

Module 2: Git Assignment - 5 - Solution - 1

1. Create a Git Flow work flow architecture on Git.

Solution:-

```
$ sudo su
# apt update
```

```
ubuntu@ip-172-31-85-241:~$ sudo su
root@ip-172-31-85-241:/home/ubuntu# apt update
Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy InRelease
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates InRelease [11
9 kB]
Get:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports InRelease [
108 kB]
Get:4 http://security.ubuntu.com/ubuntu jammy-security InRelease [110 kB]
```

```
# apt upgrade
# apt install git
# which git
# git --version
```

```
root@ip-172-31-85-241:/home/ubuntu# apt upgrade
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Calculating upgrade... Done
#
# An OpenSSL vulnerability has recently been fixed with USN-6188-1 & 6119-1:
# CVE-2023-2650: possible DoS translating ASN.1 object identifiers.
# Ensure you have updated the package to its latest version.
#
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
root@ip-172-31-85-241:/home/ubuntu# apt install git
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
git is already the newest version (1:2.34.1-1ubuntu1.9).
git set to manually installed.
0 upgraded, 0 newly installed, 0 to remove and 0 not upgraded.
root@ip-172-31-85-241:/home/ubuntu# which git
/usr/bin/git
root@ip-172-31-85-241:/home/ubuntu# git --version
git version 2.34.1
```

```
# git config --global user.name "Amit Tiwari"
# git config --global user.email "redhat.amitiwari@gmail.com"
# git config --list
# mkdir gitdir
# cd gitdir
```

```
root@ip-172-31-85-241:/home/ubuntu# git config --global user.name "Amit Tiwari"
root@ip-172-31-85-241:/home/ubuntu# git config --global user.email "redhat.amitiwari@gmail.com"
root@ip-172-31-85-241:/home/ubuntu# git config --list
user.name=Amit Tiwari
user.email=redhat.amitiwari@gmail.com
root@ip-172-31-85-241:/home/ubuntu# mkdir gitdir
root@ip-172-31-85-241:/home/ubuntu# cd gitdir
root@ip-172-31-85-241:/home/ubuntu/gitdir#
```

```
# git init
# touch master.txt
# git status
```

```
root@ip-172-31-85-241:/home/ubuntu/gitdir# 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/ubuntu/gitdir/.git/
root@ip-172-31-85-241:/home/ubuntu/gitdir# touch master.txt
root@ip-172-31-85-241:/home/ubuntu/gitdir# git status
On branch master

No commits yet

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    master.txt

nothing added to commit but untracked files present (use "git add" to track)
```

```
# git add master.txt && git commit -m "Master file commit."
master.txt
# git status
```

```
root@ip-172-31-85-241:/home/ubuntu/gitdir# git add master.txt && git commit -m "
Master file commit."    master.txt
[master (root-commit) e3c71a9] Master file commit.
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 master.txt
root@ip-172-31-85-241:/home/ubuntu/gitdir# git status
On branch master
nothing to commit, working tree clean
```

2. Create all the required branches.

Solution:-

```
# git branch develop
# git checkout develop
# touch develop.txt
# git add develop.txt && git commit -m "Develop file commit in
develop branch." develop.txt
# git branch feature1 && git branch feature2
# git branch
```

```
root@ip-172-31-85-241:/home/ubuntu/gitdir# git branch develop
root@ip-172-31-85-241:/home/ubuntu/gitdir# git checkout develop
Switched to branch 'develop'
root@ip-172-31-85-241:/home/ubuntu/gitdir# touch develop.txt
root@ip-172-31-85-241:/home/ubuntu/gitdir# git add develop.txt && git commit -m
"Develop file commit in develop branch." develop.txt
[develop cef5f58] Develop file commit in develop branch.
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 develop.txt
root@ip-172-31-85-241:/home/ubuntu/gitdir# git branch feature1 && git branch fea
ture2
root@ip-172-31-85-241:/home/ubuntu/gitdir# git branch
* develop
  feature1
  feature2
  master
```

3. Starting from the feature branch, push the branch to the master, following the architecture.

Solution:-

```
# git checkout feature1
# touch f1.txt
# git add . && git commit -m "f1.txt file commit." f1.txt
# git checkout develop
```

```
root@ip-172-31-85-241:/home/ubuntu/gitdir# git checkout feature1
Switched to branch 'feature1'
root@ip-172-31-85-241:/home/ubuntu/gitdir# touch f1.txt
root@ip-172-31-85-241:/home/ubuntu/gitdir# git add . && git commit -m "f1.txt fi
le commit." f1.txt
[feature1 0ce1adf] f1.txt file commit.
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 f1.txt
root@ip-172-31-85-241:/home/ubuntu/gitdir# git checkout develop
Switched to branch 'develop'
```

```
# git merge feature1
```

```
root@ip-172-31-85-241:/home/ubuntu/gitdir# git merge feature1
Updating cef5f58..0ce1adf
Fast-forward
 f1.txt | 0
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 f1.txt
```

4. Push a urgent.txt on master using hotfix

Solution:-

```
# git checkout master
# git merge develop
# git checkout -b hotfix (This step is perform two steps create
branch and switched to that branch.)
# touch urgent.txt
# git add urgent.txt && git commit -m "last minute very less
addition and also we do not need to merge develop branch to
master branch again. File urgent.txt file re-commit." urgent.txt
```

```
root@ip-172-31-85-241:/home/ubuntu/gitdir# git checkout master
Switched to branch 'master'
root@ip-172-31-85-241:/home/ubuntu/gitdir# git merge develop
Updating e3c71a9..0ce1adf
Fast-forward
 develop.txt | 0
 f1.txt      | 0
 2 files changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 develop.txt
 create mode 100644 f1.txt
root@ip-172-31-85-241:/home/ubuntu/gitdir# git checkout -b hotfix
Switched to a new branch 'hotfix'
root@ip-172-31-85-241:/home/ubuntu/gitdir# touch urgent.txt
root@ip-172-31-85-241:/home/ubuntu/gitdir# git add urgent.txt && git commit -m
"last minute very less addition and also we do not need to merge develop branch
to master branch again. File urgent.txt file re-commit." urgent.txt
[hotfix cd1fb21] last minute very less addition and also we do not need to merge
develop branch to master branch again. File urgent.txt file re-commit.
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 urgent.txt
```

```
# git checkout master  
# git merge hotfix
```

```
root@ip-172-31-85-241:/home/ubuntu/gitdir# git checkout master  
Switched to branch 'master'  
root@ip-172-31-85-241:/home/ubuntu/gitdir# git merge hotfix  
Updating 0ce1adf..cd1fb21  
Fast-forward  
 urgent.txt | 0  
 1 file changed, 0 insertions(+), 0 deletions(-)  
 create mode 100644 urgent.txt
```