Subject name: Source code management

Subject code: CS181

Cluster: Beta

Department: DCSE

# **Submitted by:** Gurpreet Singh

2110990535

G08

## **Submitted to:**

Dr. Monit Kapoor



Aim: Setting up of Git Client

#### Theory:

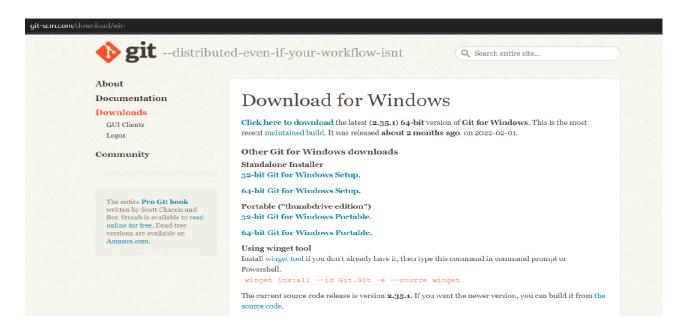
<u>GIT</u> -> It is basically used for pushing and pulling of code. We can use git and git-hub parallelly to work with multiple members or individually. We can make, edit, recreate, copy or download any code on git hub using git.

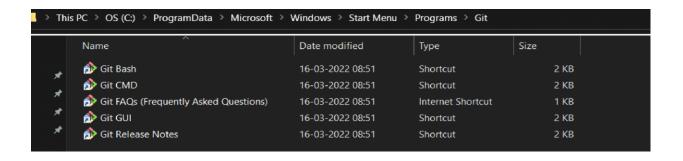
<u>What is GIT?</u> —> It's a Version Control System(VCS) -> It is a software or we can say a server by which we are able to track all the previous changes in the code.

### Advantages of GIT ->

**Procedure:** We can install Git on Windows, using the most official build which is available for download on the GIT's official website or by just typing (scmgit) on any search engine. We can go on <a href="https://git-scm.com/download/win">https://git-scm.com/download/win</a> and can select the platform and bit-version to download. And after clicking on your desired bit-version or ios it will start downloading automatically.

#### **Snapshots of download:**





```
HP@Sherry1972 MINGW64 ~/OneDrive/Desktop (master)

$ |
```



Aim: Setting up GitHub Account

#### Theory:

<u>What is GitHub</u> -> GitHub is a website and cloud-based service (client) that helps an individual or a developers to store and manage their code. We can also track as well as control changes to our or public code.

<u>Advantages of GitHub</u> -> GitHub's has a user-friendly interface and is easy to use .We can connect the git-hub and git but using some commands shown below in figure 001. Without GitHub we cannot use Git because it generally requires a host and if we are working for a project we need to share it will our team members, which can only be done by making a repository . Additionally , anyone can sign up and host a public code repository for free, which makes GitHub especially popular with open-source projects.

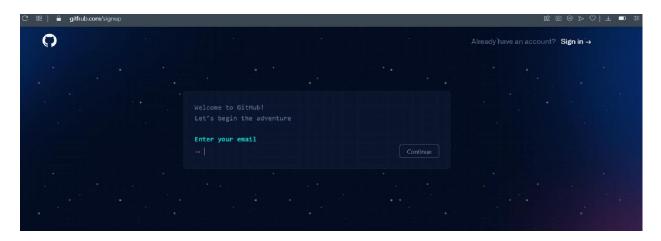
#### Procedure:-

#### Step1:-

Google (any search engine)
Search for git-hub or (https://github.com/signup).

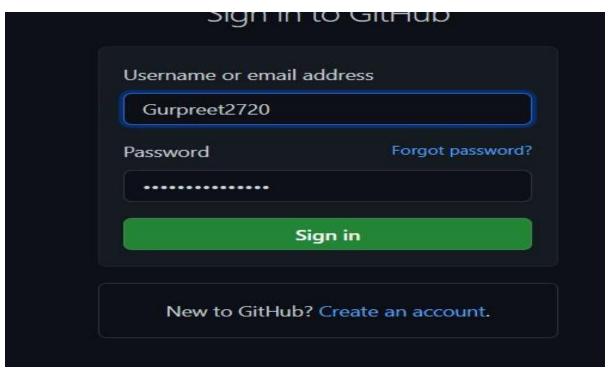
#### Step2:-

#### Snapshots -

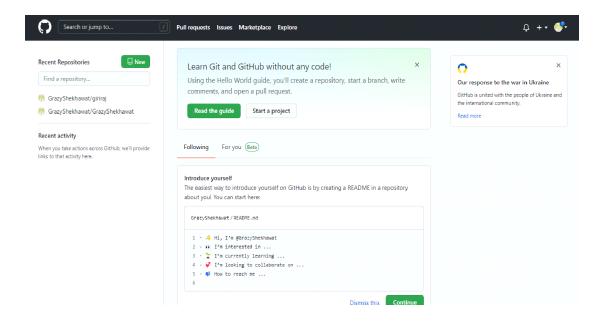


After visiting the link this type of interface will appear, if you already have account you can sign in and if not you can create.

#### Sign in into GitHub:-



Interface of GitHub:-



#### To link GitHub account with Git bash -

#### For username:-

git config --global user.name "username in git-hub"

#### For user email:-

git config --global user.email "your email in git-hub"

#### To verify:-

git config user.name

git config user.email

#### **Snapshot:-**

```
HP@Sherry1972 MINGW64 ~ (master)
$ git config --global user.name
Gurpreet27

HP@Sherry1972 MINGW64 ~ (master)
$ git config --global user.email
gurpreet0535.be21@chitkara.edu.in

HP@Sherry1972 MINGW64 ~ (master)
$
```



**Aim:** Program to Generate log

Theory:-

<u>Logs -></u> Logs are nothing but the history which we can see in git by using the code git log. It contains all the past commits, insertions and deletions in it which we can see any time.

<u>Why logs -></u> Logs helps to check that what were the changes in the code or any other file and by whom. It also contains the number of insertions and deletions including at which time it was changed.

Snapshots -

```
HP@Sherry1972 MINGW64 /c/gitbash
$ git init
Initialized empty Git repository in C:/gitbash/.git/
HP@Sherry1972 MINGW64 /c/gitbash (master)
$ git status
On branch master
No commits yet
Untracked files:
  (use "git add <file>..." to include in what will be committed)
nothing added to commit but untracked files present (use "git add" to track)
HP@Sherry1972 MINGW64 /c/gitbash (master)
$ git add --a
HP@Sherry1972 MINGW64 /c/gitbash (master)
$ git staus
git: 'staus' is not a git command. See 'git --help'.
The most similar command is
         status
HP@Sherry1972 MINGW64 /c/gitbash (master)
$ git status
On branch master
No commits yet
Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
         new file:
                       gurpreet.txt
HP@Sherry1972 MINGW64 /c/gitbash (master)
$ git commit-m"New File added gurpreet.txt"
git: 'commit-mNew File added gurpreet.txt' is not a git command. See 'git --help
HP@Sherry1972 MINGW64 /c/gitbash (master)
$ git commit -m "New File added gurpreet.txt"
[master (root-commit) 7a47bcf] New File added gurpreet.txt
1 file changed, 0 insertions(+), 0 deletions(-)
```

```
HP@Sherry1972 MINGW64 /c/gitbash (activity1)
$ git log
commit 7a47bcfb8b875b03dc5add2fd93938fc18bc61db (HEAD -> activity1, master, activity2, activity)
Author: Gurpreet27 <gurpreet0535.be21@chitkara.edu.in>
Date: Sun Apr 10 13:09:18 2022 +0530

New File added gurpreet.txt
```



Aim: Create and visualize branches

#### **Create branches:-**

The main branch in git is called as master branch. But we can make branches out of this main master branch. All the files present in master can be shown in branch but the file which are created in branch are not shown in master branch. We can also merge both the parent (master) and child (other branches).

#### Syntax:-

 For creating a new branch. git branch name of branch

#### Snapshots -

```
HP@Sherry1972 MINGW64 /c/gitbash (master)
$ git branch activity

HP@Sherry1972 MINGW64 /c/gitbash (master)
$ git branch activity1

HP@Sherry1972 MINGW64 /c/gitbash (master)
$ git branch activity2
```

 We can also check how many branches we have. git branch

```
HP@Sherry1972 MINGW64 /c/gitbash (master)
$ git branch
  activity
  activity1
  activity2
* master
```

• To change the present working branch. git checkout name of branch.

#### Snapshots -

```
HP@Sherry1972 MINGW64 /c/gitbash (activity1)
$ git checkout activity
Switched to branch 'activity'
```

#### **Visualizing branches:-**

To visualize I have created a new file in a new branch activity 1 instead of master branch.

```
HP@Sherry1972 MINGW64 /c/gitbash (activity1)
$ git checkout master
> git checkout master
error: pathspec 'mastergit' did not match any file(s) known to git
error: pathspec 'checkout' did not match any file(s) known to git
error: pathspec 'master' did not match any file(s) known to git
HP@Sherry1972 MINGW64 /c/gitbash (activity1)
$ git checkout activity
Switched to branch 'activity'
HP@Sherry1972 MINGW64 /c/gitbash (activity)
$ touch preet.text

HP@Sherry1972 MINGW64 /c/gitbash (activity)
$
```

<mark>e</mark> c	11-04-2022 09:31	C++ Source File	1 KB
₫ fibp	10-04-2022 18:20	C++ Source File	1 KB
o form	10-04-2022 18:12	Chrome HTML Do	3 KB
© power	11-04-2022 09:15	C++ Source File	1 KB
preet	11-04-2022 11:40	Text Document	1 KB
<b>⊚</b> sum	10-04-2022 17:57	C++ Source File	1 KB

After this I have done the 3 step architecture which is tracking the file, send it to stagging area and finally we can role back to any previously saved version of this file.

After this we will change the branch from activity1 to master, but when I will switch to the master branch there will not be the same file in the master, it will not show the new file in the master branch.

preet 11-04-2022 11:40 Text Document 1 KB

In this way we can create and change different branches . We can also merge the branches by using git merge command.

```
HP@Sherry1972 MINGW64 /c/bash (activity)

$ git commit -m"Branch"
[activity 84d3e61] Branch
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 preet.txt
```



Aim: Git lifecycle description

#### Theory:

<u>Stages in GIT Life Cycle</u> -> Files in a Git project have various stages like Creation, Modification, Refactoring, and Deletion and so on. Irrespective of whether this project is tracked by Git or not, these phases are still prevalent. However, when a project is under Git version control system, they are present in three major Git states in addition to these basic ones. Here are the three Git states:

- Working directory
- · Staging area
- Git directory

#### **Working Directory ->**

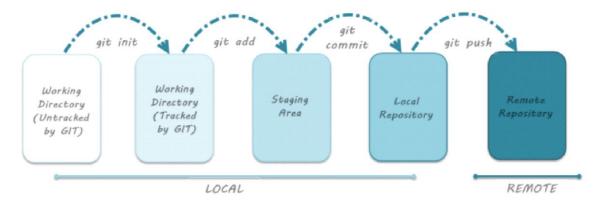
Consider a project residing in your local system. This project may or may not be tracked by Git. In either case, this project directory is called your Working directory.

#### Staging Area ->

Staging area is the playground where you group, add and organize the files to be committed to Git for tracking their versions.

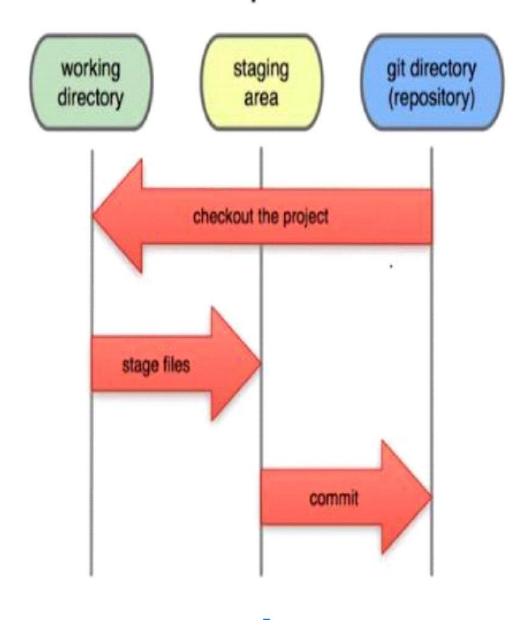
#### Git Directory ->

Now that the files to be committed are grouped and ready in the staging area, we can commit these files. So, we commit this group of files along with a commit message explaining what is the commit about. Apart from commit message, this step also records the author and time of the commit. Now, a snapshot of the files in the commit is recorded by Git. The information related to this commit is stored in the Git directory.



**Remote Repository->** means mirror or clone of the local Git repository in GitHub. And pushing means uploading the commits from local Git repository to remote repository hosted in GitHub.

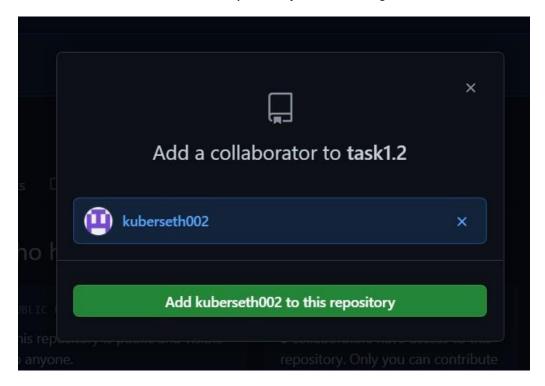
# **Local Operations**



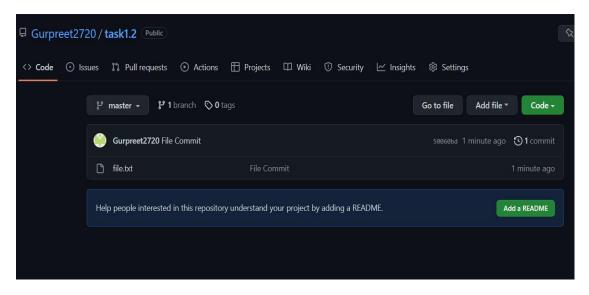
Task 1.2

## 1. Add Collaborators on Github Repo :-

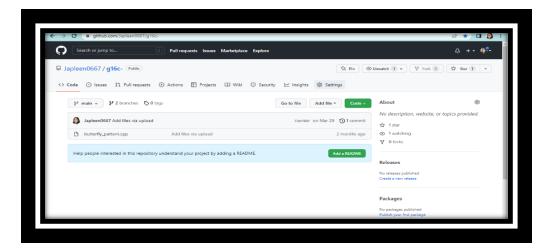
1. Ask for the username of the person you're inviting as a collaborator. ...



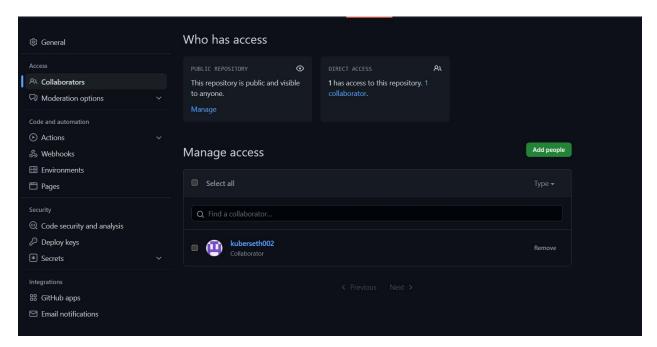
2. On GitHub.com, navigate to the main page of the repository.



3. Under our repository name, click Settings



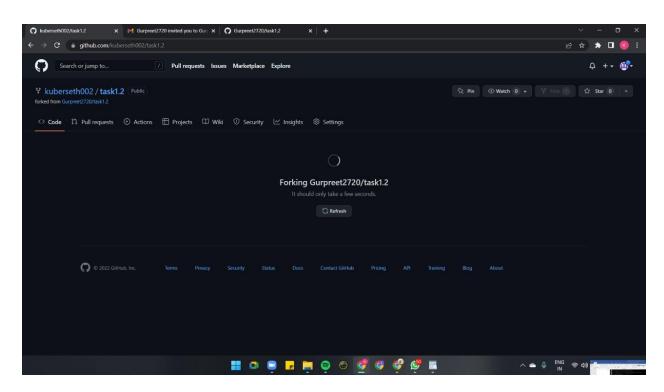
4. In the "Access" section of the sidebar, click Collaborators & teams.

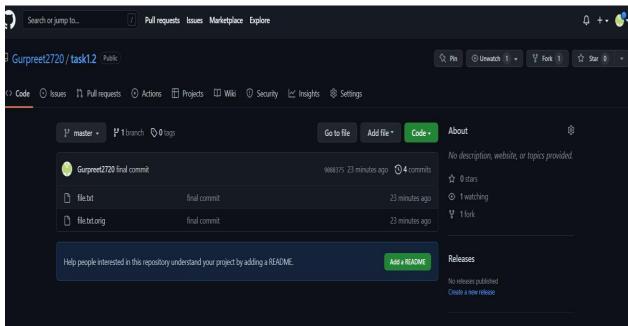


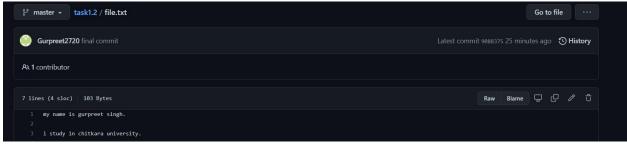
2. Fork And Commit: A fork is a copy of a repository that we manage.

Forks let us make changes to a project without affecting the original repository. We can fetch updates from or submit changes to the original repository with pull requests.

web browser and clicking on the *Fork* button on the repository's home page. A forked copy of that Git repository will be added to your personal GitHub or GitLab repo. That's it. That's all we have to do to fork a Git repo. If we need to fork a GitHub or GitLab repo, it's as simple as navigating to the landing page of the repository in your







# 3. Merge and Resolve conflicts created due to own Activity and Collaborators activity:-

There are a few steps that could reduce the steps needed to resolve merge conflicts in Git.

- 1. The easiest way to resolve a conflicted file is to open it and make any necessary changes.
- 2. After editing the file, we can use the git add a command to stage the new merged content.
- 3. The final step is to create a new commit with the help of the git commit command.
- 4. Git will create a new merge commit to finalize the merge

Let us now look into the Git commands that may play a significant role in resolving conflicts.

```
Mute
 @Sherry1972 MINGW64 /c/bash (master)
 mkdir new
P@Sherry1972 MINGW64 /c/bash (master)
 cd new
P@Sherry1972 MINGW64 /c/bash/new (master)
 git init
nitialized empty Git repository in C:/bash/new/.git/
HP@Sherry1972 MINGW64 /c/bash/new (master)
touch file.txt
 P@Sherry1972 MINGW64 /c/bash/new (master)
 vi file.txt
P@Sherry1972 MINGW64 /c/bash/new (master)
 git status
n branch master
lo commits yet
Intracked files:
  (use "git add <file>..." to include in what will be committed)
othing added to commit but untracked files present (use "git add" to track)
HP@Sherry1972 MINGW64 /c/bash/new (master)
git add .
varning: LF will be replaced by CRLF in file.txt.
The file will have its original line endings in your working directory
P@Sherry1972 MINGW64 /c/bash/new (master)
git commit -m "File Commit"
master (root-commit) 50060bd] File Commit
1 file changed, 1 insertion(+)
create mode 100644 file.txt
HP@Sherry1972 MINGW64 /c/bash/new (master)
 git remote add origin https://github.com/Gurpreet2720/task1.2.git
IP@Sherry1972 MINGW64 /c/bash/new (master)
 git push -u origin master
numerating objects: 3, done.
Jounting objects. 3, done.

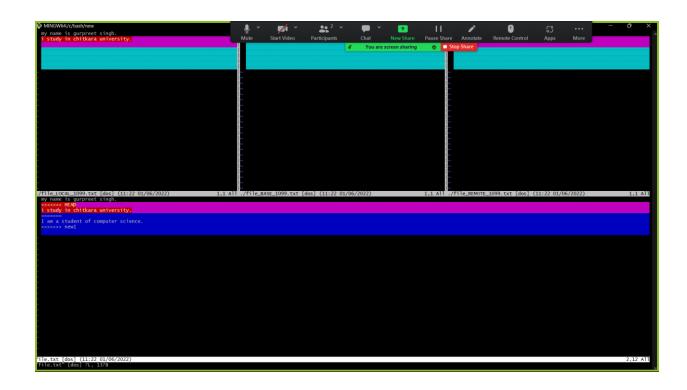
Jounting objects: 100% (3/3), done.

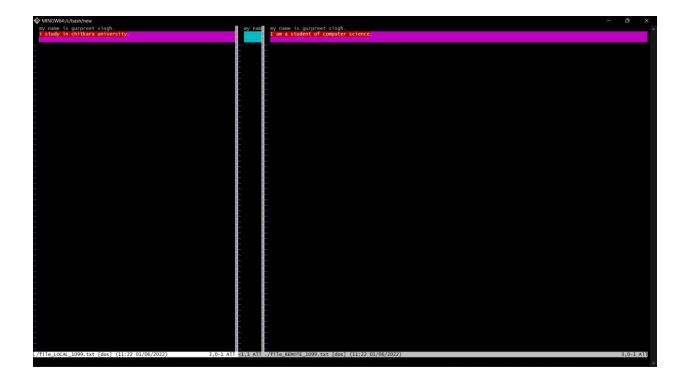
Priting objects: 100% (3/3), 247 bytes | 247.00 KiB/s, done.

Jotal 3 (delta 0), reused 0 (delta 0), pack-reused 0

Johttps://github.com/Gurpreet2720/task1.2.git
# [new branch] master -> master
pranch 'master' set up to track 'origin/master'.
HP@Sherry1972 MINGW64 /c/bash/new (master)
git status
n branch master
our branch is up to date with 'origin/master'.
othing to commit, working tree clean
 P@Sherry1972 MINGW64 /c/bash/new (master)
```

```
### A PRINCE OF TABLE OF THE PRINCE OF THE P
```





**4.** <u>Git Reset</u>: Git reset is a powerful command that is used to undo local changes to the state of a Git repo. Git reset operates on "The Three Trees of Git". These trees are the Commit History (HEAD), the Staging Index, and the Working Directory.

The easiest way to undo the last Git commit is to execute the "git reset" command with the "-soft" option that will preserve changes done to your files.

Git reset --hard, which will completely destroy any changes and remove them from the local directory.

```
Nicrosoft@DESKTOP-SOSPJP1 MINGW64 /d/text6 (master)

git reset --soft MEADA1 ': unknown revision or path not in the working tree.

lse '-- to separate paths from revisions, like this:

git <command> [crevisions...] -- [cfiles...]'

Nicrosoft@DESKTOP-SOSPJP1 MINGW64 /d/text6 (master)

vi text1.txt

Nicrosoft@DESKTOP-SOSPJP1 MINGW64 /d/text6 (master)

i vi text1

Nicrosoft@DESKTOP-SOSPJP1 MINGW64 /d/text6 (master)

i vi text1

Nicrosoft@DESKTOP-SOSPJP1 MINGW64 /d/text6 (master)

i git add ,

warning: LF will be replaced by CRLF in text1.

The file will have its original line endings in your working directory

Nicrosoft@DESKTOP-SOSPJP1 MINGW64 /d/text6 (master)

git add .

Nicrosoft@DESKTOP-SOSPJP1 MINGW64 /d/text6 (master)

git commit -m "second commit"

I file changed, I insertion(r)

Nicrosoft@DESKTOP-SOSPJP1 MINGW64 /d/text6 (master)

i git status

no branch master

nothing to commit, working tree clean

Nicrosoft@DESKTOP-SOSPJP1 MINGW64 /d/text6 (master)

i git reset --soft MEAD-1

Nicrosoft@DESKTOP-SOSPJP1 MINGW64 /d/text6 (master)

i git status

no branch master

langes to be committed:

(use "git restore --staged <file>..." to unstage)

modified: text1

Nicrosoft@DESKTOP-SOSPJP1 MINGW64 /d/text6 (master)

i notepad text1

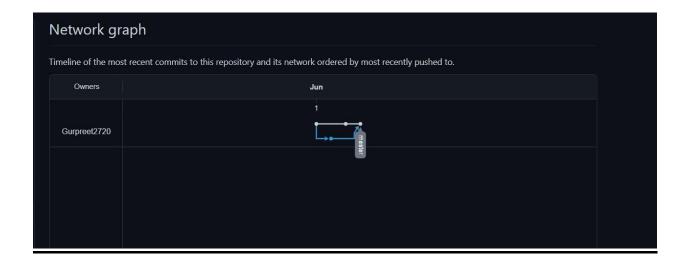
Nicrosoft@DESKTOP-SOSPJP1 MINGW64 /d/text6 (master)

i git add .

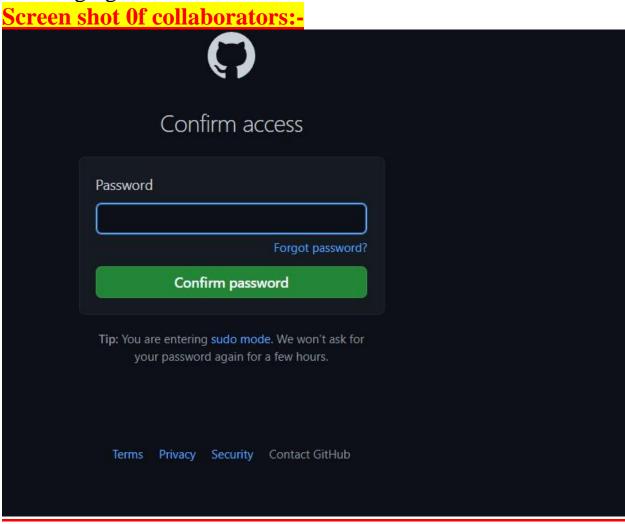
Nicrosoft@DESKTOP-SOSPJP1 MINGW64 /d/text6 (master)

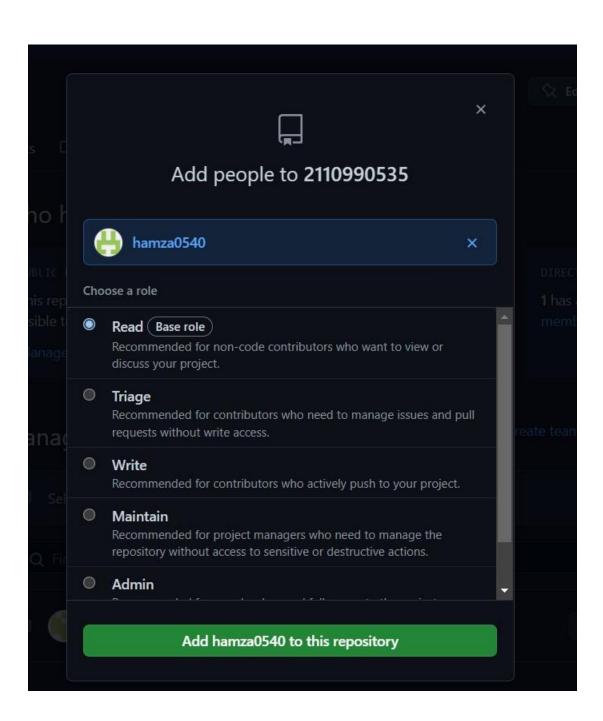
i git commit -m "second commit"
```

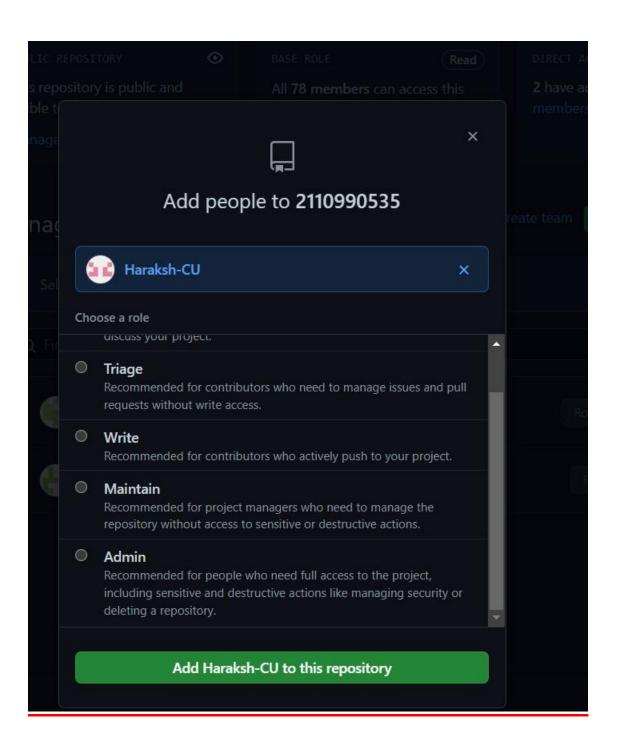
## **Network Graph of task 1.2**

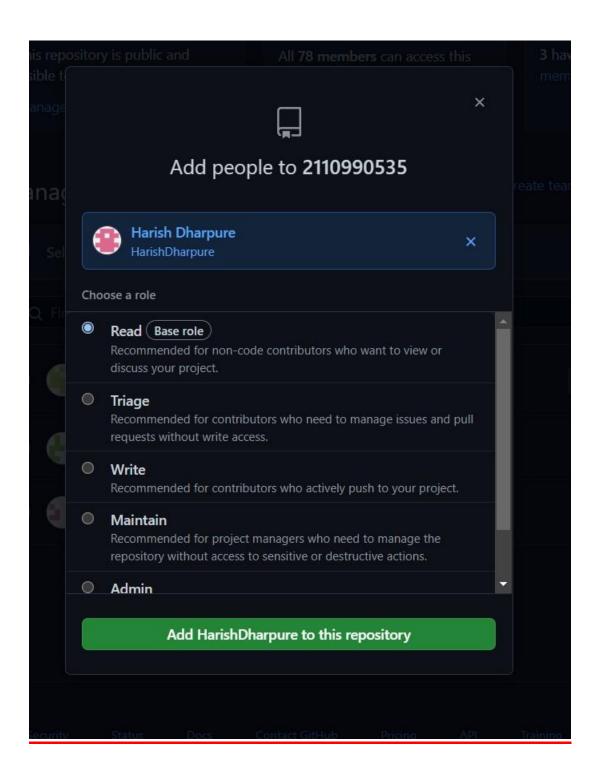


- 1.Pushed my project based on a Food website on git hub from where my team members forked it on their systems to complete the code and added collaborators.
- 2.Firstly My team member Hamza(2110990540) styled the login page using Css and after that I merged the styling with my code.Below are the screenshots of login page after and before the merging.





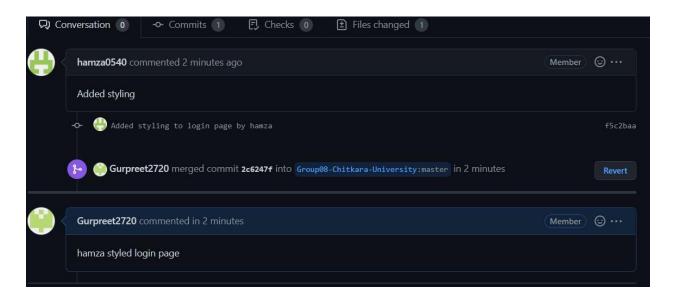




# **Before styling:-**







```
HP@Sherry1972 MINGW64 /c/bash (master)
$ git checkout -b hamza0540-master master
 Switched to a new branch 'hamza0540-master'
 HP@Sherry1972 MINGW64 /c/bash (hamza0540-master)
$ git pull https://github.com/hamza0540/2110990535.git master
remote: Enumerating objects: 7, done.
remote: Counting objects: 100% (7/7), done.
remote: Compressing objects: 100% (2/2), done.
remote: Total 4 (delta 2), reused 4 (delta 2), pack-reused 0
Unpacking objects: 100% (4/4), 840 bytes | 64.00 KiB/s, done.
From https://github.com/hamza0540/2110990535
  * branch
                                       master
                                                            -> FETCH_HEAD
Updating 599b72e..f5c2baa
 ast-forward
 HP@Sherry1972 MINGW64 /c/bash (hamza0540-master)
$ git checkout master
Switched to branch 'master'
Your branch is up to date with 'origin/master'.
HP@Sherry1972 MINGW64 /c/bash (maste
$ git merge --no-ff hamza0540-master
                                    64 /c/bash (master)
Merge made by the 'ort' strategy.
project/login.html | 48 +++++++
  1 file changed, 48 insertions(+)
HP@Sherry1972 MINGW64 /c/bash (master)
$ git push origin master
Enumerating objects: 8, done.
Counting objects: 100% (8/8), done.
Delta compression using up to 12 threads
Compression using up to 12 threads

Compressing objects: 100% (5/5), done.

Writing objects: 100% (5/5), 1.05 KiB | 1.05 MiB/s, done.

Total 5 (delta 2), reused 0 (delta 0), pack-reused 0

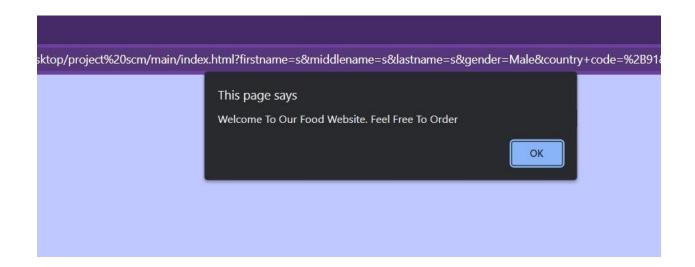
remote: Resolving deltas: 100% (2/2), completed with 2 local objects.

To https://github.com/Group08-Chitkara-University/2110990535.git

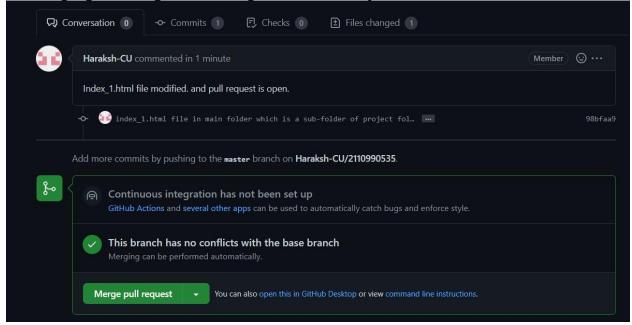
599b72e..2c6247f master -> master
```

3.Harish(2110990549) added a alert box in website by using Javascript after we are logged into website. Below are some screenshots of work done.

```
HP@Sherry1972 MINGW64 /c/bash (master)
$ git checkout -b HarishDharpure-master master
Switched to a new branch 'HarishDharpure-master'
HP@Sherry1972 MINGW64 /c/bash (HarishDharpure-master)
$ git pull https://github.com/HarishDharpure/2110990535.git master
remote: Enumerating objects: 9, done.
remote: Counting objects: 100% (9/9), done.
remote: Compressing objects: 100% (1/1), done.
remote: Total 5 (delta 4), reused 5 (delta 4), pack-reused 0
Unpacking objects: 100% (5/5), 513 bytes | 46.00 KiB/s, done.
 From https://github.com/HarishDharpure/2110990535
                                 master
                                                   -> FETCH_HEAD
Updating 2c6247f..7e3fbf8
 Fast-forward
  project/main/index.html | 7 +++++
  1 file changed, 5 insertions(+), 2 deletions(-)
HP@Sherry1972 MINGW64 /c/bash (HarishDharpure-master)
$ git checkout master
Switched to branch 'master'
Your branch is up to date with 'origin/master'.
HP@Sherry1972 MINGW64 /c/bash (master)
$ git merge --no-ff HarishDharpure-master
Merge made by the 'ort' strategy.
project/main/index.html | 7 +++++--
1 file changed, 5 insertions(+), 2 deletions(-)
 HP@Sherry1972 MINGW64 /c/bash (master)
$ git push origin master
Soft push origin master
Enumerating objects: 10, done.
Counting objects: 100% (10/10), done.
Delta compression using up to 12 threads
Compressing objects: 100% (6/6), done.
Writing objects: 100% (6/6), 734 bytes | 734.00 KiB/s, done.
Total 6 (delta 4), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (4/4), completed with 4 local objects.
To https://github.com/Group08-Chitkara-University/2110990535.git
     2c6247f..befe779 master -> master
HP@Sherry1972 MINGW64 /c/bash (master)
$ git status
On branch master
Your branch is up to date with 'origin/master'.
```



4.Lastely Haraksh(2110990541) added countdown Timer in my deals page using Javascript and has styled it also.



**Before adding Javascript** 



Deals of the day



cheese burst pizza with coke



3 Cheese burger with manao



2 Aloo Pronthe+1

## **After adding Javascript**

# Deals of the day Offer Ends in:

267days 0Hours 42Minutes 35Seconds



# 2 cheese burst pizza with coke

Pizza fully loaded with four types of cheese and with thin crust. Be a foddie and order it as early as possiable. Avaiable with a variety of toppings in both veg and non-veg.

Add to cart



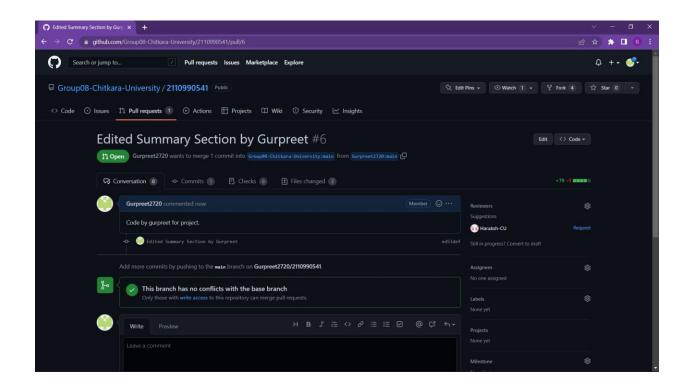
3 Cheese burger with mango shake/2 colddrinks

Enjoy the Burger with any any drink of your choice. This burger is made with



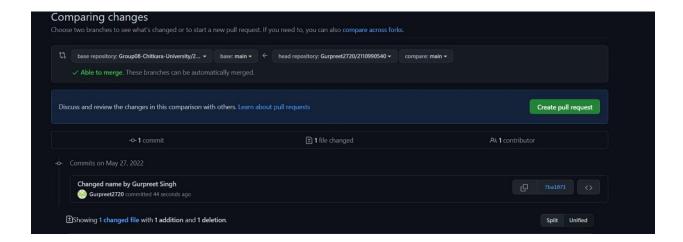
2 Aloo Pranthe+1 Gobli prantha with a bowl of Firstly I forked my team member Haraksh(2110990541) repository into my system and after that added my code to his project in summary section and also styled it using Css. Below are some screenshots of the work done.

```
#PBSherry1972 MINGW64 ~/OneDrive/Desktop/hrakash (master)
$ 18
#PBSherry1972 MINGW64 ~/OneDrive/Desktop/hrakash/2110990541 (main)
$ 18
#PBSherry1972 MINGW64 ~/OneDrive/Desktop/hrakash/2110990541/Dahboard-Javascript (main)
#PBSherry1972 MINGW64 ~/OneDrive/Desktop/hrakash/2110990541/Dahboard-Javascript (main)
#PBSherry1972 MINGW64 ~/OneDrive/Desktop/hrakash/2110990541/Dahboard-Javascript (main)
#PBSherry1972 MINGW64 ~/OneDrive/Desktop/hrakash/2110990541/Dahboard-Javascript (main)
#PBSherry1972 MINGW64 ~/OneDrive/Desktop/hrakash/2110990541
```



Next I forked Hamza(2110990540) repo in my system. Below are some screen shots.

```
loning into '2110990540'...
emote: Enumerating objects: 10, done.
emote: Counting objects: 10, done.
emote: Counting objects: 100% (10/10), done.
emote: Compressing objects: 100% (8/8), done.
emote: Total 10 (delta 1), reused 7 (delta 1), pack-reused 0
eceiving objects: 100% (10/10), 2.71 MiB | 3.51 MiB/s, done.
esolving deltas: 100% (1/1), done.
 P@Sherry1972 MINGW64 ~/OneDrive/Desktop/hs (master)
110990540/
 @Sherry1972 MINGW64 ~/OneDrive/Desktop/hs (master)
 cd 2110990540
 @Sherry1972 MINGW64 ~/OneDrive/Desktop/hs/2110990540 (main)
                     Task.docx
TASK 2.html'
 P@Sherry1972 MINGW64 ~/OneDrive/Desktop/hs/2110990540 (main)
Notepad 'TASK 2.html'
 @Sherry1972 MINGW64 ~/OneDrive/Desktop/hs/2110990540 (main)
 git status
  branch main
our branch is up to date with 'origin/main'.
hanges not staged for commit:
(use "git add <file>..." to update what will be committed)
(use "git restore <file>..." to discard changes in working directory)
o changes added to commit (use "git add" and/or "git commit -a")
P@Sherry1972 MINGw64 ~/OneDrive/Desktop/hs/2110990540 (main)
git commit -a -m "Changed name by Gurpreet Singh"
main 7ba1071] Changed name by Gurpreet Singh
1 file changed, 1 insertion(+), 1 deletion(-)
 @Sherry1972 MINGW64 ~/OneDrive/Desktop/hs/2110990540 (main)
 git status
n branch main
our branch is ahead of 'origin/main' by 1 commit.
 (use "git push" to publish your local commits)
othing to commit, working tree clean
 @Sherry1972 MINGW64 ~/OneDrive/Desktop/hs/2110990540 (main)
 git push
numerating objects: 5, done.
ounting objects: 100% (5/5), done.
elta compression using up to 12 threads ompressing objects: 100% (3/3), done. riting objects: 100% (3/3), 348 bytes | 348.00 KiB/s, done.
otal 3 (delta 1), reused 0 (delta 0), pack-reused 0
emote: Resolving deltas: 100% (1/1), completed with 1 local object. o https://github.com/Gurpreet2720/2110990540
   019b67c..7ba1071 main -> main
  @Sherry1972 MINGW64 ~/OneDrive/Desktop/hs/2110990540 (main)
```



Lastly forked Harish(2110990549) repo in my system and added html code in body part.

