub account

nivedithabhagathamity testing1.txt		c218f8e · 8 minutes ago	🕐 6 Commits
🗋 file2.txt	Add file2.txt		34 minutes ago
🗋 testing.txt	testing.txt		9 minutes ago
🗋 testing1.txt	testing1.txt		8 minutes ago

Lab Session 5 : git branching

Branch: pointer to a commit Pointer: connects two memory address where at least one variable must have an active memory address Head: branch on which the last commit is made

Git branch command used to view the existing branches in the git repository

```
Niveditha Bhagath@niveditha MINGW64 /c/source_code (master)
$ git branch
* master
```

Git checkout command used to switch the currently active branch to another branch. Here we want to create a new branch from a particular commit

```
Niveditha Bhagath@niveditha MINGW64 /c/source_code (master)
$ git checkout b1e2d80
Note: switching to 'b1e2d80'.

You are in 'detached HEAD' state. You can look around, make experimental
changes and commit them, and you can discard any commits you make in this
state without impacting any branches by switching back to a branch.

If you want to create a new branch to retain commits you create, you may
do so (now or later) by using -c with the switch command. Example:

  git switch -c <new-branch-name>

Or undo this operation with:

  git switch -

Turn off this advice by setting config variable advice.detachedHead to false

HEAD is now at b1e2d80 testing.txt
```

Git branch test1: used to create branch with name test1 Confirm the created branch by using git branch command to view all the branches

```
Niveditha Bhagath@niveditha MINGW64 /c/source_code ((b1e2d80...))
$ git branch test1
```

Use git_checkout command to pivot to that particular branch

```
Niveditha Bhagath@niveditha MINGW64 /c/source_code ((b1e2d80...))
$ git checkout test1
Switched to branch 'test1'

Niveditha Bhagath@niveditha MINGW64 /c/source_code (test1)
$
```

Make commits in test1 branch

```
Niveditha Bhagath@niveditha MINGW64 /c/source_code (test1)
$ git commit -m "file3.txt"
[test1 0037a31] file3.txt
 1 file changed, 1 insertion(+)
 create mode 100644 file3.txt
```

Viewing the commits on a particular branch

```
Niveditha Bhagath@niveditha MINGW64 /c/source_code (test1)
$ git log --oneline
0037a31 (HEAD -> test1) file3.txt
b1e2d80 testing.txt
e4a0ea5 Add file2.txt
38dbb87 Add file1.txt
8874222 add file1.txt
7f70a73 add trial.txt

Niveditha Bhagath@niveditha MINGW64 /c/source_code (test1)
$ git checkout test1
Already on 'test1'

Niveditha Bhagath@niveditha MINGW64 /c/source_code (test1)
$ git status
On branch test1
nothing to commit, working tree clean
```

Git clone command used to create copy of an existing git repository

```
Niveditha Bhagath@niveditha MINGW64 /c/source_code (test1)
$ git clone https://github.com/nivedithabhagathamity/20-3-25
Cloning into '20-3-25'...
remote: Enumerating objects: 18, done.
remote: Counting objects: 100% (18/18), done.
remote: Compressing objects: 100% (14/14), done.
remote: Total 18 (delta 1), reused 18 (delta 1), pack-reused 0 (from 0)
Receiving objects: 100% (18/18), done.
Resolving deltas: 100% (1/1), done.
```

Git pull is used to fetch and integrate changes which are in the remote repository to local repository

```
Niveditha Bhagath@niveditha MINGW64 /c/source_code (test1)
$ git pull  https://github.com/nivedithabhagathamity/20-3-25
remote: Enumerating objects: 18, done.
remote: Counting objects: 100% (18/18), done.
remote: Compressing objects: 100% (14/14), done.
remote: Total 18 (delta 1), reused 18 (delta 1), pack-reused 0 (from 0)
Unpacking objects: 100% (18/18), 1.76 KiB | 21.00 KiB/s, done.
From https://github.com/nivedithabhagathamity/20-3-25
 * branch            HEAD          -> FETCH_HEAD
```

Git remote-v: used to view all remote repositories in a directory

```
Niveditha Bhagath@niveditha MINGW64 /c/source_code (test1)
$ git remote -v
source_code      https://github.com/nivedithabhagathamity/source_code (fetch)
source_code      https://github.com/nivedithabhagathamity/source_code (push)
```

Project Report

The project was to make a repository in GitHub, make 3 branches and merge it with the main branch and access all 4 team-mate's repositories, fork it, clone it, make some changes and merge them.

1. First, make your own repositories and clone it in your local file

```
Niveditha Bhagath@niveditha MINGW64 ~
$ cd c:

Niveditha Bhagath@niveditha MINGW64 /c
$ cd TEAM_VNCS

Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS
$ mkdir TEAM_VNCS-niveditha

Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS
$ cd TEAM_VNCS-niveditha/

Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha
$ git clone https://github.com/nivedithabhagathamity/TEAM_VNCS-niveditha
Cloning into 'TEAM_VNCS-niveditha'...
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
Receiving objects: 100% (3/3), done.

Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha
$ cd TEAM_VNCS-niveditha/
```

2. Now create a branch and make commits in the branch

```
Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha/TEAM_VNCS-niveditha (main)
$ git status
On branch main
Your branch is up to date with 'origin/main'.

nothing to commit, working tree clean

Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha/TEAM_VNCS-niveditha (main)
$ git branch women-html

Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha/TEAM_VNCS-niveditha (main)
$ git checkout women-html
Switched to branch 'women-html'

Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha/TEAM_VNCS-niveditha (women-html)
$ vi women.html

Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha/TEAM_VNCS-niveditha (women-html)
$ git add .
warning: in the working copy of 'women.html', LF will be replaced by CRLF the next time Git touches it

Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha/TEAM_VNCS-niveditha (women-html)
$ git commit -m "added till style category"
[women-html 38d3d70] added till style category
 1 file changed, 44 insertions(+)
 create mode 100644 women.html
```

3. Use git log to check the commits done and checkout your main branch.

```
Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha/TEAM_VNCS-niveditha (women-html)
$ git log
commit 337f829747eb30222d6af47228bcc7ae4d12a7db (HEAD -> women-html)
Author: "Niveditha <niveditha.bhagath@s.amity.edu>
Date:   Wed Jun 4 14:08:16 2025 +0530

    added till the end

commit 47dc5eccfbaed1407a5a5b594fae08954b564217
Author: "Niveditha <niveditha.bhagath@s.amity.edu>
Date:   Wed Jun 4 14:07:29 2025 +0530

    added till about women section

commit 38d3d704abbf5526658bac394a6553fb71e20f92
Author: "Niveditha <niveditha.bhagath@s.amity.edu>
Date:   Wed Jun 4 14:03:34 2025 +0530

    added till style category

commit dc5b3568650aaa4e56d8b729ac70273f624ec1d4 (origin/main, origin/HEAD, main)
Author: Niveditha Bhagath <niveditha.bhagath@s.amity.edu>
Date:   Wed Jun 4 13:54:31 2025 +0530

    Initial commit
```

4. Now repeat this process for 2 more branches

```
Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha/TEAM_VNCS-niveditha (women-css)
$ git log
commit cf91ba6402a45ce1cadacbd797e7e2db71e01ac5 (HEAD -> women-css)
Author: "Niveditha <niveditha.bhagath@s.amity.edu>
Date:   Wed Jun 4 14:14:41 2025 +0530

    Added till the end

commit 6ed2b634c7bc93de8fe1312c6c39e2185883518e
Author: "Niveditha <niveditha.bhagath@s.amity.edu>
Date:   Wed Jun 4 14:13:44 2025 +0530

    Added till Modal

commit 923a2d069d1f010021daa8ae573625bfd453111b
Author: "Niveditha <niveditha.bhagath@s.amity.edu>
Date:   Wed Jun 4 14:12:28 2025 +0530

    Added till hero section

commit dc5b3568650aaa4e56d8b729ac70273f624ec1d4 (origin/main, origin/HEAD, main)
Author: Niveditha Bhagath <niveditha.bhagath@s.amity.edu>
Date:   Wed Jun 4 13:54:31 2025 +0530

    Initial commit
```

```
Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha/TEAM_VNCS-niveditha (women-js)
$ git log
commit 6642ae79f8dde6c799796a9dfeac1c69ec5b433c (HEAD -> women-js)
Author: "Niveditha <niveditha.bhagath@s.amity.edu>
Date:   Wed Jun 4 14:23:33 2025 +0530

    Added till the end

commit 0d10d3e584d2a8e7a7b5ec85013bb9c3b8b3611d
Author: "Niveditha <niveditha.bhagath@s.amity.edu>
Date:   Wed Jun 4 14:22:50 2025 +0530

    Added till Toast Notifications

commit 7a94fdb8249cd262b852c2b19ea01ac202e711cf
Author: "Niveditha <niveditha.bhagath@s.amity.edu>
Date:   Wed Jun 4 14:21:54 2025 +0530

    Added till Modal

commit dc5b3568650aaa4e56d8b729ac70273f624ec1d4 (origin/main, origin/HEAD, main)
Author: Niveditha Bhagath <niveditha.bhagath@s.amity.edu>
Date:   Wed Jun 4 13:54:31 2025 +0530

    Initial commit
```

5. After merging all the individual branches, create a branch dev and push all the branches

```
Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha/TEAM_VNCS-niveditha (main)
$ git branch
  dev
* main
  women-css
  women-html
  women-js

Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha/TEAM_VNCS-niveditha (main)
$ git push origin main
Enumerating objects: 32, done.
Counting objects: 100% (32/32), done.
Delta compression using up to 4 threads
Compressing objects: 100% (31/31), done.
Writing objects: 100% (31/31), 9.97 KiB | 785.00 KiB/s, done.
Total 31 (delta 12), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (12/12), done.
To https://github.com/nivedithabhagathamity/TEAM_VNCS-niveditha
   dc5b356..cf3d323  main -> main

Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha/TEAM_VNCS-niveditha (main)
$ git push origin women-css
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: Create a pull request for 'women-css' on GitHub by visiting:
remote:      https://github.com/nivedithabhagathamity/TEAM_VNCS-niveditha/pull/new/women-css
remote:
To https://github.com/nivedithabhagathamity/TEAM_VNCS-niveditha
 * [new branch]      women-css -> women-css

Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha/TEAM_VNCS-niveditha (main)
$ git push origin women-html
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: Create a pull request for 'women-html' on GitHub by visiting:
remote:      https://github.com/nivedithabhagathamity/TEAM_VNCS-niveditha/pull/new/women-html
remote:
To https://github.com/nivedithabhagathamity/TEAM_VNCS-niveditha
 * [new branch]      women-html -> women-html

Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha/TEAM_VNCS-niveditha (main)
$ git push origin women-js
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: Create a pull request for 'women-js' on GitHub by visiting:
remote:      https://github.com/nivedithabhagathamity/TEAM_VNCS-niveditha/pull/new/women-js
remote:
To https://github.com/nivedithabhagathamity/TEAM_VNCS-niveditha
 * [new branch]      women-js -> women-js

Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha/TEAM_VNCS-niveditha (main)
$ git push origin dev
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: Create a pull request for 'dev' on GitHub by visiting:
remote:      https://github.com/nivedithabhagathamity/TEAM_VNCS-niveditha/pull/new/dev
remote:
To https://github.com/nivedithabhagathamity/TEAM_VNCS-niveditha
```

6. Fork your first teammate's repository and clone to make a new branch

```
Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha/TEAM_VNCS-niveditha (main)
$ cd ..

Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha
$ ls
TEAM_VNCS-niveditha/

Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha
$ git clone https://github.com/nivedithabhagathamity/TEAM_VNCS-shaun
Cloning into 'TEAM_VNCS-shaun'...
remote: Enumerating objects: 34, done.
remote: Counting objects: 100% (34/34), done.
remote: Compressing objects: 100% (22/22), done.
remote: Total 34 (delta 10), reused 31 (delta 10), pack-reused 0 (from 0)
Receiving objects: 100% (34/34), 12.08 KiB | 120.00 KiB/s, done.
Resolving deltas: 100% (10/10), done.

Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha
$ ls
TEAM_VNCS-niveditha/   TEAM_VNCS-shaun/

Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha
$ cd TEAM_VNCS-shaun/

Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha/TEAM_VNCS-shaun (main)
$ ls
README.md  men.html  men.js  mens.css

Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha/TEAM_VNCS-shaun (main)
$ git branch niveditha-color

Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha/TEAM_VNCS-shaun (main)
$ git branch
* main
  niveditha-color

Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha/TEAM_VNCS-shaun (main)
$ git checkout niveditha-color
Switched to branch 'niveditha-color'

Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha/TEAM_VNCS-shaun (niveditha-color)
$ ls
README.md  men.html  men.js  mens.css
```

7. Now make changes in the new repo and commit the changes and push that branch.

```
Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha/TEAM_VNCS-shaun (niveditha-color)
$ vi mens.css

Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha/TEAM_VNCS-shaun (niveditha-color)
$ git status
On branch niveditha-color
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:   mens.css

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

Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha/TEAM_VNCS-shaun (niveditha-color)
$ git add .

Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha/TEAM_VNCS-shaun (niveditha-color)
$ git commit -m "Changed color to pink"
[niveditha-color 7570344] Changed color to pink
 1 file changed, 1 insertion(+), 1 deletion(-)
```

```
Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha/TEAM_VNCS-shaun (niveditha-color)
$ git log
commit 746dc61c31c9c529b485e47a1ca574222cfc3fa9 (HEAD -> niveditha-color)
Author: "Niveditha <niveditha.bhagath@s.amity.edu>
Date:   Wed Jun 4 15:07:34 2025 +0530

    changed width and height of logo

commit 757034445a78e8ec4ca245169291b7f77f841f67
Author: "Niveditha <niveditha.bhagath@s.amity.edu>
Date:   Wed Jun 4 15:03:29 2025 +0530

    Changed color to pink
```

8. Now go to Git Hub and create a pull request

Comparing changes

Choose two branches to see what's changed or to start a new pull request. If you need to, you can also compare across forks or learn more about diff comparisons.

⇅ base repository: shaunsausmanamity/TEAM_VN... ▾   base: main ▾   ←   head repository: nivedithabhagathamity/TEAM_... ▾   compare: niveditha-color ▾

✓ **Able to merge.** These branches can be automatically merged.

Add a title

| Niveditha color |

Helpful resources

GitHub Community Guidelines

Add a description

Write   Preview   H B I ≔ ⟨⟩ 🔗 │ ⁝≡ ☰ ☑ │ 📎 @ ⤢ ↩ ⬚

| Add your description here... |

▥ Markdown is supported   🖼 Paste, drop, or click to add files

☑ Allow edits by maintainers ⍰   **Create pull request** ▾

Niveditha color #1

Edit   ⟨⟩ Code ▾

🔀 Open   nivedithabhagath... wants to merge 2 commits into shaunsausmanamity:main from nivedithabhagathamity:niveditha-color 🗗

| 💬 Conversation 0 | ⦾ Commits 2 | ☑ Checks 0 | 🗎 Files changed 1 | +3 −3 ■■■■

nivedithabhagathamity commented now   ···

No description provided.

😊

⌐⟲ **nivedithabhagathamity** added 2 commits 11 minutes ago

⟜ Ⓗ Changed color to pink   7570344

⟜ Ⓗ changed width and height of logo   746dc61

🔀 ◯ **Checking for the ability to merge automatically...**
         Changes can be cleanly merged.

Add a comment

Write   Preview   H B I ≔ ⟨⟩ 🔗 │ ⁝≡ ☰ ☑ │ 📎 @ ⤢ ↩ ⬚

| Add your comment here... |

Reviewers
No reviews
Still in progress? Convert to draft

Assignees
No one assigned

Labels
None yet

Projects
None yet

Milestone
No milestone

Development
Successfully merging this pull request may close these issues.
None yet

9. Fork your second teammate's repository and clone to make a new branch

```
Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha/TEAM_VNCS-shaun (niveditha-color)
$ cd ..

Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha
$ git clone https://github.com/nivedithabhagathamity/TEAM_VNCS_VAIBHAV
Cloning into 'TEAM_VNCS_VAIBHAV'...
remote: Enumerating objects: 34, done.
remote: Counting objects: 100% (34/34), done.
remote: Compressing objects: 100% (20/20), done.
remote: Total 34 (delta 12), reused 31 (delta 12), pack-reused 0 (from 0)
Receiving objects: 100% (34/34), 11.79 KiB | 524.00 KiB/s, done.
Resolving deltas: 100% (12/12), done.

Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha
$ ls
TEAM_VNCS-niveditha/  TEAM_VNCS-shaun/  TEAM_VNCS_VAIBHAV/

Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha
$ cd TEAM_VNCS_VAIBHAV/

Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha/TEAM_VNCS_VAIBHAV (main)
$ ls
README.md  kids.css  kids.html  kids.js
```

10. Now make changes in the new repo and commit the changes in a new branch and push

```
Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha/TEAM_VNCS_VAIBHAV (niveditha-html)
$ git log
commit d64cc13621957114e8e411d286a47219c2522369 (HEAD -> niveditha-html)
Author: "Niveditha <niveditha.bhagath@s.amity.edu>
Date:   Wed Jun 4 15:36:12 2025 +0530

    updated size chart

commit 777a4e9a84c12c4f97a6ee82aca591c30bf81402
Author: "Niveditha <niveditha.bhagath@s.amity.edu>
Date:   Wed Jun 4 15:34:45 2025 +0530

    added more content in para tag in about section
```

```
Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha/TEAM_VNCS_VAIBHAV (niveditha-html)
$ git push origin niveditha-html
Enumerating objects: 8, done.
Counting objects: 100% (8/8), done.
Delta compression using up to 4 threads
Compressing objects: 100% (6/6), done.
Writing objects: 100% (6/6), 739 bytes | 184.00 KiB/s, done.
Total 6 (delta 4), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (4/4), completed with 2 local objects.
remote:
remote: Create a pull request for 'niveditha-html' on GitHub by visiting:
remote:      https://github.com/nivedithabhagathamity/TEAM_VNCS_VAIBHAV/pull/new/niveditha-html
remote:
To https://github.com/nivedithabhagathamity/TEAM_VNCS_VAIBHAV
 * [new branch]      niveditha-html -> niveditha-html
```

11. Compare and pull request

12. Create a forked repository of your third teammate's repository and clone

```
Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha/TEAM_VNCS_VAIBHAV (niveditha-html)
$ cd ..

Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha
$ git clone https://github.com/nivedithabhagathamity/TEAM_VNCS-Chirantan
Cloning into 'TEAM_VNCS-Chirantan'...
remote: Enumerating objects: 34, done.
remote: Counting objects: 100% (34/34), done.
remote: Compressing objects: 100% (20/20), done.
remote: Total 34 (delta 12), reused 31 (delta 12), pack-reused 0 (from 0)
Receiving objects: 100% (34/34), 4.82 KiB | 159.00 KiB/s, done.
Resolving deltas: 100% (12/12), done.

Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha
$ ls
TEAM_VNCS-Chirantan/   TEAM_VNCS-niveditha/   TEAM_VNCS-shaun/   TEAM_VNCS_VAIBHAV/

Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha
$ cd TEAM_VNCS-Chirantan/
```

13. Now make changes in the new repo and commit the changes and push

```
Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha/TEAM_VNCS-Chirantan (niveditha-css)
$ vi styles.css

Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha/TEAM_VNCS-Chirantan (niveditha-css)
$ git add styles.css

Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha/TEAM_VNCS-Chirantan (niveditha-css)
$ git commit -m "changed h1 font size"
[niveditha-css da8f114] changed h1 font size
 1 file changed, 1 insertion(+), 1 deletion(-)

Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha/TEAM_VNCS-Chirantan (niveditha-css)
$ vi styles.css

Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha/TEAM_VNCS-Chirantan (niveditha-css)
$ git add styles.css

Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha/TEAM_VNCS-Chirantan (niveditha-css)
$ git commit -m "changed h2 font size"
[niveditha-css f530a86] changed h2 font size
 1 file changed, 1 insertion(+), 1 deletion(-)
```

```
Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha/TEAM_VNCS-Chirantan (niveditha-css)
$ git log
commit f530a86f55d3f184ccf53ad8102b04c4db194755 (HEAD -> niveditha-css)
Author: "Niveditha <niveditha.bhagath@s.amity.edu>
Date:   Wed Jun 4 15:57:20 2025 +0530

    changed h2 font size

commit da8f11485b940937e361cc873d562196e83f1f40
Author: "Niveditha <niveditha.bhagath@s.amity.edu>
Date:   Wed Jun 4 15:55:55 2025 +0530

    changed h1 font size
```

```
Niveditha Bhagath@niveditha MINGW64 /c/TEAM_VNCS/TEAM_VNCS-niveditha/TEAM_VNCS-Chirantan (niveditha-css)
$ git push origin niveditha-css
Enumerating objects: 8, done.
Counting objects: 100% (8/8), done.
Delta compression using up to 4 threads
Compressing objects: 100% (6/6), done.
Writing objects: 100% (6/6), 591 bytes | 147.00 KiB/s, done.
Total 6 (delta 4), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (4/4), completed with 2 local objects.
remote:
remote: Create a pull request for 'niveditha-css' on GitHub by visiting:
remote:        https://github.com/nivedithabhagathamity/TEAM_VNCS-Chirantan/pull/new/niveditha-css
remote:
To https://github.com/nivedithabhagathamity/TEAM_VNCS-Chirantan
 * [new branch]      niveditha-css -> niveditha-css
```

14. Compare and pull on Git Hub

15. Accept all the pull requests