

##Advance Git & GitHub for DevOps Engineers – Day 10

Task 1:

Add a text file called version01.txt inside the Devops/Git/ with "This is first feature of our application" written inside.

This should be in a branch coming from 'master',

[hint try `git checkout -b dev`]

```
P1324376@DESKTOP-1236IDC MINGW64 /d/90_Days_DevOps/MyTasks/Devops/Git (main)
$ vim version01.txt

P1324376@DESKTOP-1236IDC MINGW64 /d/90_Days_DevOps/MyTasks/Devops/Git (main)
$ cat version01.txt
This is first feature of our application.

P1324376@DESKTOP-1236IDC MINGW64 /d/90_Days_DevOps/MyTasks/Devops/Git (main)
$ git add version01.txt
warning: in the working copy of 'Git/version01.txt', LF will be replaced by CRLF the next time Git touches it

P1324376@DESKTOP-1236IDC MINGW64 /d/90_Days_DevOps/MyTasks/Devops/Git (main)
$ git commit -m "Added new feature."
[main 9bfd8cd] Added new feature.
1 file changed, 1 insertion(+)
create mode 100644 Git/version01.txt
```

switch to `dev` branch (Make sure your commit message will reflect as "Added new feature").

[Hint use your knowledge of creating branches and Git commit command]

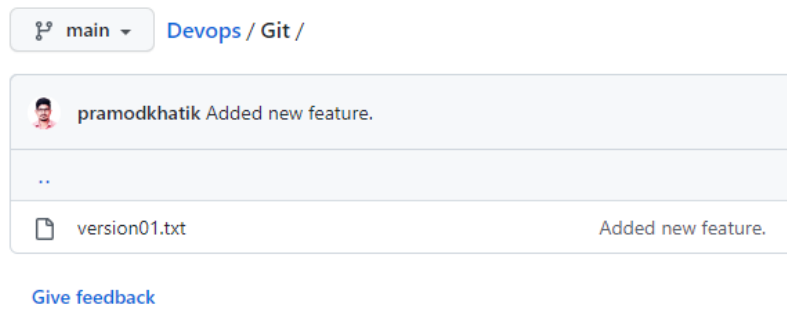
```
P1324376@DESKTOP-1236IDC MINGW64 /d/90_Days_DevOps/MyTasks/Devops/Git (main)
$ git checkout -b dev
Switched to a new branch 'dev'

P1324376@DESKTOP-1236IDC MINGW64 /d/90_Days_DevOps/MyTasks/Devops/Git (dev)
$ |
```

- version01.txt should reflect at local repo first followed by Remote repo for review.

[Hint use your knowledge of Git push and git pull commands here]

```
P1324376@DESKTOP-1236IDC MINGW64 /d/90_Days_DevOps/MyTasks/Devops/Git (dev)
$ git push origin main
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (4/4), 408 bytes | 408.00 KiB/s, done.
Total 4 (delta 0), reused 0 (delta 0), pack-reused 0
To github.com:pramodkhatik/Devops.git
61ed48d..9bfd8cd main -> main
```



Add new commit in `dev` branch after adding below mentioned content in Devops/Git/version01.txt:

While writing the file make sure you write these lines

- 1st line>> This is the bug fix in development branch
- Commit this with message "Added feature2 in development branch"

```
P1324376@DESKTOP-1236IDC MINGW64 /d/90_Days_DevOps/MyTasks/Devops/Git (dev)
$ git add version01.txt
warning: in the working copy of 'Git/version01.txt', LF will be replaced by CRLF the next time Git touches it

P1324376@DESKTOP-1236IDC MINGW64 /d/90_Days_DevOps/MyTasks/Devops/Git (dev)
$ git commit -m "Added feature2 in development branch."
[dev 16505bb] Added feature2 in development branch.
1 file changed, 1 insertion(+), 1 deletion(-)

P1324376@DESKTOP-1236IDC MINGW64 /d/90_Days_DevOps/MyTasks/Devops/Git (dev)
$ cat version01.txt
This is the bug fix in development branch.
```

- 2nd line>> This is gadbad code
- Commit this with message "Added feature3 in development branch"

```
P1324376@DESKTOP-1236IDC MINGW64 /d/90_Days_DevOps/MyTasks/Devops/Git (dev)
$ vim version01.txt

P1324376@DESKTOP-1236IDC MINGW64 /d/90_Days_DevOps/MyTasks/Devops/Git (dev)
$ git add version01.txt
warning: in the working copy of 'Git/version01.txt', LF will be replaced by CRLF the next time Git touches it

P1324376@DESKTOP-1236IDC MINGW64 /d/90_Days_DevOps/MyTasks/Devops/Git (dev)
$ git commit -m "Added feature3 in development branch."
[dev 56923db] Added feature3 in development branch.
1 file changed, 1 insertion(+)

P1324376@DESKTOP-1236IDC MINGW64 /d/90_Days_DevOps/MyTasks/Devops/Git (dev)
$ cat version01.txt
This is the bug fix in development branch.
This is gadbad code.
```

- 3rd line>> This feature will gadbad everything from now.
- Commit with message "Added feature4 in development branch"

```
P1324376@DESKTOP-1236IDC MINGW64 /d/90_Days_DevOps/MyTasks/Devops/Git (dev)
$ vim version01.txt

P1324376@DESKTOP-1236IDC MINGW64 /d/90_Days_DevOps/MyTasks/Devops/Git (dev)
$ git add version01.txt
warning: in the working copy of 'Git/version01.txt', LF will be replaced by CRLF the next time Git touches it

P1324376@DESKTOP-1236IDC MINGW64 /d/90_Days_DevOps/MyTasks/Devops/Git (dev)
$ git commit -m "Added feature4 in development branch."
[dev 6475099] Added feature4 in development branch.
1 file changed, 1 insertion(+)

P1324376@DESKTOP-1236IDC MINGW64 /d/90_Days_DevOps/MyTasks/Devops/Git (dev)
$ cat version01.txt
This is the bug fix in development branch.
This is gadbad code.
This feature will gadbad everything from now.
```

Restore the file to a previous version where the content should be "This is the bug fix in development branch"

[Hint use git revert or reset according to your knowledge]

```
P1324376@DESKTOP-1236IDC MINGW64 /d/90_Days_DevOps/MyTasks/Devops/Git (dev)
$ git log --oneline
6475099 (HEAD -> dev) Added feature4 in development branch.
66923db Added feature3 in development branch.
16505bb Added feature2 in development branch.
9bfd8cd (origin/main, origin/HEAD, main) Added new feature.
61ed48d Initial commit

P1324376@DESKTOP-1236IDC MINGW64 /d/90_Days_DevOps/MyTasks/Devops/Git (dev)
$ git reset --soft 16505bb

P1324376@DESKTOP-1236IDC MINGW64 /d/90_Days_DevOps/MyTasks/Devops/Git (dev)
$ git log
commit 16505bbd8927f136093b5470b20a4ee21b6a6b7e (HEAD -> dev)
Author: Pramod B. Khatik <pramod.khatik111@gmail.com>
Date: Fri Feb 24 19:21:34 2023 +0530

    Added feature2 in development branch.

commit 9bfd8cdb00f3323bcb0b22ad1e4ae0b88c305b33 (origin/main, origin/HEAD, main)
Author: Pramod B. Khatik <pramod.khatik111@gmail.com>
Date: Fri Feb 24 19:07:03 2023 +0530

    Added new feature.

commit 61ed48d64eb8da2dc009fe4b2101fc665e170c88
Author: pramodkhatik <98466507+pramodkhatik@users.noreply.github.com>
Date: Fri Feb 24 18:49:26 2023 +0530

    Initial commit

P1324376@DESKTOP-1236IDC MINGW64 /d/90_Days_DevOps/MyTasks/Devops/Git (dev)
$ git log --oneline
16505bb (HEAD -> dev) Added feature2 in development branch.
9bfd8cd (origin/main, origin/HEAD, main) Added new feature.
61ed48d Initial commit
```

Task 2:

- Demonstrate the concept of branches with 2 or more branches with screenshot.
 - In below screenshot we can see there are two branches present.

```
P1324376@DESKTOP-1236IDC MINGW64 /d/90_Days_DevOps/MyTasks/Devops/Git (dev)
$ git branch
* dev
  main
```

Now we will add new branch called **test** from **dev** branch, when we will create test branch all data from dev branch will get created to test branch as it is.

git checkout -b test

```
P1324376@DESKTOP-1236IDC MINGW64 /d/90_Days_DevOps/MyTasks/Devops/Git (dev)
$ git checkout -b test
Switched to a new branch 'test'

P1324376@DESKTOP-1236IDC MINGW64 /d/90_Days_DevOps/MyTasks/Devops/Git (test)
$ git branch
  dev
  main
* test
```

As shown in above screenshot we have 3 branches now main, dev and test.

```
P1324376@DESKTOP-1236IDC MINGW64 /d/90_Days_DevOps/MyTasks/Devops/Git (test)
$ ls
version01.txt

P1324376@DESKTOP-1236IDC MINGW64 /d/90_Days_DevOps/MyTasks/Devops/Git (test)
$ git switch dev
Switched to branch 'dev'

P1324376@DESKTOP-1236IDC MINGW64 /d/90_Days_DevOps/MyTasks/Devops/Git (dev)
$ ls
version01.txt
```

As we can see we have created test branch from dev **version01.txt** file got created in test branch also.

- add some changes to `dev` branch and merge that branch in `master`
 - We have only one file in dev branch currently. Now we will create one more file called **Samplefile.txt** and merge the changes to main branch.

```
P1324376@DESKTOP-1236IDC MINGW64 /d/90_Days_DevOps/MyTasks/Devops/Git (dev)
$ touch Samplefile.txt

P1324376@DESKTOP-1236IDC MINGW64 /d/90_Days_DevOps/MyTasks/Devops/Git (dev)
$ git add Samplefile.txt

P1324376@DESKTOP-1236IDC MINGW64 /d/90_Days_DevOps/MyTasks/Devops/Git (dev)
$ git commit -m "Added Samplefile for Day 10 exercise."
[dev 155ad26] Added Samplefile for Day 10 exercise.
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 Git/Samplefile.txt

P1324376@DESKTOP-1236IDC MINGW64 /d/90_Days_DevOps/MyTasks/Devops/Git (dev)
$ git switch main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.

P1324376@DESKTOP-1236IDC MINGW64 /d/90_Days_DevOps/MyTasks/Devops/Git (main)
$ ls
version01.txt

P1324376@DESKTOP-1236IDC MINGW64 /d/90_Days_DevOps/MyTasks/Devops/Git (main)
$ git merge dev
Updating 9bfd8cd..155ad26
Fast-forward
 Git/Samplefile.txt | 0
 Git/version01.txt  | 3 ++-
2 files changed, 2 insertions(+), 1 deletion(-)
create mode 100644 Git/Samplefile.txt

P1324376@DESKTOP-1236IDC MINGW64 /d/90_Days_DevOps/MyTasks/Devops/Git (main)
$ ls
Samplefile.txt version01.txt
```

We can see here we merged dev into main so we have Samplefile.txt in main branch also after git merge.