

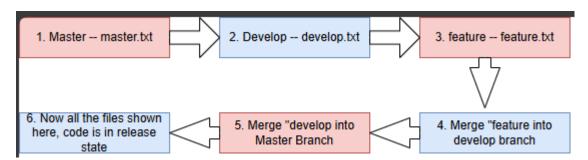
# CASE STUDY - GIT WORKFLOW

#### **Problem Statement:**

You work as a Devops Architect in Zendriix Softwares. The company has been struggling to manage their product releases. The releases should happen on 25th of every month. Suggest a Git Workflow Architecture for this requirement.

Simulate this workflow, by creating a pseudo code files and branches, and upload the same to your GitHub Account.

As a part of solution, share the link to your GitHub repository.

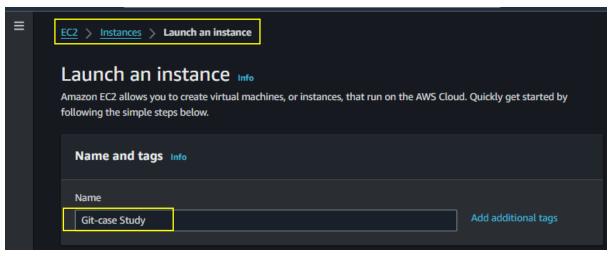


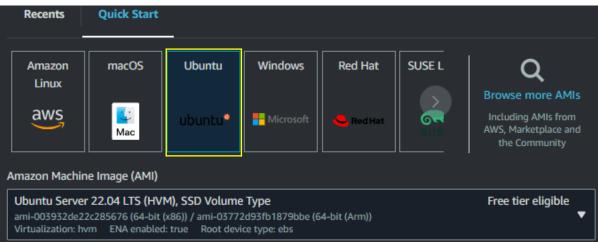
In this case, we will create three separate branches "master", "develop" & "feature". The "develop" branch will be created from the "master" branch, while the "feature" branch will be created from the "develop" branch. Also, create three files such as "master.txt", "develop.txt" & "feature.txt" in these respective branches.

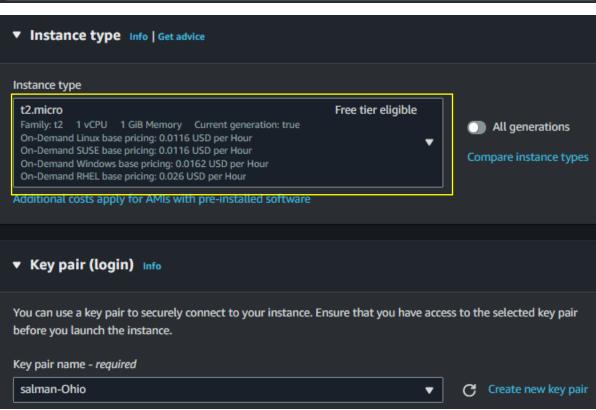
After creating all the branches & files, we will merge the "feature" branch into the "develop" branch & after merging the "feature" branch, we will merge the "develop" branch into the "master" branch.

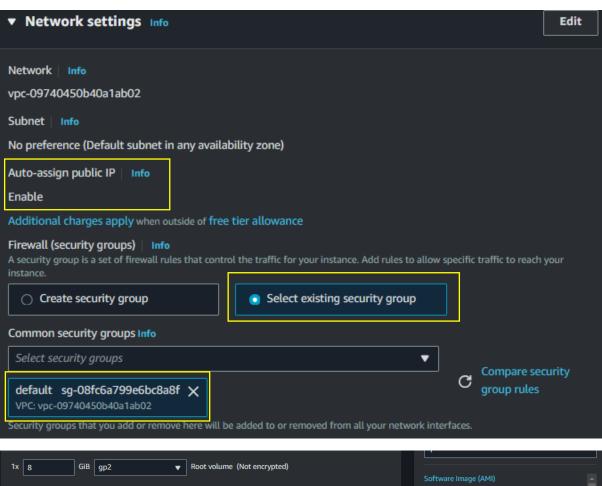
Merging all branches into a master means the final code is ready to release & company will easily release the final product on the 25th of every month using this strategy.

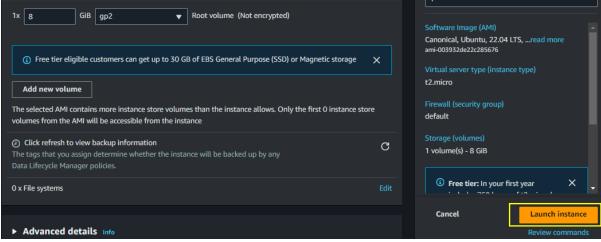
# Create an EC2 Instance for Accessing the Git Environment

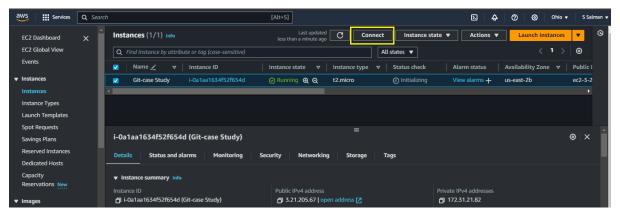




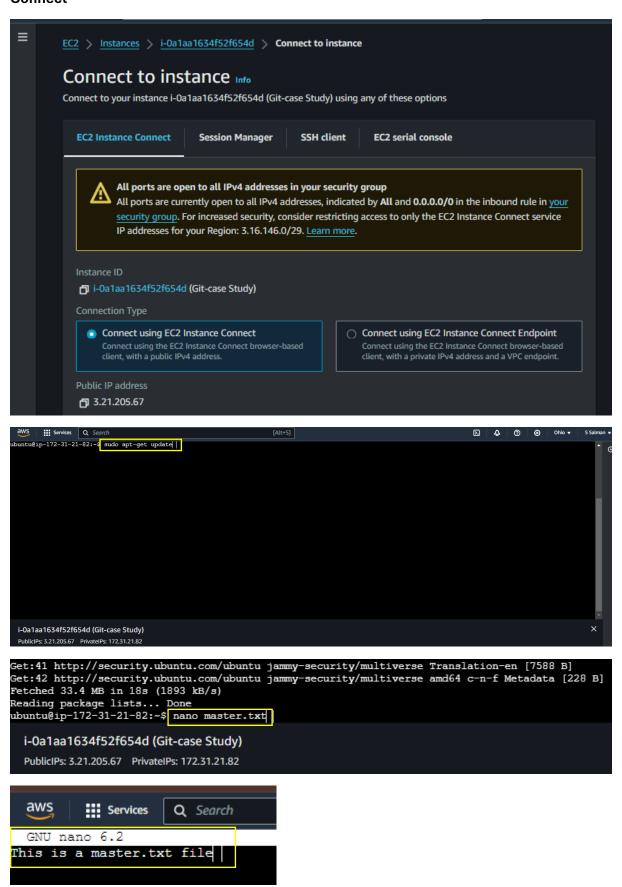








#### Connect



```
ubuntu@ip-172-31-21-82:~$ git init
hint: Using 'master' as the name for the initial branch. This default branch na
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:
       git config --global init.defaultBranch <name>
nint:
mint: Names commonly chosen instead of 'master' are 'main', 'trunk' and
nint: 'development'. The just-created branch can be renamed via this command:
      git branch -m <name>
Initialized empty Git repository in /home/ubuntu/.git/
ubuntu@ip-172-31-21-82:~$ | |
  i-0a1aa1634f52f654d (Git-case Study)
  PublicIPs: 3.21.205.67 PrivateIPs: 172.31.21.82
ubuntu@ip-172-31-21-82:~$ git add master.txt
ubuntu@ip-172-31-21-82:~$ git status
On branch master
No commits yet
Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
         new file: master.txt
Untracked files:
  (use "git add <file>..." to include in what will be committed)
ubuntu@ip-172-31-21-82:~$
  i-0a1aa1634f52f654d (Git-case Study)
```

PublicIPs: 3.21.205.67 PrivateIPs: 172.31.21.82

```
ubuntu@ip-172-31-21-82:~$ git commit -m "committing the master.txt file"
[master (root-commit) 2ce08dc] committing the master.txt file
Committer: Ubuntu <ubuntu@ip-172-31-21-82.us-east-2.compute.internal>
Your name and email address were configured automatically based
on your username and hostname. Please check that they are accurate.
You can suppress this message by setting them explicitly. Run the
following command and follow the instructions in your editor to edit
your configuration file:
    git config --global --edit
After doing this, you may fix the identity used for this commit with:
    git commit --amend --reset-author
1 file changed, 1 insertion(+)
create mode 100644 master.txt
ubuntu@ip-172-31-21-82:~$
  i-0a1aa1634f52f654d (Git-case Study)
  PublicIPs: 3.21.205.67 PrivateIPs: 172.31.21.82
ubuntu@ip-172-31-21-82:~$ git branch
ubuntu@ip-172-31-21-82:~$ git checkout master
Already on 'master'
ubuntu@ip-172-31-21-82:~$ ls
master.txt
ubuntu@ip-172-31-21-82:~$
  i-0a1aa1634f52f654d (Git-case Study)
  PublicIPs: 3.21.205.67 PrivateIPs: 172.31.21.82
ubuntu@ip-172-31-21-82:~$ git branch develop
ubuntu@ip-172-31-21-82:~$ git branch
 develop
ubuntu@ip-172-31-21-82:~$ git checkout develop
Switched to branch 'develop'
ubuntu@ip-172-31-21-82:~$ nano develop.txt
  i-0a1aa1634f52f654d (Git-case Study)
 PublicIPs: 3.21.205.67 PrivateIPs: 172.31.21.82
  aws
         Services
                    Q Search
  GNU nano 6.2
This is a develop.txt file
```

```
ubuntu@ip-172-31-21-82:~$ ls
develop.txt master.txt
ubuntu@ip-172-31-21-82:~$ git add develop.txt
ubuntu@ip-172-31-21-82:~$ git status
On branch develop
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
Untracked files:
  (use "git add <file>..." to include in what will be committed)
ubuntu@ip-172-31-21-82:~$
  i-0a1aa1634f52f654d (Git-case Study)
  PublicIPs: 3.21.205.67 PrivateIPs: 172.31.21.82
ubuntu@ip-172-31-21-82:~$ git commit -m "commiting develop.txt"
[develop c81bef1] committing develop.txt
Committer: Ubuntu <ubuntu@ip-172-31-21-82.us-east-2.compute.internal>
Your name and email address were configured automatically based
on your username and hostname. Please check that they are accurate.
You can suppress this message by setting them explicitly. Run the
following command and follow the instructions in your editor to edit
your configuration file:
    git config --global --edit
After doing this, you may fix the identity used for this commit with:
    git commit --amend --reset-author
1 file changed, 1 insertion(+)
create mode 100644 develop.txt
ubuntu@ip-172-31-21-82:~$ ls
develop.txt master.txt
ubuntu@ip-172-31-21-82:~$ git branch
```

ubuntu@ip-172-31-21-82:~\$ nano develop.txt

\* develop
master

ubuntu@ip-172-31-21-82:~\$ |

i-Oa1aa1634f52f654d (Git-case Study)
PublicIPs: 3.21.205.67 PrivateIPs: 172.31.21.82

```
ubuntu@ip-172-31-21-82:~$ git branch feature ubuntu@ip-172-31-21-82:~$ git branch

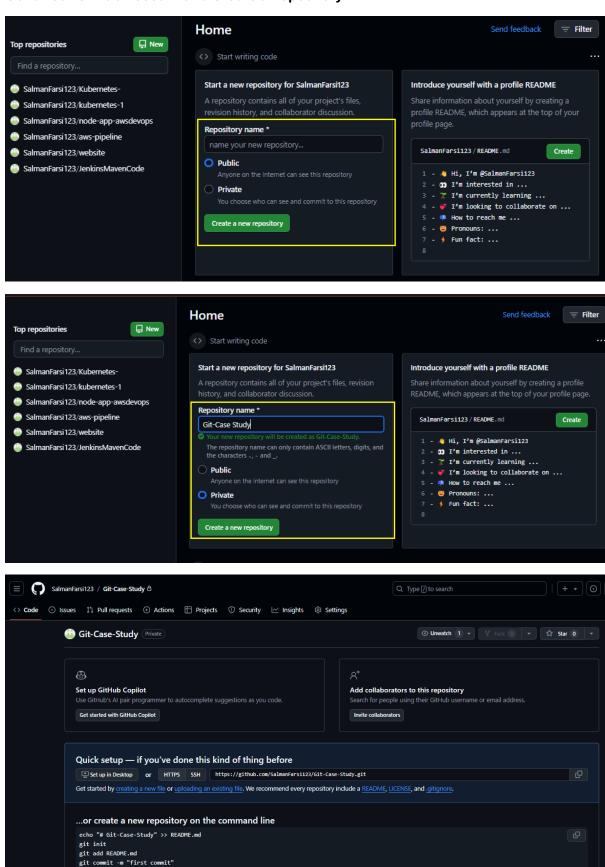
    develop

  feature
 master
ubuntu@ip-172-31-21-82:~$ git checkout feature
Switched to branch 'feature'
ubuntu@ip-172-31-21-82:~$ ls
develop.txt master.txt
ubuntu@ip-172-31-21-82:~$
  i-0a1aa1634f52f654d (Git-case Study)
  PublicIPs: 3.21.205.67 PrivateIPs: 172.31.21.82
ubuntu@ip-172-31-21-82:~$ nano feature.txt
  i-0a1aa1634f52f654d (Git-case Study)
  PublicIPs: 3.21.205.67 PrivateIPs: 172.31.21.82
  aws
          Services
                       Q Search
  GNU nano 6.2
This is a feature.txt file
ubuntu@ip-172-31-21-82:~$ git add feature.txt
ubuntu@ip-172-31-21-82:~$ git status
On branch feature
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file: feature.txt
Untracked files:
  (use "git add <file>..." to include in what will be committed)
ubuntu@ip-172-31-21-82:~$ git
  i-0a1aa1634f52f654d (Git-case Study)
  PublicIPs: 3.21.205.67 PrivateIPs: 172.31.21.82
```

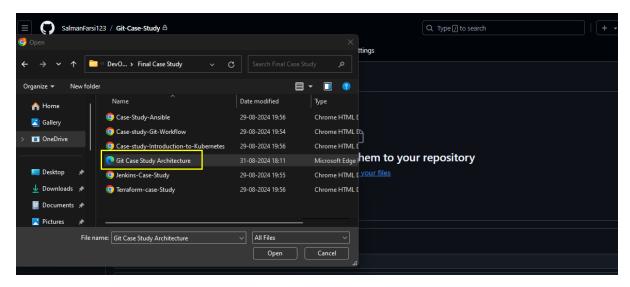
```
ubuntu@ip-172-31-21-82:~$ git commit -m "commiting feature.txt file"
[feature 6de8702] committing feature.txt file
Committer: Ubuntu <ubuntu@ip-172-31-21-82.us-east-2.compute.internal>
Your name and email address were configured automatically based
on your username and hostname. Please check that they are accurate.
You can suppress this message by setting them explicitly. Run the
following command and follow the instructions in your editor to edit
your configuration file:
    git config --global --edit
After doing this, you may fix the identity used for this commit with:
    git commit --amend --reset-author
 1 file changed, 1 insertion(+)
 create mode 100644 feature.txt
ubuntu@ip-172-31-21-82:~$
  i-0a1aa1634f52f654d (Git-case Study)
  PublicIPs: 3.21.205.67 PrivateIPs: 172.31.21.82
```

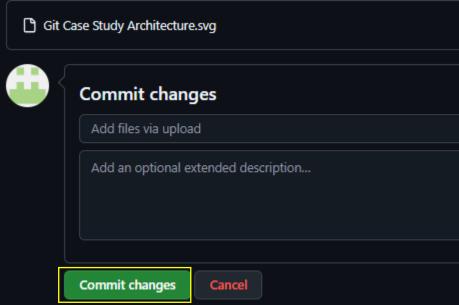
```
ubuntu@ip-172-31-21-82:~$ git branch
 develop
 master
ubuntu@ip-172-31-21-82:~$ ls
develop.txt feature.txt master.txt
ubuntu@ip-172-31-21-82:~$ git checkout develop
Switched to branch 'develop'
ubuntu@ip-172-31-21-82:~$ ls
develop.txt master.txt
ubuntu@ip-172-31-21-82:~$ git checkout master
Switched to branch 'master'
ubuntu@ip-172-31-21-82:~$ ls
master.txt
ubuntu@ip-172-31-21-82:~$
  i-0a1aa1634f52f654d (Git-case Study)
  PublicIPs: 3.21.205.67 PrivateIPs: 172.31.21.82
```

### Go to Your Github Account and Create a Repository

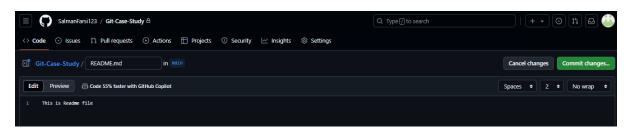


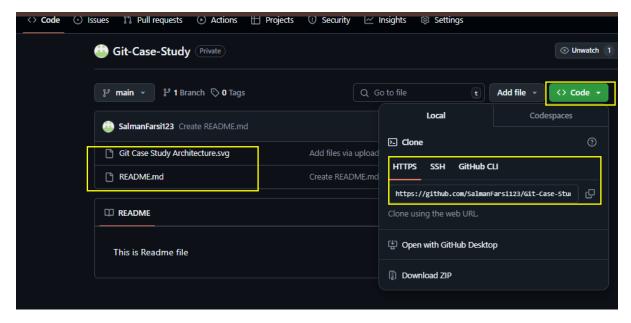
# I am just upload a file(Not mandatory)





# Also I Added README.md





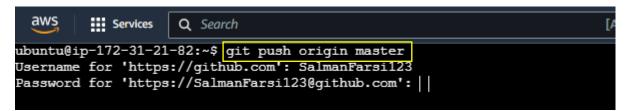
### My Github Credentials

```
aWS Services Q Search [Alt+S]
ubuntu@ip-172-31-21-82:~$ git config --global user.email "shaiksalmanfarsi56@gmail.com"
ubuntu@ip-172-31-21-82:~$ git config --global user.name "SalmanFarsi123"
```

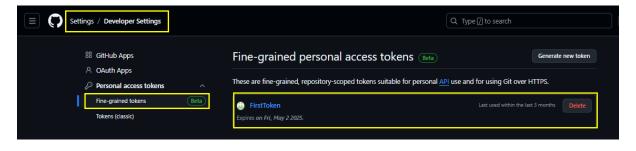
# Adding the origin to push and fetch

```
aws | Services | Q Search | [Alt+5] |
ubuntu@ip-172-31-21-82:~$ git remote add origin https://github.com/SalmanFarsi123/Git-Case-Study.git
ubuntu@ip-172-31-21-82:~$ git remote -v
origin https://github.com/SalmanFarsi123/Git-Case-Study.git (fetch)
origin https://github.com/SalmanFarsi123/Git-Case-Study.git (push)
ubuntu@ip-172-31-21-82:~$ |
```

Pushing Master branch to remote repository(Github), so need to password here, I am using tokens, which I created while performing github assignments in the past



Go to Settings > developer settings, I stored the token in my local desktop

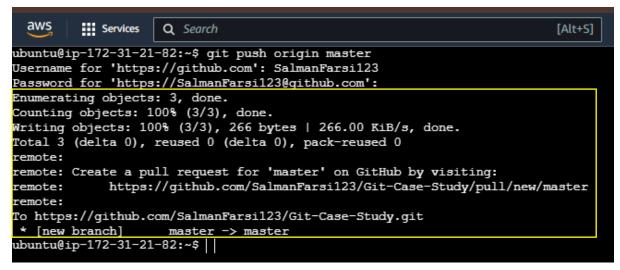


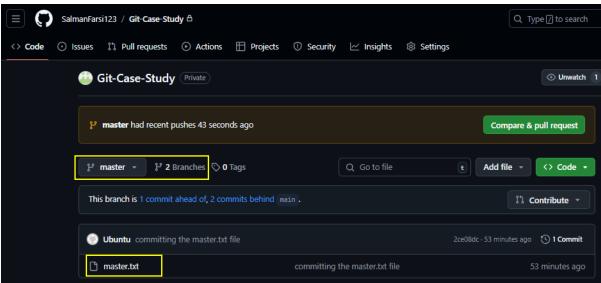
### Copy it

```
File Edit View

SalmanFarsi123 Token: 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
```

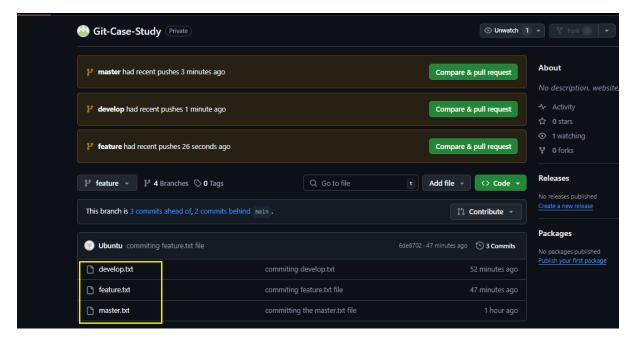
#### Paste here, its invisible and enter it, and it will push successfully



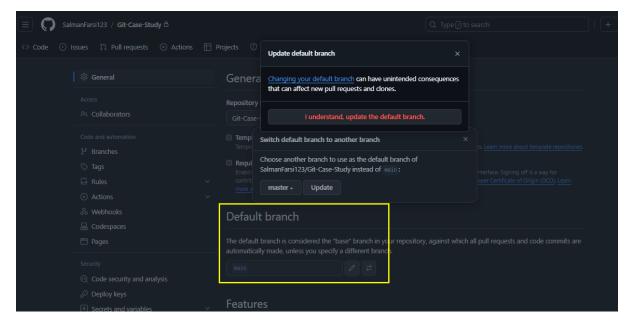


### **Push Develop branch**

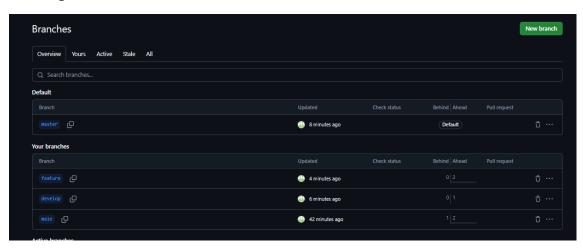
```
aws
          Services
                      Q Search
                                                                                 [Alt+S]
ubuntu@ip-172-31-21-82:~$ git push origin develop
Username for 'https://github.com': SalmanFarsi123
Password for 'https://SalmanFarsi123@github.com':
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 328 bytes | 328.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
remote:
remote: Create a pull request for 'develop' on GitHub by visiting:
              https://github.com/SalmanFarsi123/Git-Case-Study/pull/new/develop
remote:
remote:
To https://github.com/SalmanFarsi123/Git-Case-Study.git
[new branch]
                       develop -> develop
ubuntu@ip-172-31-21-82:~$
                                                                                  ⊙ Unwatch
      Git-Case-Study Private
        master had recent pushes 2 minutes ago
                                                                         Compare & pull request
        develop had recent pushes 29 seconds ago
                                                                         Compare & pull request
       泮 develop ▼
                   រុំ 3 Branches
                            O Tags
                                                 Q Go to file
                                                                        Add file 🔻
                                                                                 <> Code ▼
        This branch is 2 commits ahead of, 2 commits behind main.
                                                                             11 Contribute
        Ubuntu commiting develop.txt
                                                                   c81bef1 · 50 minutes ago (3) 2 Commits
        develop.txt
                                         committing develop.txt
                                                                                50 minutes ago
        master.txt
                                         committing the master.txt file
                                                                                   1 hour ago
  aws
          Services
                      Q Search
                                                                                   [Alt+S]
ubuntu@ip-172-31-21-82:~$ git push origin feature
Username for 'https://github.com': SalmanFarsi123
Password for 'https://SalmanFarsi123@github.com':
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 362 bytes | 362.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
remote:
remote: Create a pull request for 'feature' on GitHub by visiting:
              https://github.com/SalmanFarsi123/Git-Case-Study/pull/new/feature
remote:
remote:
To https://github.com/SalmanFarsi123/Git-Case-Study.git
[new branch]
                       feature -> feature
ubuntu@ip-172-31-21-82:~$ | |
```



# Click Settings(click Double Click on it), and I am changing default branch main to master



### **Deleting main branch**



#### Come to Instances and go to develop branch and merge with feature branch

```
aws
          Services Q Search
                                                                                [Alt+S]
ubuntu@ip-172-31-21-82:~$ git branch
  develop
  feature
ubuntu@ip-172-31-21-82:~$ git checkout develop
Switched to branch 'develop
ubuntu@ip-172-31-21-82:~$ ls
develop.txt master.txt
ubuntu@ip-172-31-21-82:~$ git branch
  feature
  master
ubuntu@ip-172-31-21-82:~$ git merge feature
Updating c81bef1..6de8702
Fast-forward
feature.txt | 1
1 file changed, 1 insertion(+)
create mode 100644 feature.txt
ubuntu@ip-172-31-21-82:~$ | |
  i-0a1aa1634f52f654d (Git-case Study)
  PublicIPs: 3.21.205.67 PrivateIPs: 172.31.21.82
```

### Come to master branch and merge with develop branch

```
ubuntu@ip-172-31-21-82:~$ git checkout master
Switched to branch 'master'
ubuntu@ip-172-31-21-82:~$ git merge develop
Updating 2ce08dc..6de8702
Fast-forward
develop.txt | 1 +
feature.txt | 1 +
2 files changed, 2 insertions(+)
create mode 100644 develop.txt
create mode 100644 feature.txt
ubuntu@ip-172-31-21-82:~$ |
```

# And pushing master branch, like push develop branch too

