

Experiment - 1

Steps :

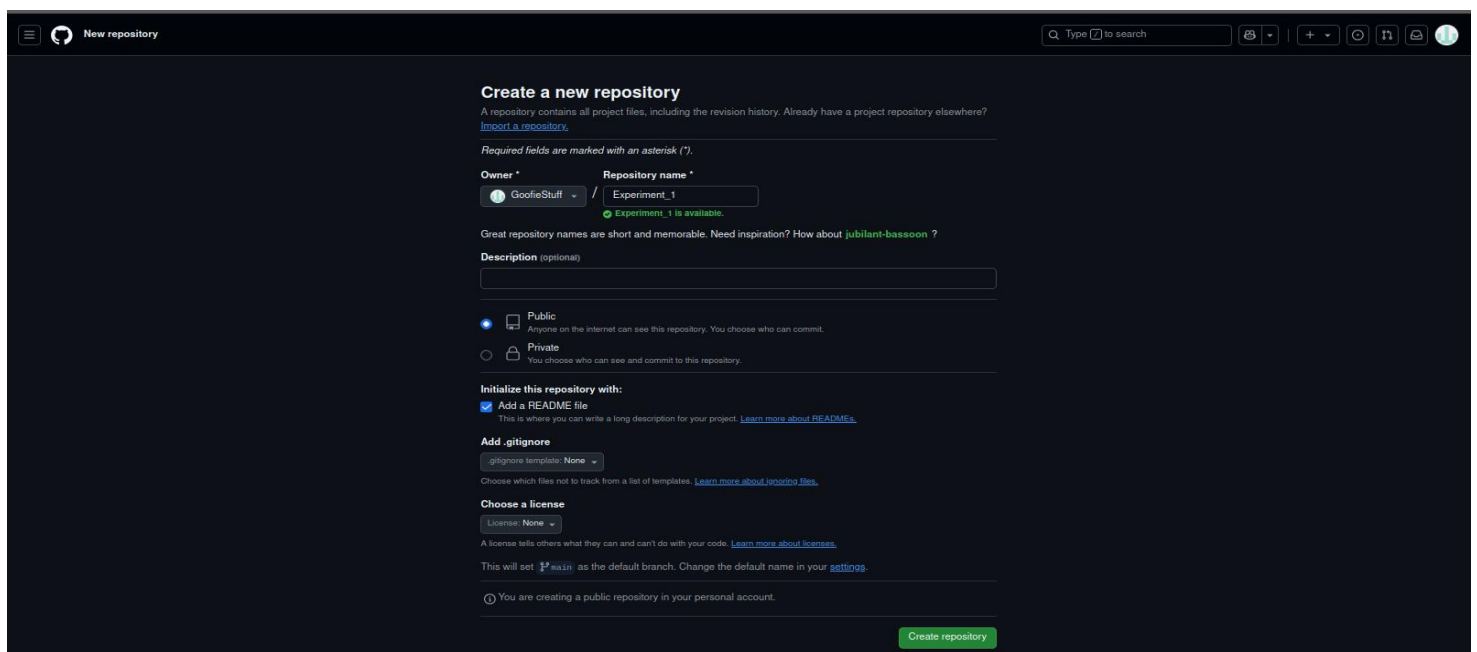
- Install git and configure with your User name and Email.

```
dyp@dyp-OptiPlex-3000:~$ sudo apt install git
[sudo] password for dyp:
Sorry, try again.
[sudo] password for dyp:
Reading package lists... Done
Building dependency tree
Reading state information... Done
git is already the newest version (1:2.25.1-1ubuntu3.14).
0 upgraded, 0 newly installed, 0 to remove and 71 not upgraded.
dyp@dyp-OptiPlex-3000:~$
dyp@dyp-OptiPlex-3000:~$
dyp@dyp-OptiPlex-3000:~$ git config --global user.name "Sanket"
dyp@dyp-OptiPlex-3000:~$ git config --global user.email "sanketkokate1084@gmail.com"
```

- Initialize Git repository

```
dyp@dyp-OptiPlex-3000:~/Desktop$ cd Sanket
dyp@dyp-OptiPlex-3000:~/Desktop/Sanket$ mkdir Project_Sanket
dyp@dyp-OptiPlex-3000:~/Desktop/Sanket$ cd Project_Sanket
dyp@dyp-OptiPlex-3000:~/Desktop/Sanket/Project_Sanket$ git init
Initialized empty Git repository in /home/dyp/Desktop/Sanket/Project_Sanket/.git/
dyp@dyp-OptiPlex-3000:~/Desktop/Sanket/Project_Sanket$ git config -list
error: did you mean '--list' (with two dashes)?
dyp@dyp-OptiPlex-3000:~/Desktop/Sanket/Project_Sanket$ git config --list
user.name=Sanket
user.email=sanketkokate1084@gmail.com
use.email=shreevardhansapkal5590@gmail.com
core.repositoryformatversion=0
core.filemode=true
core.bare=false
core.logallrefupdates=true
dyp@dyp-OptiPlex-3000:~/Desktop/Sanket/Project_Sanket$
```

- Open Github.com on browser and sign in, create a new repository.



The screenshot shows the GitHub 'Create a new repository' page. At the top, there's a header with the GitHub logo and 'New repository'. Below this, the main heading is 'Create a new repository'. A subtext says 'A repository contains all project files, including the revision history. Already have a project repository elsewhere? [Import a repository.](#)'. There's a note: 'Required fields are marked with an asterisk (*)'. The 'Owner' field is set to 'GoofieStuff'. The 'Repository name' field is 'Experiment_1', with a green checkmark indicating 'Experiment_1 is available'. Below this, there's a tip: 'Great repository names are short and memorable. Need inspiration? How about [jubilant-bassoon](#) ?'. The 'Description (optional)' field is empty. There are two radio buttons for visibility: 'Public' (selected) and 'Private'. Under 'Initialize this repository with:', the 'Add a README file' option is checked. There's a section for 'Add .gitignore' with a dropdown set to 'None'. Below that, it says 'Choose which files not to track from a list of templates. [Learn more about template files.](#)'. The 'Choose a license' section has a dropdown set to 'None'. At the bottom, there's a note: 'This will set `main` as the default branch. Change the default name in your [settings](#).' and a final note: 'You are creating a public repository in your personal account.' A green 'Create repository' button is at the bottom right.

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```
dyp@dyp-OptiPlex-3000:~/Desktop/Sanket/Project_Sanket$ git clone https://github.com/GoofieStuff/Experiment_1.git
Cloning into 'Experiment_1'...
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)
Unpacking objects: 100% (3/3), 867 bytes | 867.00 KiB/s, done.
dyp@dyp-OptiPlex-3000:~/Desktop/Sanket/Project_Sanket$
```

```
dyp@dyp-OptiPlex-3000:~/Desktop/Sanket/Project_Sanket$ git clone https://github.com/GoofieStuff/Experiment_1.git
Cloning into 'Experiment_1'...
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)
Unpacking objects: 100% (3/3), 867 bytes | 867.00 KiB/s, done.
dyp@dyp-OptiPlex-3000:~/Desktop/Sanket/Project_Sanket$ ls
Experiment_1
dyp@dyp-OptiPlex-3000:~/Desktop/Sanket/Project_Sanket$ cd Experiment_1
dyp@dyp-OptiPlex-3000:~/Desktop/Sanket/Project_Sanket/Experiment_1$ ls
README.md
dyp@dyp-OptiPlex-3000:~/Desktop/Sanket/Project_Sanket/Experiment_1$ cat README.md
# Experiment_1
dyp@dyp-OptiPlex-3000:~/Desktop/Sanket/Project_Sanket/Experiment_1$ touch factorial1.py
dyp@dyp-OptiPlex-3000:~/Desktop/Sanket/Project_Sanket/Experiment_1$ ls
factorial1.py  README.md
dyp@dyp-OptiPlex-3000:~/Desktop/Sanket/Project_Sanket/Experiment_1$ gedit factorial1.py
```

Factorial1.py:



```
1 n1 = int(input("Enter the number: "))
2 ans = 1
3 for i in range(1,n1+1):
4     ans*=i
5 print("Factorial is ", ans);
6
```

- Committing Changes and pushing to remote Repository:

```
add
dyp@dyp-OptiPlex-3000:~/Desktop/Sanket/Project_Sanket/Experiment_1$ git add .
dyp@dyp-OptiPlex-3000:~/Desktop/Sanket/Project_Sanket/Experiment_1$ git commit -m "First commit"
[main 85a78dd] First commit
1 file changed, 6 insertions(+)
create mode 100644 factorial1.py
```

Experiment - 1

```
Sanket@DESKTOP-25316AG MINGW64 ~/Desktop/Sanket/Experiment_1 (main)
$ git remote set-url origin https://github_pat_11A463ZOI05BI7Uq1jc9Q4_8dPRA97xoGf8Xix9dB4yewiiepdYkgwAd8cSfAnyBWL
CYUXWRAwP9XbRC9@github.com/GoofieStuff/Experiment_1

Sanket@DESKTOP-25316AG MINGW64 ~/Desktop/Sanket/Experiment_1 (main)
$ git push origin main
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 12 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 386 bytes | 193.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/GoofieStuff/Experiment_1
   dda1b8f..8d534dd  main -> main

Sanket@DESKTOP-25316AG MINGW64 ~/Desktop/Sanket/Experiment_1 (main)
$
```

- Making changes in code file:

```
Sanket@DESKTOP-25316AG MINGW64 ~/Desktop/Sanket/Experiment_1 (main)
$ git pull origin main
From https://github.com/GoofieStuff/Experiment_1
 * branch      main      -> FETCH_HEAD
Already up to date.
```

factorial1.py (changed) :

```
C: > Users > Sanket > Desktop > Sanket > Experiment_1 > factorial1.py > ...
1  n = int(input("Enter a number: "))
2  ans = 1
3
4  for i in range(1, n + 1):
5      ans *= i
6
7  print(f"The factorial of {n} is {ans}")
8
9  print("This is changed code.")
```

Experiment - 1

```
Sanket@DESKTOP-25316AG MINGW64 ~/Desktop/Sanket/Experiment_1 (main)
$ git pull origin main
From https://github.com/Goofiestuff/Experiment_1
 * branch          main          -> FETCH_HEAD
Already up to date.

Sanket@DESKTOP-25316AG MINGW64 ~/Desktop/Sanket/Experiment_1 (main)
$ git commit -m "second commit"
On branch main
Your branch is up to date with 'origin/main'.

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:   factorial1.py

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

Sanket@DESKTOP-25316AG MINGW64 ~/Desktop/Sanket/Experiment_1 (main)
$ git pull origin main
From https://github.com/Goofiestuff/Experiment_1
 * branch          main          -> FETCH_HEAD
Already up to date.

Sanket@DESKTOP-25316AG MINGW64 ~/Desktop/Sanket/Experiment_1 (main)
$ git add .

Sanket@DESKTOP-25316AG MINGW64 ~/Desktop/Sanket/Experiment_1 (main)
$ git commit -m "third commit"
[main dd543b0] third commit
1 file changed, 3 insertions(+), 1 deletion(-)

Sanket@DESKTOP-25316AG MINGW64 ~/Desktop/Sanket/Experiment_1 (main)
$ git pull origin main
From https://github.com/Goofiestuff/Experiment_1
 * branch          main          -> FETCH_HEAD
Already up to date.

Sanket@DESKTOP-25316AG MINGW64 ~/Desktop/Sanket/Experiment_1 (main)
$ git push origin main
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 12 threads
compressing objects: 100% (3/3), done.
```

Experiment - 1

- Creating new branch:

```
Sanket@DESKTOP-25316AG MINGW64 ~/Desktop/Sanket/Experiment_1 (main)
$ git branch
* main

Sanket@DESKTOP-25316AG MINGW64 ~/Desktop/Sanket/Experiment_1 (main)
$ git branch sub-branch

Sanket@DESKTOP-25316AG MINGW64 ~/Desktop/Sanket/Experiment_1 (main)
$ git branch
* main
  sub-branch

Sanket@DESKTOP-25316AG MINGW64 ~/Desktop/Sanket/Experiment_1 (main)
$ git status
On branch main
Your branch is up to date with 'origin/main'.

nothing to commit, working tree clean

Sanket@DESKTOP-25316AG MINGW64 ~/Desktop/Sanket/Experiment_1 (main)
$ git add .

Sanket@DESKTOP-25316AG MINGW64 ~/Desktop/Sanket/Experiment_1 (main)
$ git commit -m "Created new branch"
On branch main
Your branch is up to date with 'origin/main'.

nothing to commit, working tree clean

Sanket@DESKTOP-25316AG MINGW64 ~/Desktop/Sanket/Experiment_1 (main)
$ git push origin main
Everything up-to-date

Sanket@DESKTOP-25316AG MINGW64 ~/Desktop/Sanket/Experiment_1 (main)
$ git checkout sub-branch
Switched to branch 'sub-branch'

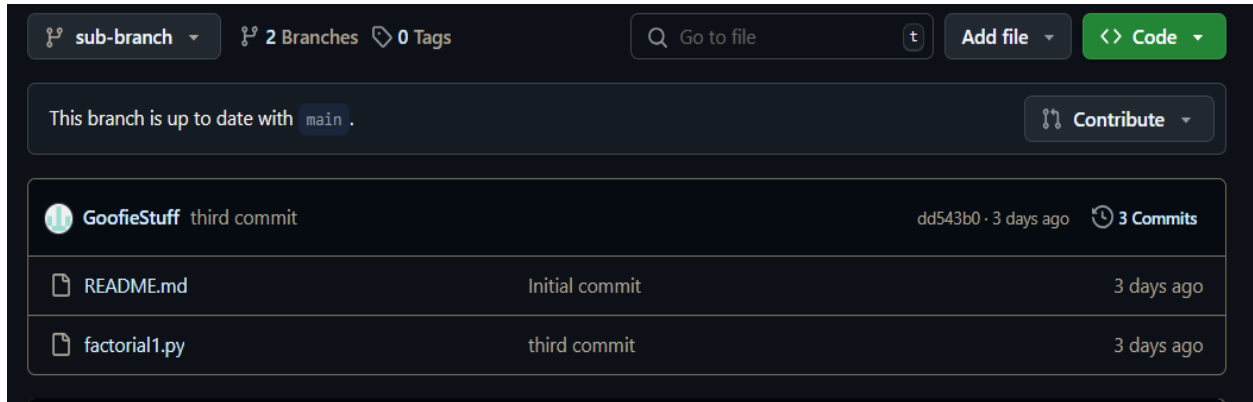
Sanket@DESKTOP-25316AG MINGW64 ~/Desktop/Sanket/Experiment_1 (sub-branch)
$ git push origin sub-branch
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: Create a pull request for 'sub-branch' on GitHub by
remote: visiting:
remote:   https://github.com/GoofieStuff/Experiment_1/pull/new/sub-branch
remote:
remote: To https://github.com/GoofieStuff/Experiment_1
* [new branch]      sub-branch -> sub-branch

Sanket@DESKTOP-25316AG MINGW64 ~/Desktop/Sanket/Experiment_1 (sub-branch)
$ |
```

Experiment - 1

-

- check branch on github:



Experiment - 1

add new file for branch: (sum.py)

```
Sanket@DESKTOP-25316AG MINGW64 ~/Desktop/Sanket/Experiment_1
C: > Users > Sanket > Desktop > Sanket > Experiment_1 > sum.py > ...
1  n1 = int(input("Enter first number: "))
2  n2 = int(input("Enter second number: "))
3  print("Sum is ", n1+n2)

Sanket@DESKTOP-25316AG MINGW64 ~/Desktop/Sanket/Experiment_1 (sub-branch)
$ git add .

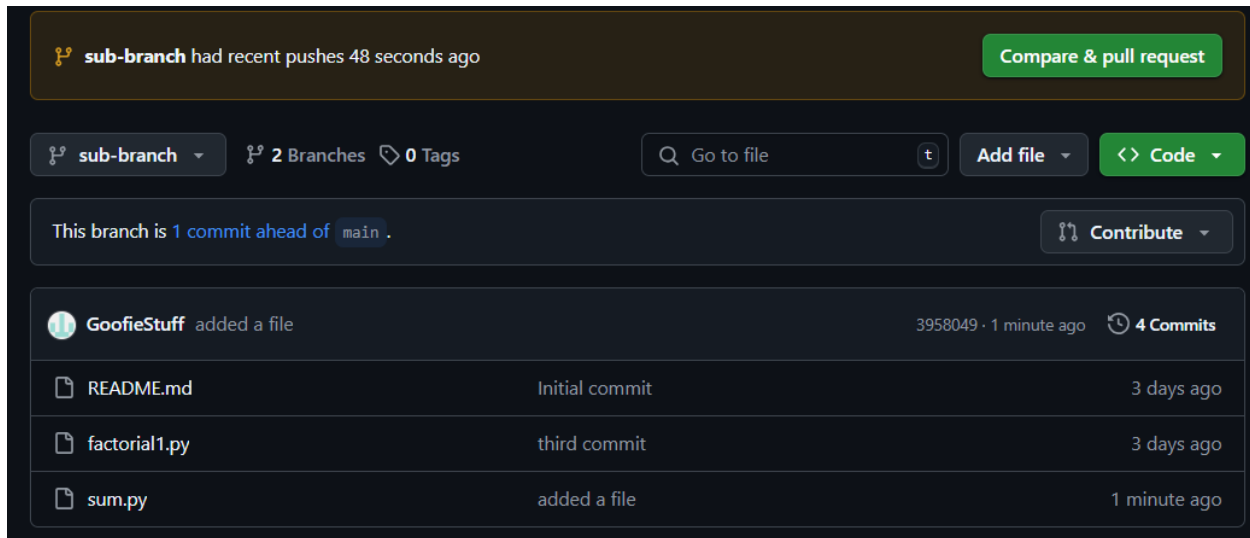
Sanket@DESKTOP-25316AG MINGW64 ~/Desktop/Sanket/Experiment_1 (sub-branch)
$ git commit -m "added a file"
[sub-branch 3958049] added a file
1 file changed, 3 insertions(+)
create mode 100644 sum.py

Sanket@DESKTOP-25316AG MINGW64 ~/Desktop/Sanket/Experiment_1 (sub-branch)
$ git push origin sub-branch
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 12 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (3/3), 384 bytes | 384.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/GoofieStuff/Experiment_1
   dd543b0..3958049  sub-branch -> sub-branch

Sanket@DESKTOP-25316AG MINGW64 ~/Desktop/Sanket/Experiment_1 (sub-branch)
$
```

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- Committing and pushing changes to remote repository (checking if file is added):



- Make Changes, commit, merge branch to main branch and delete branch (locally and from remote repository) :

```
Sanket@DESKTOP-25316AG MINGW64 ~/Desktop/Sanket/Experiment_1 (sub-branch)
$ git status
On branch sub-branch
nothing to commit, working tree clean

Sanket@DESKTOP-25316AG MINGW64 ~/Desktop/Sanket/Experiment_1 (sub-branch)
$ git checkout -b sub-branch
fatal: a branch named 'sub-branch' already exists

Sanket@DESKTOP-25316AG MINGW64 ~/Desktop/Sanket/Experiment_1 (sub-branch)
$ git status
On branch sub-branch
nothing to commit, working tree clean

Sanket@DESKTOP-25316AG MINGW64 ~/Desktop/Sanket/Experiment_1 (sub-branch)
$
```


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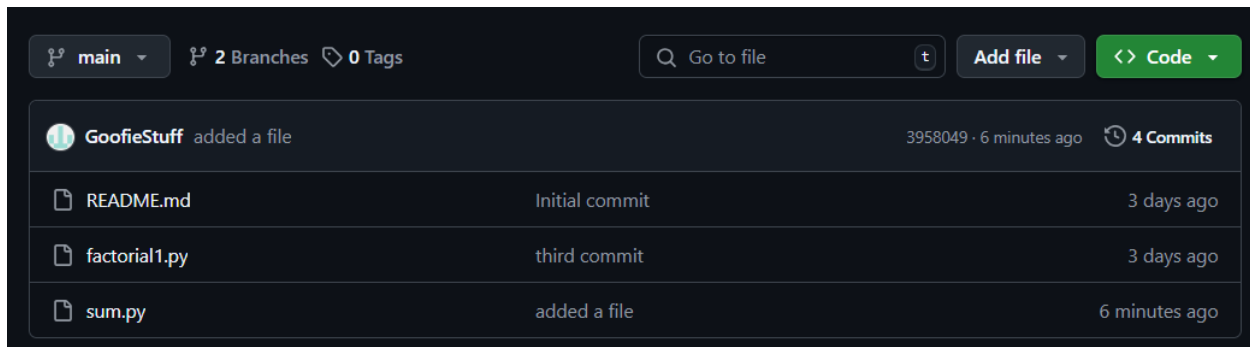
merging:

```
Sanket@DESKTOP-25316AG MINGW64 ~/Desktop/Sanket/Experiment_1 (sub-branch)
$ git checkout main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.

Sanket@DESKTOP-25316AG MINGW64 ~/Desktop/Sanket/Experiment_1 (main)
$ git merge sub-branch
Updating dd543b0..3958049
Fast-forward
 sum.py | 3 +++
 1 file changed, 3 insertions(+)
 create mode 100644 sum.py

Sanket@DESKTOP-25316AG MINGW64 ~/Desktop/Sanket/Experiment_1 (main)
$ git push origin main
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
To https://github.com/GoofieStuff/Experiment_1
 dd543b0..3958049  main -> main
```

main branch after merge:



The screenshot shows the GitHub repository interface for 'GoofieStuff/Experiment_1'. At the top, the 'main' branch is selected, with 2 branches and 0 tags. A search bar and buttons for 'Add file' and 'Code' are visible. Below, the commit history is displayed, showing a commit by 'GoofieStuff' at 3958049, 6 minutes ago, with 4 commits in total. The commit list includes:

File	Commit Message	Time
README.md	Initial commit	3 days ago
factorial1.py	third commit	3 days ago
sum.py	added a file	6 minutes ago

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- deleting branch :

```
Sanket@DESKTOP-25316AG MINGW64 ~/Desktop/Sanket/Experiment_1 (main)
$ git branch -D sub-branch
Deleted branch sub-branch (was 3958049).

Sanket@DESKTOP-25316AG MINGW64 ~/Desktop/Sanket/Experiment_1 (main)
$ git push origin -delete sub-branch
error: did you mean '--delete' (with two dashes)?

Sanket@DESKTOP-25316AG MINGW64 ~/Desktop/Sanket/Experiment_1 (main)
$ git push origin --delete sub-branch
To https://github.com/GoofieStuff/Experiment_1
- [deleted]          sub-branch

Sanket@DESKTOP-25316AG MINGW64 ~/Desktop/Sanket/Experiment_1 (main)
$
```

no branch on remote repository :

