

ASSIGNMENT 1

Initialize a new Git repository in a directory of your choice. Add a simple text file to the repository and make the first commit.

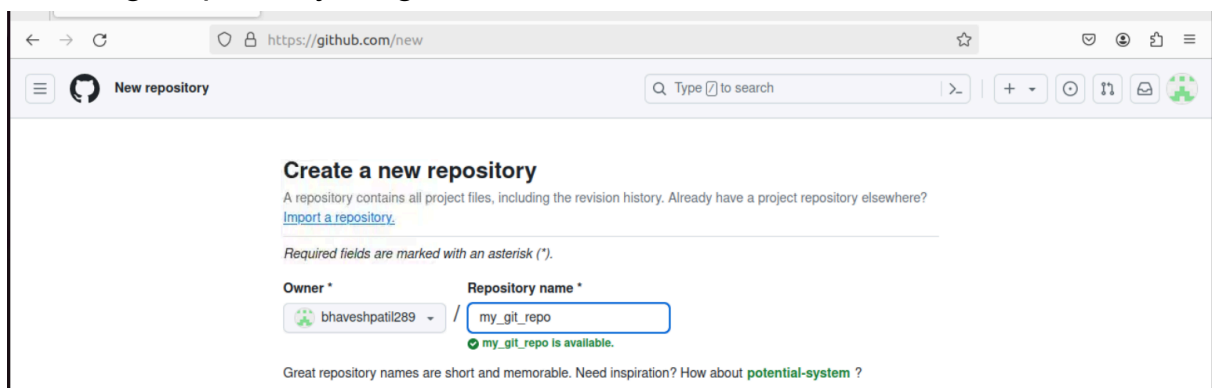
1. Creating Git Repository and initializing it in local directory.

```
rps@rps-virtual-machine: ~/$ pwd
/home/rps
rps@rps-virtual-machine:~$ mkdir my_git_repo
rps@rps-virtual-machine:~$ cd my_git_repo
rps@rps-virtual-machine:~/my_git_repo$ git init
hint: Using 'master' as the name for the initial branch. This default branch name
hint: is subject to change. To configure the initial branch name to use in all
hint: of your new repositories, which will suppress this warning, call:
hint:
hint:   git config --global init.defaultBranch <name>
hint:
hint: Names commonly chosen instead of 'master' are 'main', 'trunk' and
hint: 'development'. The just-created branch can be renamed via this command:
hint:
hint:   git branch -m <name>
Initialized empty Git repository in /home/rps/my_git_repo/.git/
```

2. Adding a text file 'README.txt' to repository and committed

```
rps@rps-virtual-machine:~/my_git_repo$ vim README.txt
rps@rps-virtual-machine:~/my_git_repo$ git add README.txt
rps@rps-virtual-machine:~/my_git_repo$ git commit -m "Initiak Commit with README.txt"
[master (root-commit) e3354c1] Initiaak Commit with README.txt
1 file changed, 2 insertions(+)
 create mode 100644 README.txt
rps@rps-virtual-machine:~/my_git_repo$ git status
On branch master
nothing to commit, working tree clean
```

3. Creating Repository on github



4. Pushing code into github repository

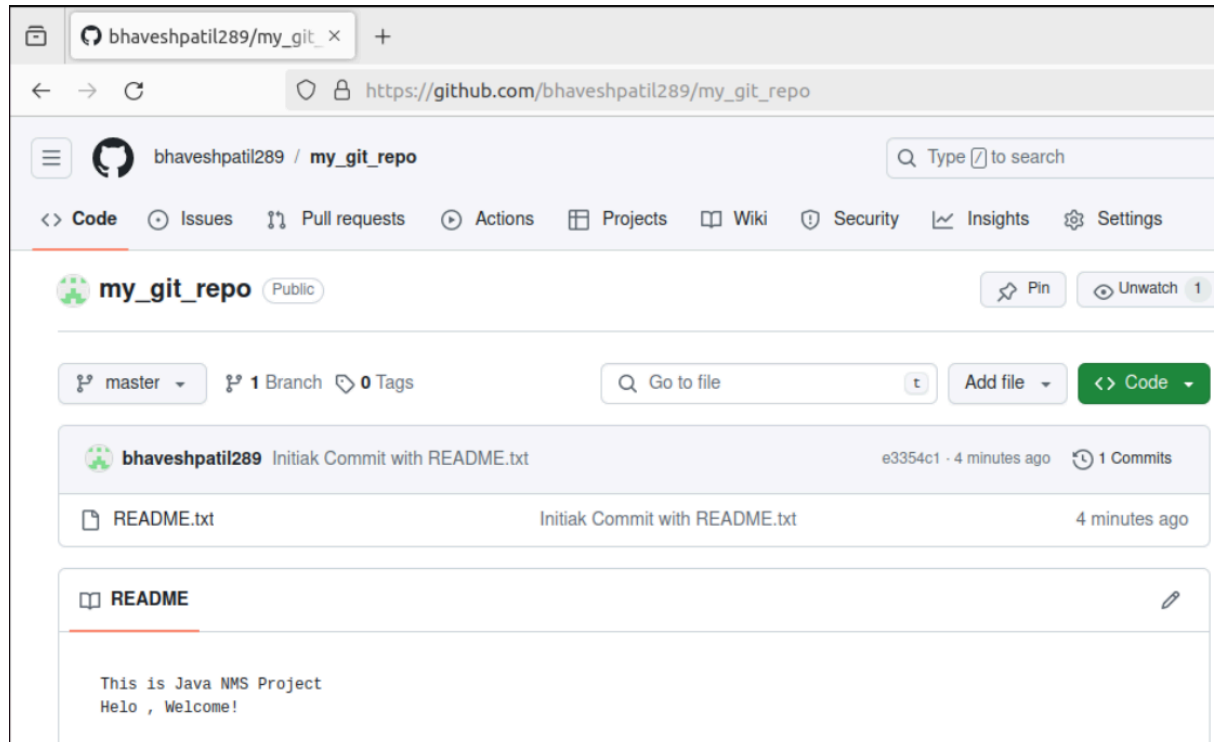
```

rps@rps-virtual-machine:~/my_git_repo$ git remote add origin git@github.com:bhaveshtpatil289/my_git_repo.git
rps@rps-virtual-machine:~/my_git_repo$ git status
On branch master
nothing to commit, working tree clean

rps@rps-virtual-machine:~/my_git_repo$ git push --set-upstream origin master
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Writing objects: 100% (3/3), 276 bytes | 276.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To github.com:bhaveshtpatil289/my_git_repo.git
 * [new branch]      master -> master
Branch 'master' set up to track remote branch 'master' from 'origin'.
rps@rps-virtual-machine:~/my_git_repo$

```

5. Finally github repository in sync with local repository



The screenshot shows the GitHub web interface for a repository named 'my_git_repo' owned by 'bhaveshtpatil289'. The repository is public and has 1 branch (master) and 0 tags. The commit history shows a single commit titled 'Initiak Commit with README.txt' by 'bhaveshtpatil289' 4 minutes ago, with a commit hash of 'e3354c1'. The README file is visible, containing the text: 'This is Java NMS Project' and 'Helo , Welcome!'. The interface includes navigation tabs for Code, Issues, Pull requests, Actions, Projects, Wiki, Security, Insights, and Settings. There are also buttons for Pin, Unwatch, and a search bar.

ASSIGNMENT 2

Branch Creation and Switching.

Create a new branch named 'feature' and switch to it. Make changes in the 'feature' branch and commit them.

1. Checking current branches, then created feature branch

```
rps@rps-virtual-machine:~/my_git_repo$ git branch
* master
rps@rps-virtual-machine:~/my_git_repo$ git branch feature
rps@rps-virtual-machine:~/my_git_repo$ git branch
feature
* master
rps@rps-virtual-machine:~/my_git_repo$
```

2. Switch to newly created feature branch

```
rps@rps-virtual-machine:~/my_git_repo$ git checkout feature
Switched to branch 'feature'
rps@rps-virtual-machine:~/my_git_repo$
```

3. Done some changes in feature branch, here i added content in 'README.txt'

```
This is Java NMS Project
Helo , Welcome!
This repo also contains feature documentation for project.
```

4. Added and committed changes

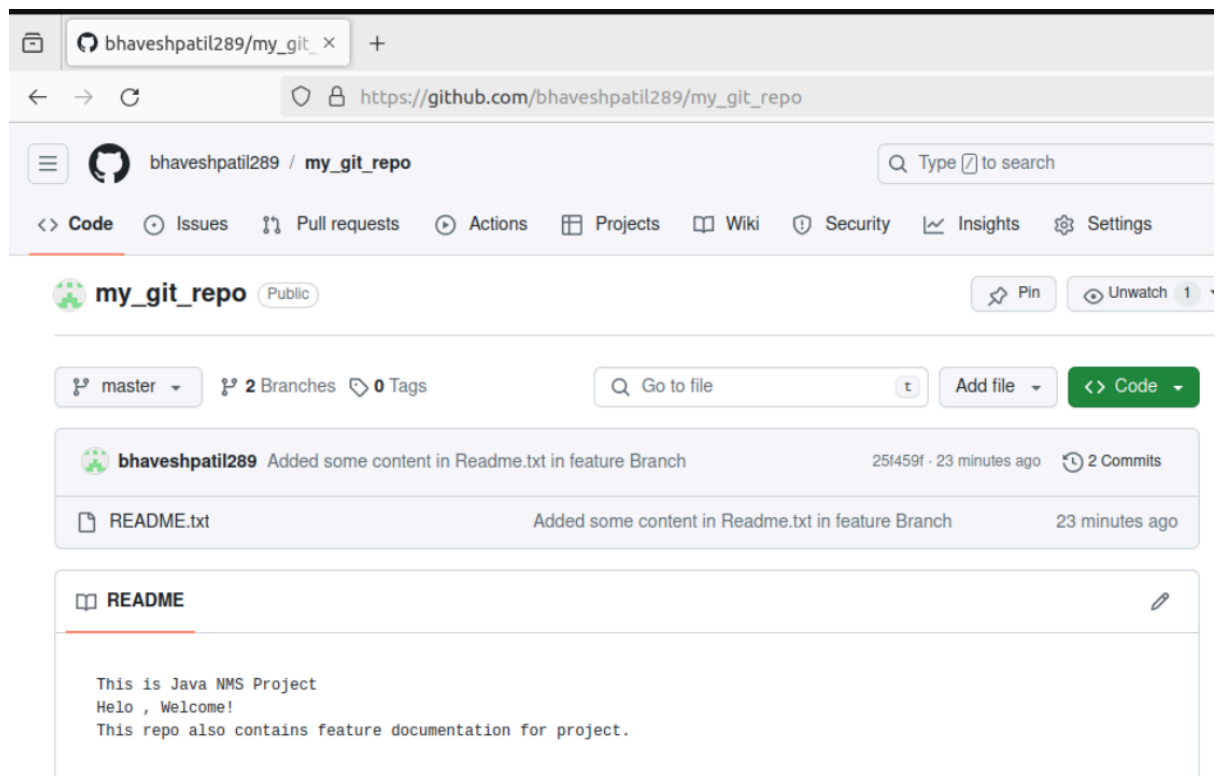
```
rps@rps-virtual-machine:~/my_git_repo$ vim README.txt
rps@rps-virtual-machine:~/my_git_repo$ git add README.txt
rps@rps-virtual-machine:~/my_git_repo$ git commit -m "Added some content in Readme.txt in feature Branch"
[feature 25f459f] Added some content in Readme.txt in feature Branch
1 file changed, 1 insertion(+)
```

5. Merged code from feature branch to main master branch

```
rps@rps-virtual-machine:~/my_git_repo$ git pull origin feature
From github.com:bhavespatil289/my_git_repo
* branch                feature    -> FETCH_HEAD
Updating e3354c1..25f459f
Fast-forward
 README.txt | 1 +
 1 file changed, 1 insertion(+)
```

```
rps@rps-virtual-machine:~/my_git_repo$ git push
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0
To github.com:bhavespatil289/my_git_repo.git
 e3354c1..25f459f  master -> master
rps@rps-virtual-machine:~/my_git_repo$
```

6. Master branch



The screenshot shows the GitHub web interface for a repository named 'my_git_repo' by user 'bhavespatil289'. The repository is public and has 2 branches and 0 tags. The 'master' branch is selected. A recent commit by 'bhavespatil289' is shown, titled 'Added some content in Readme.txt in feature Branch', with commit hash '25f459f' and timestamp '23 minutes ago'. The commit message is 'Added some content in Readme.txt in feature Branch'. The file 'README.txt' is listed as changed. The README content is visible, stating: 'This is Java NMS Project', 'Hello , Welcome!', and 'This repo also contains feature documentation for project.'

ASSIGNMENT 3

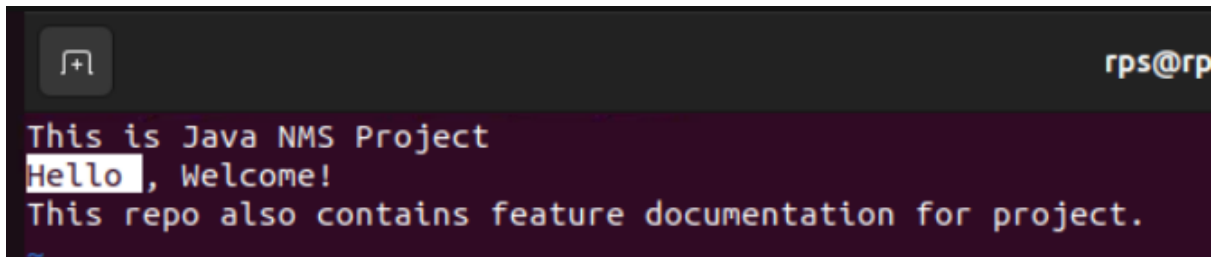
Feature Branches and Hotfixes.

Create a 'hotfix' branch to fix an issue in the main code. Merge the 'hotfix' branch into 'main' ensuring that the issue is resolved.

1. Created a hotfix branch

```
rps@rps-virtual-machine:~/my_git_repo$ git branch
feature
* master
rps@rps-virtual-machine:~/my_git_repo$ git branch hotfix
rps@rps-virtual-machine:~/my_git_repo$ git checkout hotfix
Switched to branch 'hotfix'
rps@rps-virtual-machine:~/my_git_repo$
```

2. Fixed Typo in 'README.txt' in hotfix branch



```
rps@rp
```

This is Java NMS Project
Hello, Welcome!
This repo also contains feature documentation for project.

3. Added and committed fix

```
rps@rps-virtual-machine:~/my_git_repo$ vim README.txt
rps@rps-virtual-machine:~/my_git_repo$ git add .
rps@rps-virtual-machine:~/my_git_repo$ git commit -m "Fixed typo in 'README.txt' with hotfix branch"
[hotfix c920225] Fixed typo in 'README.txt' with hotfix branch
1 file changed, 1 insertion(+), 1 deletion(-)
rps@rps-virtual-machine:~/my_git_repo$
```

4. Merged the 'hotfix' branch into 'main' so that the issue is resolved.

```
rps@rps-virtual-machine:~/my_git_repo$ git checkout master
Switched to branch 'master'
Your branch is up to date with 'origin/master'.
rps@rps-virtual-machine:~/my_git_repo$ git merge hotfix
Updating 25f459f..c920225
Fast-forward
 README.txt | 2 +-
 1 file changed, 1 insertion(+), 1 deletion(-)
rps@rps-virtual-machine:~/my_git_repo$ git push
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 4 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 306 bytes | 306.00 KiB/s, done.
Total 3 (delta 1), reused 0 (delta 0), pack-reused 0
remote: Resolving deltas: 100% (1/1), completed with 1 local object.
To github.com:bhaveshtpatil289/my_git_repo.git
 25f459f..c920225 master -> master
rps@rps-virtual-machine:~/my_git_repo$
```

The screenshot shows the GitHub web interface for a repository named 'my_git_repo' owned by 'bhaveshtpatil289'. The repository is public. The main navigation bar includes links for Code, Issues, Pull requests, Actions, Projects, Wiki, Security, Insights, and Settings. Below the repository name, there are buttons for Pin and Unwatch (1). The repository has 2 branches (master) and 0 tags. A commit by 'bhaveshtpatil289' is shown, titled 'Fixed typo in 'README.txt' with hotfix branch', with commit hash 'c920225' and timestamp '5 minutes ago'. The commit message is 'Fixed typo in 'README.txt' with hotfix branch'. The README file is listed with the same commit message and timestamp. The README content is displayed below, showing a typo correction from 'Hello , Welcome!' to 'Hello, Welcome!'. The README text reads: 'This is Java NMS Project', 'Hello, Welcome!', and 'This repo also contains feature documentation for project.'