Source Code Management

Course Code: CSE 2015

Slot: L14 L15

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Lab Session 1: 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 organized 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 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.
- **Optimizing 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.

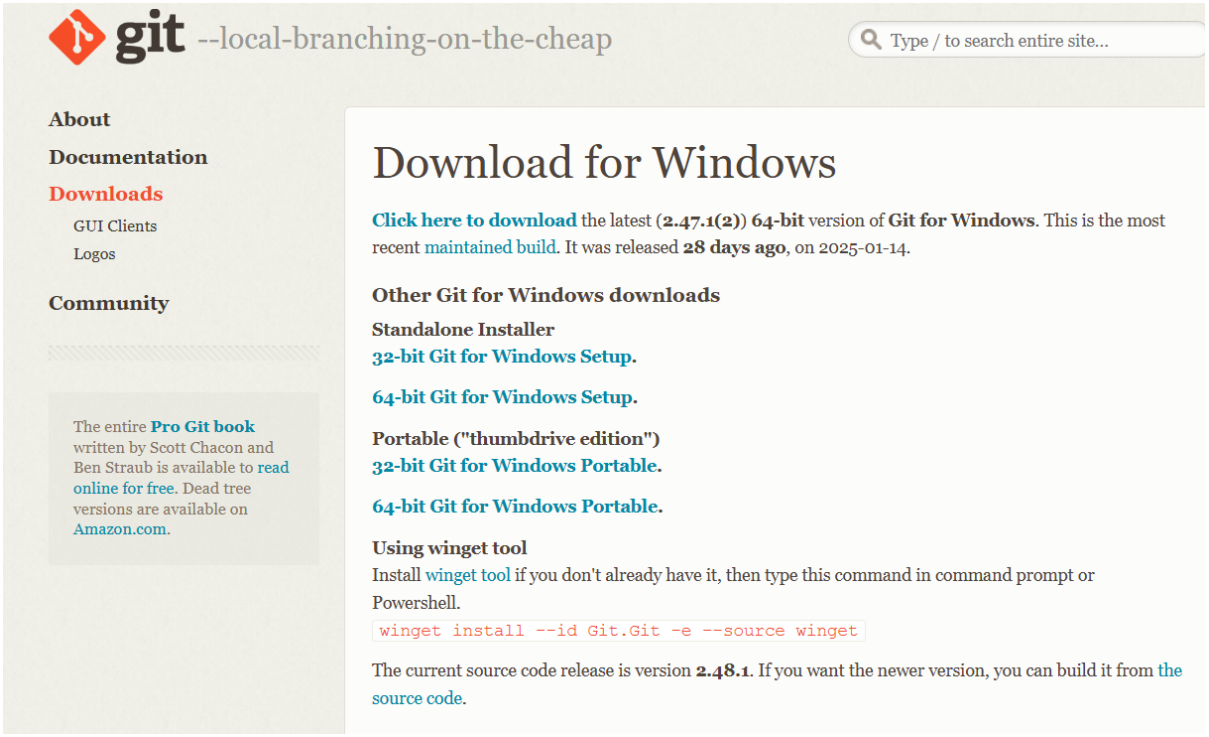
Version

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.

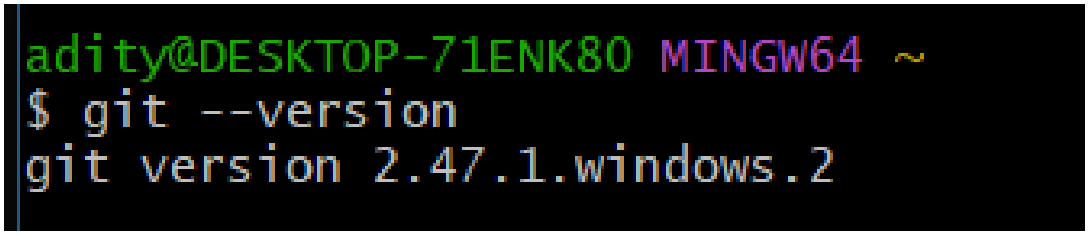
Lab Practical 1

1. Installing Git in Windows

Step 1: Visit section 1.5 of pro git document and navigate to Windows section



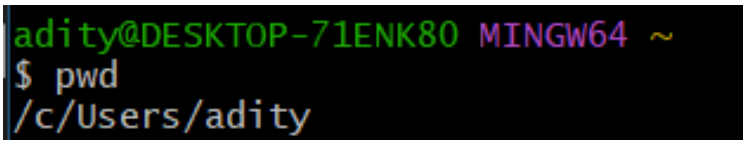
Step 2: Verify Git Installation:



2. Basic CLI Commands

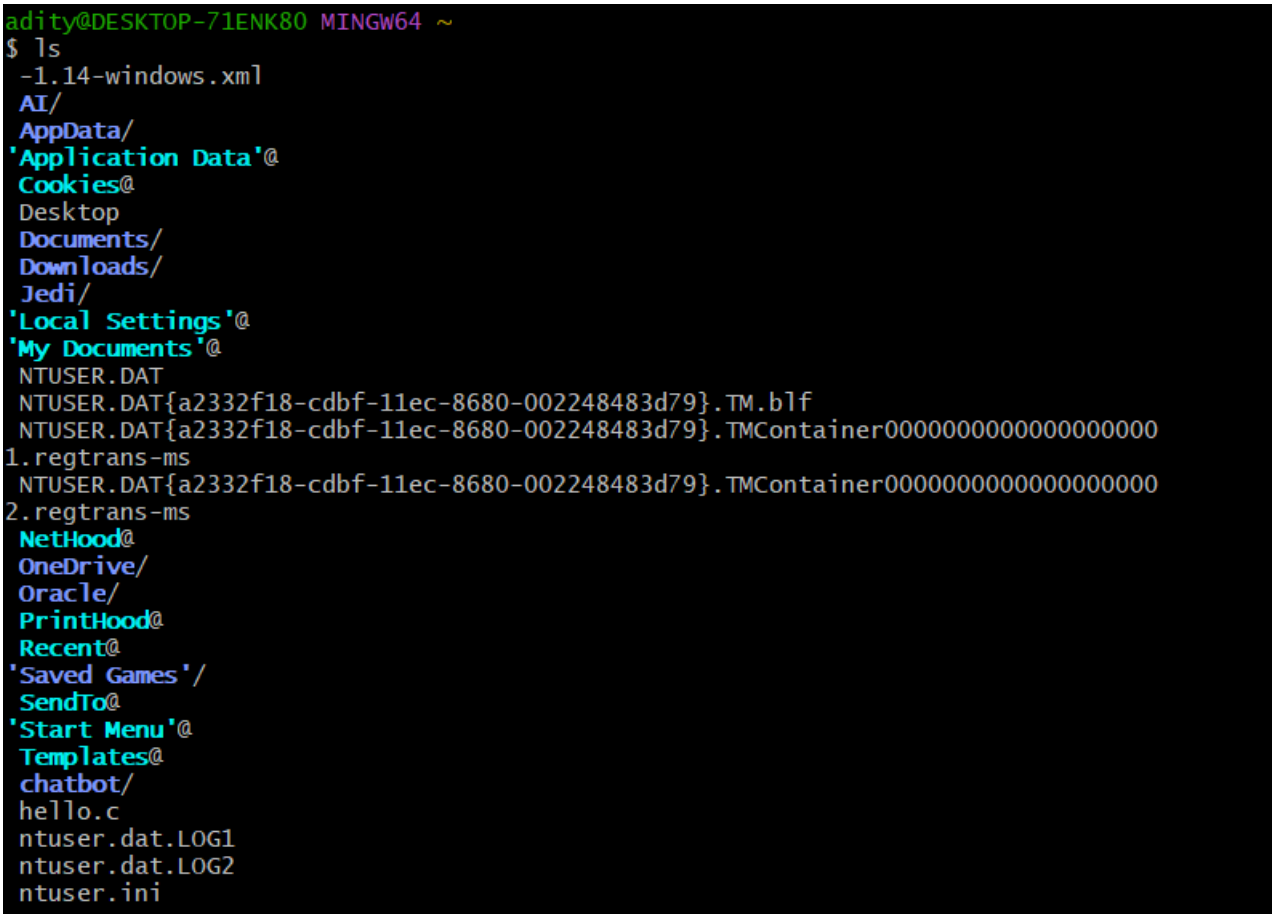
1) Command: pwd

Description: Prints the directory the user is working in.



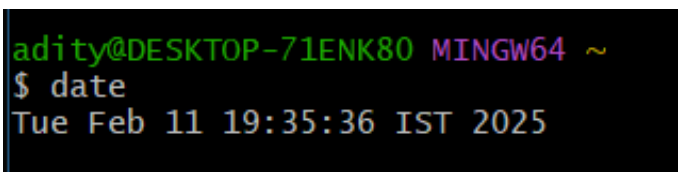
2) Command: ls

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



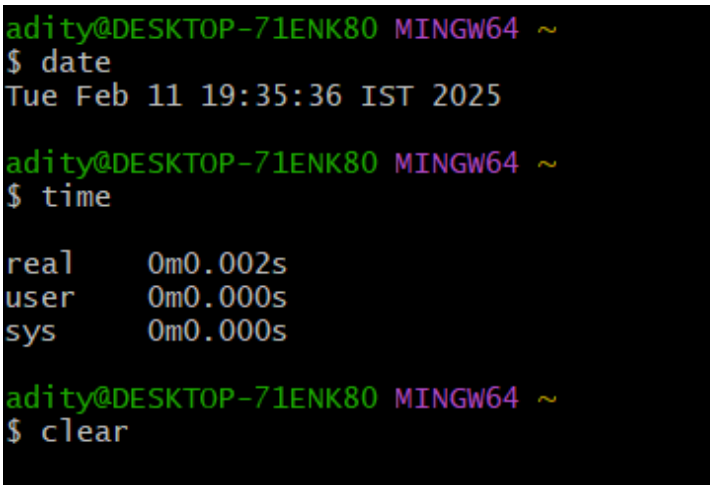
3. Command: date

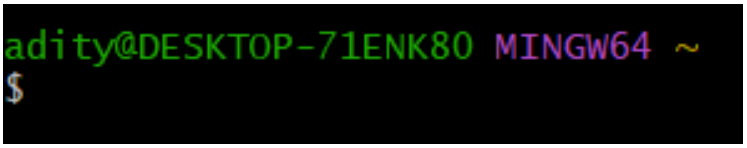
Description: shows the current date and time in a standard format



4. Command: clear

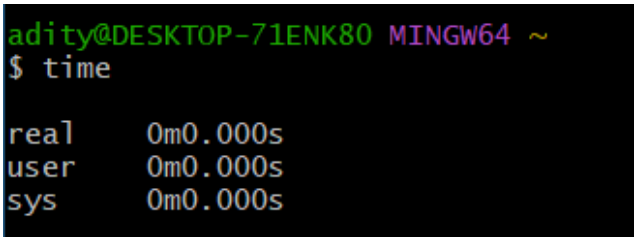
Description: The `clear` command in the CLI is used to clear all the current text and output displayed in the terminal window.





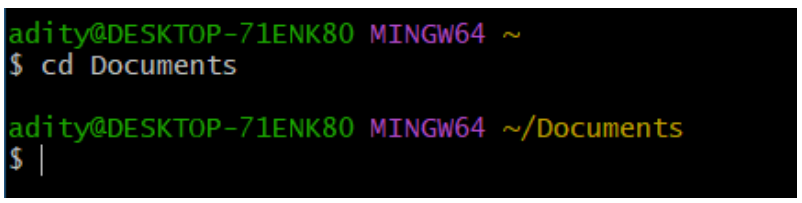
5. Command: time

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



6. Command: cd 'Directory'

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



7. Command: cd ..

Description: Goes back to the previous directory.

```
adity@DESKTOP-71ENK80 MINGW64 ~
$ cd Documents

adity@DESKTOP-71ENK80 MINGW64 ~/Documents
$ cd ..

adity@DESKTOP-71ENK80 MINGW64 ~
$
```

8. Command: mkdir

Description: To create a new directory.

```
adity@DESKTOP-71ENK80 MINGW64 ~/Documents
$ mkdir Trial

adity@DESKTOP-71ENK80 MINGW64 ~/Documents
$ ls
'Pro Tools'/   Trial/
```

9. Command: rmdir

Description: To delete a directory

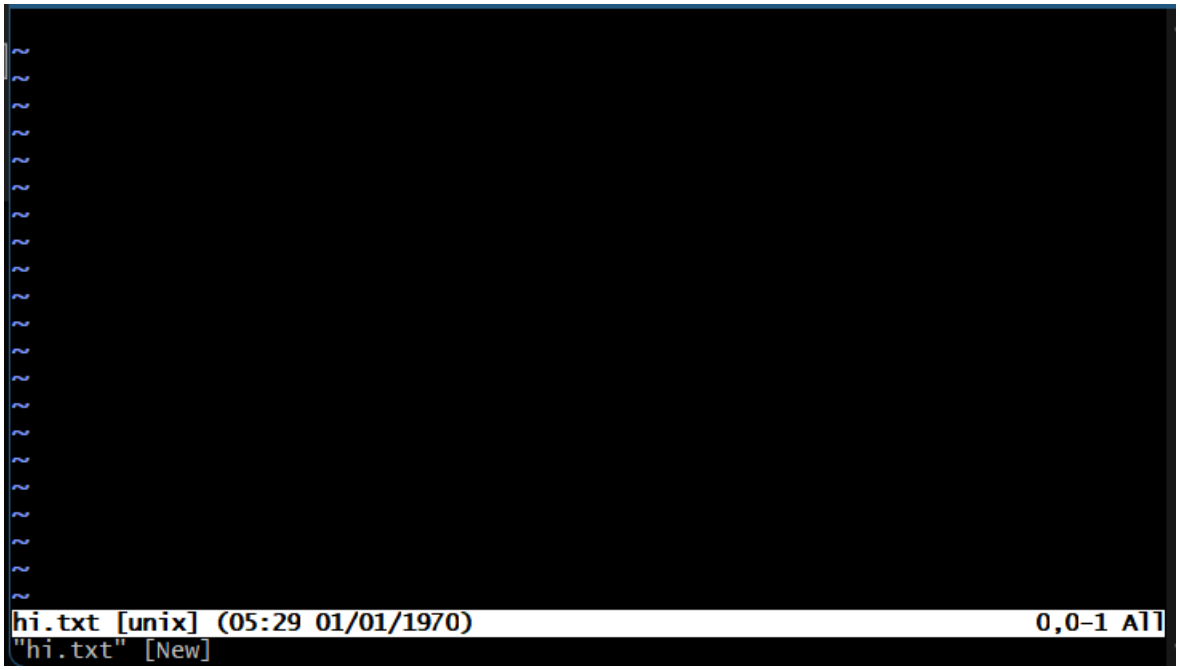
```
adity@DESKTOP-71ENK80 MINGW64 ~/Documents
$ mkdir Trial

adity@DESKTOP-71ENK80 MINGW64 ~/Documents
$ ls
'Pro Tools'/   Trial/

adity@DESKTOP-71ENK80 MINGW64 ~/Documents
$ rmdir Trial

adity@DESKTOP-71ENK80 MINGW64 ~/Documents
$ ls
'Pro Tools'/
```

3. Vim Text Editor

1) Command: vi hi.txt

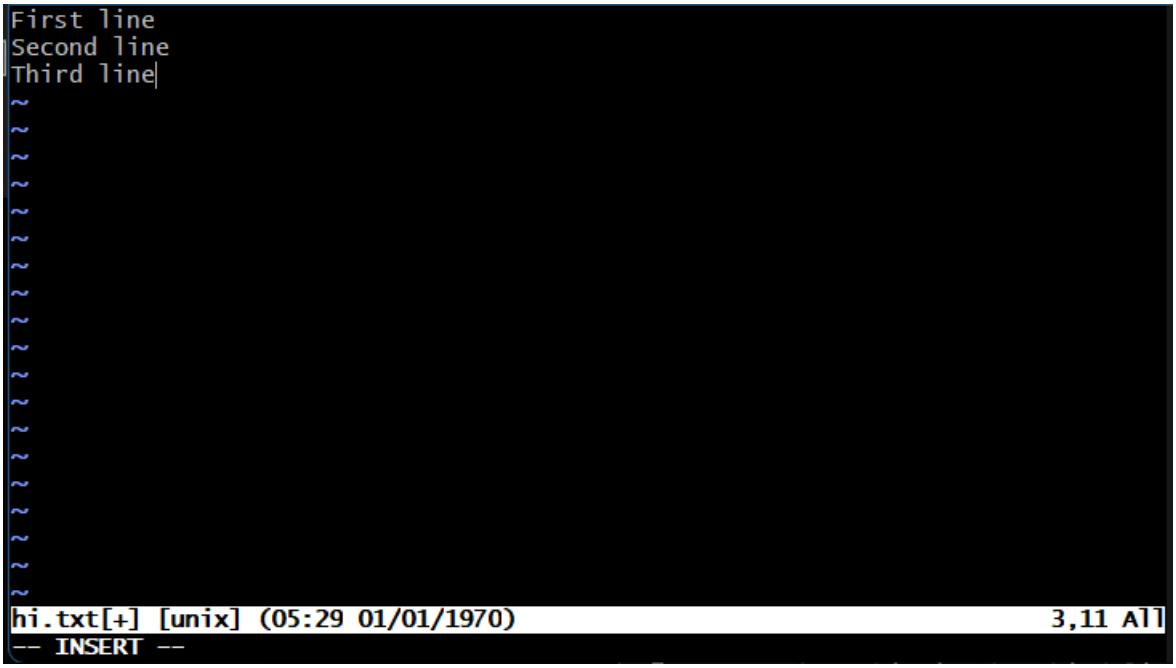
Description: Opens (or creates) the file `hi.txt` in the Vim text editor.

```
adity@DESKTOP-71ENK80 MINGW64 ~/Documents
$ vi hi.txt
```



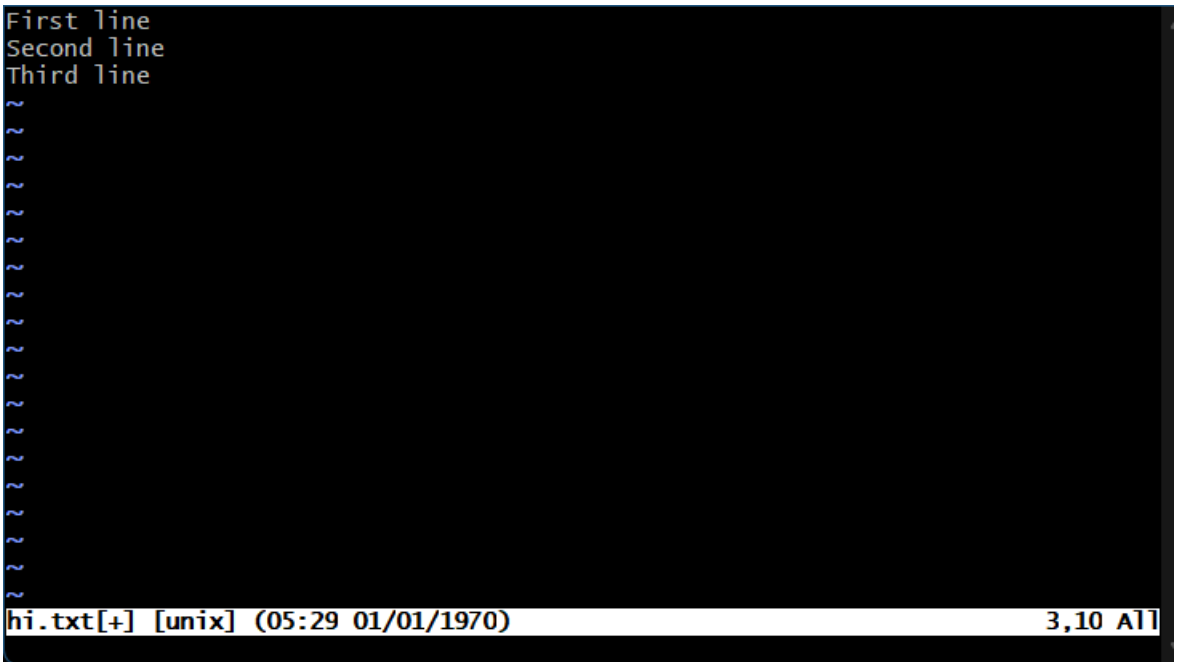
2) Command: `i` (Insert Mode)

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



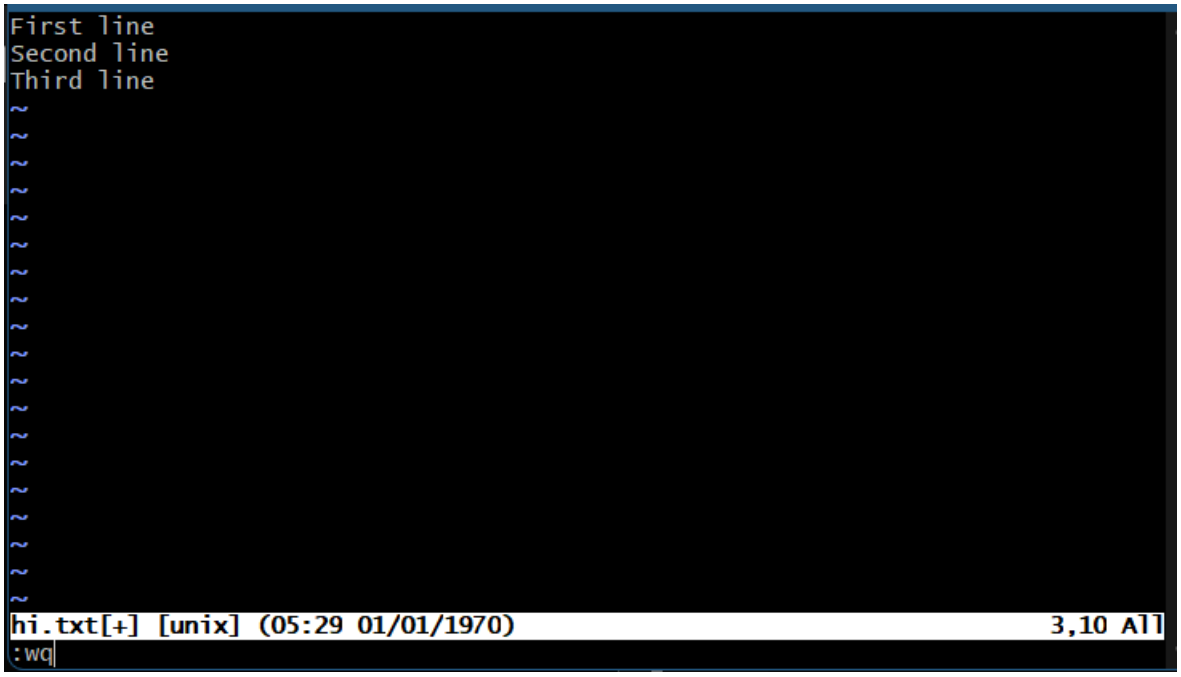
3) Command: esc

Description: Used to exit insert mode



4) Command: `:wq`

Description: Saves the changes and exits the Vim editor.




```
adity@DESKTOP-71ENK80 MINGW64 ~/Documents
$ vi hi.txt

adity@DESKTOP-71ENK80 MINGW64 ~/Documents
$ ls
'Pro Tools'/   hi.txt
```

4. Git Commands

1. Command: git - - version

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

bash

```
adity@DESKTOP-71ENK80 MINGW64 ~/Documents
$ git --version
git version 2.47.1.windows.2
```

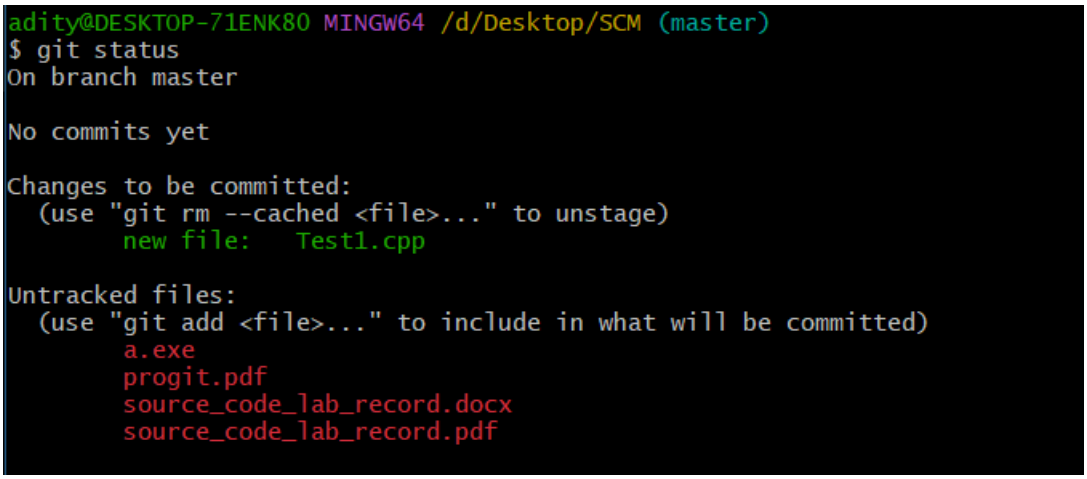
2. Command: git init

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

```
adity@DESKTOP-71ENK80 MINGW64 /d/Desktop/Trial
$ git init
Initialized empty Git repository in D:/Desktop/Trial/.git/

adity@DESKTOP-71ENK80 MINGW64 /d/Desktop/Trial (master)
$
```

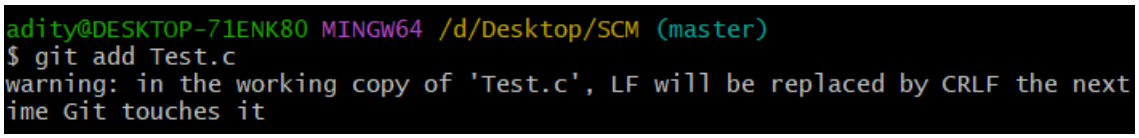
3. Command: git status

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



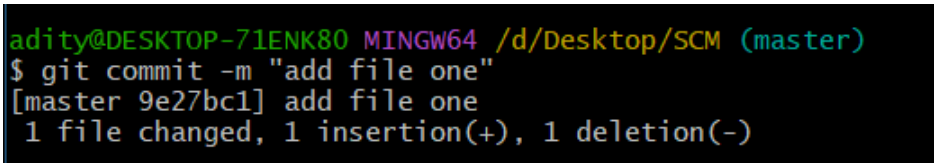
4. Command: git add Test.c

Description: Add Test.c to the staging area in preparation for a commit.



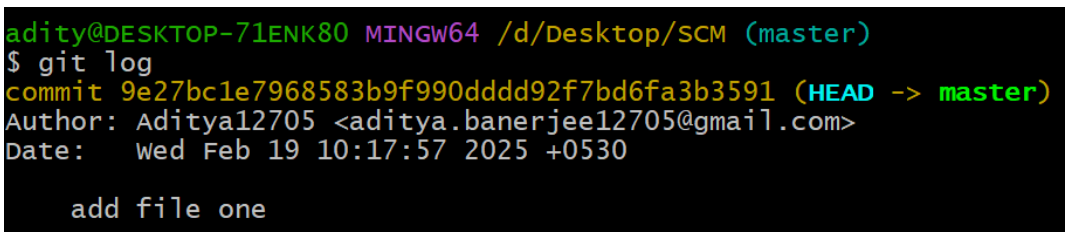
5. Command: git commit -m “add file one”

Description: Commits the stage changes with the message “add file one”.



6. Command: git log

Description: Display the commit history of the repository.



7. Command: git clone

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

```
adity@DESKTOP-71ENK80 MINGW64 /d/Desktop/SCM (master)
$ git clone https://github.com/AsmSafone/MusicPlayer
Cloning into 'MusicPlayer'...
remote: Enumerating objects: 266, done.
remote: Counting objects: 100% (116/116), done.
remote: Compressing objects: 100% (33/33), done.
remote: Total 266 (delta 97), reused 83 (delta 83), pack-reused 150 (fro
m 2)
Receiving objects: 100% (266/266), 1.84 MiB | 2.24 MiB/s, done.
Resolving deltas: 100% (145/145), done.
```

8. Command: git log --oneline

Description: For generating shorter commit ID.

```
adity@DESKTOP-71ENK80 MINGW64 /d/Desktop/SCM (master)
$ git log --oneline
9e27bc1 (HEAD -> master) add file one
751add6 Committing Test.c and Test2.c
0bdc113 committing Test.c
ef0886b committing Test.c
3e40141 committing Test.c
```

9. Command: git diff

Description: To compare two files.

```
adity@DESKTOP-71ENK80 MINGW64 /D/Desktop/SCM/SCM (master)
$ git diff b46a555 521a0d3
diff --git a/Trial.c b/Trial.c
index 7a64e83..e6ef922 100644
--- a/Trial.c
+++ b/Trial.c
@@ -8,5 +8,4 @@ int main()
        printf("Addition: %d", a+b);
        printf("Subtraction: %d", a-b);
        printf("Multiplication: %d", a*b);
-       printf("Division: %d", a/b);
 }
```

10. Command: git remote add “Variable”

Description: To connect with the Users GitHub account.

```
adity@DESKTOP-71ENK80 MINGW64 /D/Desktop/SCM/SCM (master)
$ git remote add SCM https://github.com/Aditya12705/SCM.git
```

11. Command: git remote

Description: To check the status of the repositories connected with the Users account.

```
adity@DESKTOP-71ENK80 MINGW64 /D/Desktop/SCM/SCM (master)
$ git remote
SCM
```

12. Command: git push -u “Variable” master

Description: To push all the files to the Users account.

```
adity@DESKTOP-71ENK80 MINGW64 /D/Desktop/SCM/SCM (master)
$ git push -u SCM master
Enumerating objects: 12, done.
Counting objects: 100% (12/12), done.
Delta compression using up to 12 threads
Compressing objects: 100% (8/8), done.
Writing objects: 100% (12/12), 1.01 KiB | 343.00 KiB/s, done.
Total 12 (delta 3), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (3/3), done.
To https://github.com/Aditya12705/SCM.git
 * [new branch]      master -> master
branch 'master' set up to track 'SCM/master'.
```

13. Command: git merge “File_Name” -m “comment”

Description: To merge a branch with main branch.

```
adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM-Project (main)
$ git merge aditya-css -m "Merging aditya-css branch"
Merge made by the 'ort' strategy.
 Blockchain.css | 494 ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
 1 file changed, 494 insertions(+)
 create mode 100644 Blockchain.css
```

SCM Project

The project is 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.

First, make your own repositories and make 3 branches and add files and merge with the main branch.

1) **Go to the directory on your computer**

```
adity@DESKTOP-71ENK80 MINGW64 ~
$ cd 'C:\Users\aditya\Desktop\SCM-Project'
```

2) Git init the folder

```
adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM-Project
$ git init
Initialized empty Git repository in C:/Users/Aditya/Desktop/SCM-Project/.git/
```

3) Make an initial commit as a README.md and commit it

```
adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM-Project (master)
$ echo "Initial Commit" > README.md

adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM-Project (master)
$ git add README.md
warning: in the working copy of 'README.md', LF will be replaced by CRLF the nex
t time Git touches it

adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM-Project (master)
$ git commit -m "Initial Commit"
[master (root-commit) da9ff9b] Initial Commit
 1 file changed, 1 insertion(+)
 create mode 100644 README.md
```

4) Make three branches

```
adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM-Project (main)
$ git branch aditya-html

adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM-Project (main)
$ git branch aditya-css

adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM-Project (main)
$ git branch files-for-github-repo
```

5) Checkout to the first branch

```
adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM-Project (main)
$ git checkout aditya-html
Switched to branch 'aditya-html'
```

6) **Create a html file, add the file and commit it**

```
adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM-Project (aditya-html)
$ code Blockchain.html

adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM-Project (aditya-html)
$ git add Blockchain.html

adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM-Project (aditya-html)
$ git commit -m "Till Header Section"
[aditya-html ecefd7c] Till Header Section
 1 file changed, 36 insertions(+)
 create mode 100644 Blockchain.html
```

7) **Reopen the file, make changes, add the file again and commit**

```
adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM-Project (aditya-html)
$ git add Blockchain.html

adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM-Project (aditya-html)
$ git commit -m "Till Agenda Section"
[aditya-html 45b8cad] Till Agenda Section
 1 file changed, 119 insertions(+)
```

8) **Redo the previous steps to make some changes, add and commit again.**

```
adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM-Project (aditya-html)
$ code Blockchain.html

adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM-Project (aditya-html)
$ git add Blockchain.html

adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM-Project (aditya-html)
$ git commit -m "Till Footer Section"
[aditya-html a05493e] Till Footer Section
 1 file changed, 104 insertions(+)
```

9) **Checkout to the second branch, do the steps again for adding and committing a file 3 times.**

```
adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM-Project (aditya-html)
$ git checkout aditya-css
Switched to branch 'aditya-css'

adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM-Project (aditya-css)
$ vi Blockchain.css

adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM-Project (aditya-css)
$ git add Blockchain.css
warning: in the working copy of 'Blockchain.css', LF will be replaced by CRLF th
e next time Git touches it

adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM-Project (aditya-css)
$ git commit -m "Till Nav Links"
[aditya-css c5186db] Till Nav Links
 1 file changed, 51 insertions(+)
 create mode 100644 Blockchain.css

adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM-Project (aditya-css)
$ code Blockchain.css

adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM-Project (aditya-css)
$ git add Blockchain.css
warning: in the working copy of 'Blockchain.css', LF will be replaced by CRLF th
e next time Git touches it

adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM-Project (aditya-css)
$ git commit -m "Till Header-content"
[aditya-css 2a4dd54] Till Header-content
 1 file changed, 68 insertions(+)
```

10) **Checkout to the third branch after committing 3 changes in the previous branch**

```
adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM-Project (aditya-css)
$ git branch
* aditya-css
  aditya-html
  files-for-github-repo
  main

adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM-Project (aditya-css)
$ git checkout files-for-github-repo
Switched to branch 'files-for-github-repo'
```

11) In the third branch, adding the speaker icon and committing it.

```
adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM-Project (aditya-css)
$ git checkout files-for-github-repo
Switched to branch 'files-for-github-repo'

adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM-Project (files-for-git
hub-repo)
$ ls
README.md  icon.jpg

adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM-Project (files-for-git
hub-repo)
$ git add icon.jpg

adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM-Project (files-for-git
hub-repo)
$ git commit -m "Addition of Speaker Icon"
[files-for-github-repo 4b43bd8] Addition of Speaker Icon
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 icon.jpg
```

12) Checking out to the main branch

```
adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM-Project (files-for-git
hub-repo)
$ git checkout main
Switched to branch 'main'
```

13) Merging the first branch (aditya-html) to the main branch

```
adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM-Project (main)
$ git merge aditya-html -m "Merging aditya-html branch"
Updating da9ff9b..a05493e
Fast-forward (no commit created; -m option ignored)
 Blockchain.html | 259 ++++++++++++++++++++++++++++++++++++++++++++++++++++++++
 1 file changed, 259 insertions(+)
 create mode 100644 Blockchain.html
```

14) Same way merging the rest 2 branches with the main branch as well

```
adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM-Project (main)
$ git merge aditya-css -m "Merging aditya-css branch"
Merge made by the 'ort' strategy.
 Blockchain.css | 494 ++++++++++++++++++++++++++++++++++++++++++++++++++++++++++
 1 file changed, 494 insertions(+)
 create mode 100644 Blockchain.css

adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM-Project (main)
$ git merge files-for-github-repo -m "Merging files-for-github-repo branch"
Merge made by the 'ort' strategy.
 icon.jpg | Bin 0 -> 17321 bytes
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 icon.jpg
```

15) Using “git log –oneline” to check all the commits

```
adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM-Project (main)
$ git log --oneline
f38d4ee (HEAD -> main) Merging files-for-github-repo branch
116924e Merging aditya-css branch
4b43bd8 (files-for-github-repo) Addition of Speaker Icon
a66b78a (aditya-css) Till Footer Section
2a4dd54 Till Header-content
c5186db Till Nav Links
a05493e (aditya-html) Till Footer Section
45b8cad Till Agenda Section
ecefd7c Till Header Section
da9ff9b Initial Commit
```

16) Using git remote to add GitHub repository

```
adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM-Project (main)
$ git remote add origin https://github.com/Aditya12705/System32-SCM-Project.git

adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM-Project (main)
$ git remote -v
origin  https://github.com/Aditya12705/System32-SCM-Project.git (fetch)
origin  https://github.com/Aditya12705/System32-SCM-Project.git (push)
```

17) Pushing all the commits and file in the GitHub repository

```
adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM-Project (main)
$ git push origin --all
Enumerating objects: 28, done.
Counting objects: 100% (28/28), done.
Delta compression using up to 12 threads
Compressing objects: 100% (26/26), done.
Writing objects: 100% (28/28), 18.87 KiB | 920.00 KiB/s, done.
Total 28 (delta 7), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (7/7), done.
To https://github.com/Aditya12705/System32-SCM-Project.git
 * [new branch]      aditya-css -> aditya-css
 * [new branch]      aditya-html -> aditya-html
 * [new branch]      files-for-github-repo -> files-for-github-repo
 * [new branch]      main -> main
```

(Now we will clone the repository of the rest of my Team Members, make some changes in their repositories, and send pull requests.)

- **Ishrit**

1) Go back to the folder where you want to save the folder

```
adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/QR (main)
$ cd 'C:\Users\aditya\Desktop\SCM'
```

2) Clone the forked repository

```
adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM
$ git clone https://github.com/Aditya12705/System_32_Ishrit_git_workshop_Aditya
Cloning into 'System_32_Ishrit_git_workshop_Aditya'...
remote: Enumerating objects: 50, done.
remote: Counting objects: 100% (50/50), done.
remote: Compressing objects: 100% (35/35), done.
remote: Total 50 (delta 19), reused 42 (delta 12), pack-reused 0 (from 0)
Receiving objects: 100% (50/50), 11.62 KiB | 699.00 KiB/s, done.
Resolving deltas: 100% (19/19), done.
```

3) Go to the cloned repository

```
adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM
$ cd "System_32_Ishrit_git_workshop_Aditya"
```

4) Create a new branch and checkout to it

```
adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM/System_32_Ishrit_git_w
orkshop_Aditya (main)
$ git checkout -b my-contribution
Switched to a new branch 'my-contribution'
```

5) Make some changes in the repository.

```
adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM/System_32_Ishrit_git_w
orkshop_Aditya (my-contribution)
$ vi git_workshop.html

adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM/System_32_Ishrit_git_w
orkshop_Aditya (my-contribution)
$ vi git_workshop.css
```

6) Add the edited files.

```
adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM/System_32_Ishrit_git_w
orkshop_Aditya (my-contribution)
$ git add .
```

7) Commit the files.

```
adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM/System_32_Ishrit_git_w
orkshop_Aditya (my-contribution)
$ git commit -m "Added a new Testimonial Section"
[my-contribution 703a911] Added a new Testimonial Section
 2 files changed, 65 insertions(+), 6 deletions(-)
```

8) **Push it to the Forked Repository for pull request.**

```
adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM/System_32_Ishrit_git_w
orkshop_Aditya (my-contribution)
$ git push origin my-contribution
Enumerating objects: 7, done.
Counting objects: 100% (7/7), done.
Delta compression using up to 12 threads
Compressing objects: 100% (4/4), done.
Writing objects: 100% (4/4), 1.14 KiB | 389.00 KiB/s, done.
Total 4 (delta 2), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (2/2), completed with 2 local objects.
remote:
remote: Create a pull request for 'my-contribution' on GitHub by visiting:
remote:      https://github.com/Aditya12705/System_32_Ishrit_git_workshop_Aditya
/pull/new/my-contribution
remote:
To https://github.com/Aditya12705/System_32_Ishrit_git_workshop_Aditya
 * [new branch]      my-contribution -> my-contribution
```

- **Sharon**

1) **Go back to the folder where you want to save the folder**

```
adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM
$ cd 'C:\Users\aditya\Desktop\SCM'
```

2) **Clone the Forked repository**

```
adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM
$ git clone https://github.com/Aditya12705/Final-Pro-Max-Aditya
Cloning into 'Final-Pro-Max-Aditya'...
remote: Enumerating objects: 83, done.
remote: Counting objects: 100% (83/83), done.
remote: Compressing objects: 100% (59/59), done.
remote: Total 83 (delta 28), reused 58 (delta 20), pack-reused 0 (from 0)
Receiving objects: 100% (83/83), 1.44 MiB | 2.07 MiB/s, done.
Resolving deltas: 100% (28/28), done.
```

3) **Go to the cloned repository.**

```
adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM
$ cd 'Final-Pro-Max-Aditya'
```

4) **Make changes in the file.**

```
adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM/Final-Pro-Max-Aditya (
main)
$ vi index.html

adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM/Final-Pro-Max-Aditya (
main)
$ vi style.css
```

5) **Create a new branch and checkout to it.**

```
adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM/Final-Pro-Max-Aditya (
main)
$ git checkout -b my-contribution
Switched to a new branch 'my-contribution'
```

6) **Add the files and commit the files.**

```
dity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM/Final-Pro-Max-Aditya (
y-contribution)
 git add .

dity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM/Final-Pro-Max-Aditya (
y-contribution)
 git commit -m "Added a new Partners section"
my-contribution b44d479] Added a new Partners section
2 files changed, 85 insertions(+), 2 deletions(-)
```

7) **Push the branch to the forked repository for pull request.**

```
dity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM/Final-Pro-Max-Aditya (
y-contribution)
 git push origin my-contribution
numerating objects: 7, done.
ounting objects: 100% (7/7), done.
elta compression using up to 12 threads
ompressing objects: 100% (4/4), done.
riting objects: 100% (4/4), 1.18 KiB | 1.18 MiB/s, done.
otal 4 (delta 3), reused 0 (delta 0), pack-reused 0 (from 0)
emote: Resolving deltas: 100% (3/3), completed with 3 local objects.
emote:
emote: Create a pull request for 'my-contribution' on GitHub by visiting:
emote:      https://github.com/Aditya12705/Final-Pro-Max-Aditya/pull/new/my-con
tribution
emote:
o https://github.com/Aditya12705/Final-Pro-Max-Aditya
 * [new branch]      my-contribution -> my-contribution
```

- **Ritvik**

1) Go back to the folder where you want to save the folder

```
adity@DESKTOP-71ENK80 MINGW64 ~
$ cd 'C:\Users\aditya\Desktop\SCM'
```

2) Clone the Forked Repository.

```
adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM
$ git clone https://github.com/Aditya12705/IOT_Project_Aditya
Cloning into 'IOT_Project_Aditya'...
remote: Enumerating objects: 17, done.
remote: Counting objects: 100% (17/17), done.
remote: Compressing objects: 100% (9/9), done.
remote: Total 17 (delta 5), reused 17 (delta 5), pack-reused 0 (from 0)
Receiving objects: 100% (17/17), 6.41 KiB | 729.00 KiB/s, done.
Resolving deltas: 100% (5/5), done.
```

3) Go to the cloned repository.

```
adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM
$ cd IOT_Project_Aditya
```

4) Create a branch and checkout to it.

```
adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM/IOT_Project_Aditya (ma
ster)
$ git checkout -b my-contribution
Switched to a new branch 'my-contribution'
```

5) Make changes to the files.

```
adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM/IOT_Project_Aditya (my
-contribution)
$ vi iot.html

adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM/IOT_Project_Aditya (my
-contribution)
$ vi iot.css
```

6) **Add the files and then commit it.**

```
adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM/IOT_Project_Aditya (my
-contribution)
$ git add .

adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM/IOT_Project_Aditya (my
-contribution)
$ git commit -m "Added a new Highlights section"
[my-contribution 657af25] Added a new Highlights section
 2 files changed, 41 insertions(+), 2 deletions(-)
```

7) **Push the branch to the forked repository for pull request.**

```
adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM/IOT_Project_Aditya (my
-contribution)
$ git push origin my-contribution
Enumerating objects: 7, done.
Counting objects: 100% (7/7), done.
Delta compression using up to 12 threads
Compressing objects: 100% (4/4), done.
Writing objects: 100% (4/4), 958 bytes | 958.00 KiB/s, done.
Total 4 (delta 2), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (2/2), completed with 2 local objects.
remote:
remote: Create a pull request for 'my-contribution' on GitHub by visiting:
remote:      https://github.com/Aditya12705/IOT_Project_Aditya/pull/new/my-contr
ibution
remote:
To https://github.com/Aditya12705/IOT_Project_Aditya
 * [new branch]      my-contribution -> my-contribution
```

- **Khushi**

1) **Go back to the folder where you want to save the folder**

```
adity@DESKTOP-71ENK80 MINGW64 ~
$ cd 'C:\Users\aditya\Desktop\SCM'
```

2) **Clone the Forked Repository.**

```
adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM
$ git clone https://github.com/Aditya12705/SCM_final-eventpage-Aditya
Cloning into 'SCM_final-eventpage-Aditya'...
remote: Enumerating objects: 45, done.
remote: Counting objects: 100% (45/45), done.
remote: Compressing objects: 100% (31/31), done.
Receiving objects: 100% (45/45), 15.44 KiB | 585.00 KiB/s, done.
Resolving deltas: 100% (15/15), done.
remote: Total 45 (delta 15), reused 39 (delta 13), pack-reused 0 (from 0)
```

3) Go to the cloned repository.

```
adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM
$ cd 'SCM_final-eventpage-Aditya'
```

4) Create a branch and checkout to it.

```
adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM/SCM_final-eventpage-Ad
itya (master)
$ git checkout -b my-contribution
Switched to a new branch 'my-contribution'
```

5) Make changes to the files.

```
adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM/SCM_final-eventpage-Ad
itya (my-contribution)
$ vi buildai.html

adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM/SCM_final-eventpage-Ad
itya (my-contribution)
$ vi buildaicss.css
```

6) Add the files and then commit it.

```
adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM/SCM_final-eventpage-Ad
itya (my-contribution)
$ git commit -m "Added a Testimonials section"
[my-contribution 1c9d60a] Added a Testimonials section
 2 files changed, 89 insertions(+), 2 deletions(-)
```

7) Push the branch to the forked repository for pull request.

```
adity@DESKTOP-71ENK80 MINGW64 /c/Users/aditya/Desktop/SCM/SCM_final-eventpage-Ad
itya (my-contribution)
$ git push origin my-contribution
Enumerating objects: 7, done.
Counting objects: 100% (7/7), done.
Delta compression using up to 12 threads
Compressing objects: 100% (4/4), done.
Writing objects: 100% (4/4), 1.18 KiB | 1.18 MiB/s, done.
Total 4 (delta 2), reused 0 (delta 0), pack-reused 0 (from 0)
remote: Resolving deltas: 100% (2/2), completed with 2 local objects.
remote:
remote: Create a pull request for 'my-contribution' on GitHub by visiting:
remote:      https://github.com/Aditya12705/SCM_final-eventpage-Aditya/pull/new/
my-contribution
remote:
To https://github.com/Aditya12705/SCM_final-eventpage-Aditya
 * [new branch]      my-contribution -> my-contribution
```

(Finally after all the changes made and pull requests we use “git pull” to sync all the changes in our local folder)