Assignment 1 (GitHub)

Problem statement:

ABC Organization would like to opt for the distributed version control system to upgrade their environment, where Git has been selected as the solution. You been assigned as a consultant to educate the migration process to move their Source Code from Centralized to Distributed systems. As a phase one, you would like to go ahead with a workshop to demonstrate below operation to make the ABC team comfortable.

- i) Create a Repository
- ii) Add Tow Directory and some raw code files to the repository
- iii) Move Code from One directory to Another Directory
- iv) Update one source code file and display the difference
- v) Create a Branch
- vi) Add some raw code to the branch
- vii) Merge the Branch with Main line

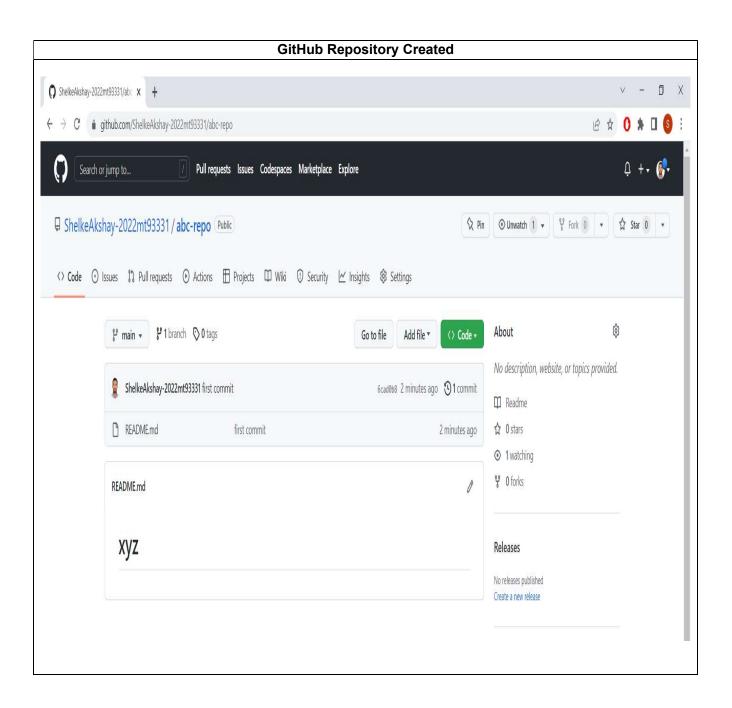
And at the end provide the Summary of advantages of moving from Centralized Source Code to Distributed Version Control.

Student ID	2022MT93331
Student Name	SHELKE AKSHAY NANDKUMAR
Student email ID	2022mt93331@wilp.bits-pilani.ac.in
GitHub Public profile	https://github.com/ShelkeAkshay-2022mt93331
GitHub Solution Repository	https://github.com/ShelkeAkshay-2022mt93331/abc-repo

i) Create a Repository:

```
GIT Commands from local Git Bash
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement $ git config --global user.email "2022mt93331@wilp.bits-pilani.ac.in"
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement $ git config --global user.name "SHELKE AKSHAY NANDKUMAR - 2022mt93331"
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement
$ mkdir abc-repo
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement
$ cd abc-repo/
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo
$ mkdir my_repository
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo
$ cd my_repository/
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-
repo/my_repository
$ echo "# xyz" >> README.md
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-
repo/my_repository
$ git init
Initialized empty Git repository in D:/IntoductionToDevops-Assignement/abc-
repo/my_repository/.git/
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-
repo/my_repository (master)
$ git add README.md
warning: in the working copy of 'README.md', LF will be replaced by CRLF the next time Git touches it
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-
repo/my_repository (master)
$ git commit -m "first commit"
[master (root-commit) 6cad0b8] first commit
 1 file changed, 1 insertion(+) create mode 100644 README.md
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-
repo/my_repository (master)
$ git branch -M main
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-
repo/my_repository (main)
$ git remote add origin https://github.com/ShelkeAkshay-2022mt93331/abc-repo.git
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-
repo/my_repository (main)
**sgit push -u origin main
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Writing objects: 100% (3/3), 253 bytes | 253.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/shelkeAkshay-2022mt93331/abc-repo.git
 * [new branch]
                         main -> main
branch 'main' set up to track 'origin/main'.
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-
repo/my_repository (main)
$
```

```
MINGW64:/d/IntoductionToDevops-Assignement/abc-repo/my/repository
DELL@DESKTOP-UH6PT1D MINGW64 /<mark>d/IntoductionToDevops-Assignement</mark>
$ git config --global user.email "2022mt93331@wilp.bits-pilani.ac.in"
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement
$ git config --global user.name "SHELKE AKSHAY NANDKUMAR - 2022mt93331"
     @DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement
$ mkdir abc-repo
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement
$ cd abc-repo/
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo
$ mkdir my_repository
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo
$ cd my_repository/
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository
$ echo "# xyz" >> README.md
 DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository
$ git init
Initialized empty Git repository in D:/IntoductionToDevops-Assignement/abc-repo/my_repository/.git/
 ELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (master)
$ git add README.md
warning: in the working copy of 'README.md', LF will be replaced by CRLF the next time Git touches it
DELL@DESKTOP-UH6PTlD MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (master)
$ git commit -m "first commit"
[master (root-commit) 6cad0b8] first commit
1 file changed, 1 insertion(+)
create mode 100644 README.md
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (master)
$ git branch -M main
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (main)
$ git remote add origin https://github.com/ShelkeAkshay-2022mt93331/abc-repo.git
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (main)
$ git push -u origin main
Sign push -u origin main
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Writing objects: 100% (3/3), 253 bytes | 253.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/ShelkeAkshay-2022mt93331/abc-repo.git
* [new branch] main -> main
branch 'main' set up to track 'origin/main'.
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (main)
```



GIT Commands from local Git Bash DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abcrepo/my_repository (main) \$ mkdir Tow DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abcrepo/my_repository (main) \$ touch Tow/python_code_1.py DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abcrepo/my_repository (main) \$ touch Tow/python_code_2.py DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abcrepo/my_repository (main) \$ git add Tow/ DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abcrepo/my_repository (main) \$ git status On branch main Your branch is up to date with 'origin/main'. Changes to be committed: (use "git restore --staged <file>..." to unstage) new file: Tow/python_code_1.py Tow/python_code_2.py DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abcrepo/my_repository (main) \$ git commit -m "adding Tow directory and python code files" [main e1ca78a] adding Tow directory and python code files 2 files changed, 0 insertions(+), 0 deletions(-) create mode 100644 Tow/python_code_1.py create mode 100644 Tow/python_code_2.py DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abcrepo/my_repository (main) \$ git remote add origin https://github.com/ShelkeAkshay-2022mt93331/abc-repo.git error: remote origin already exists. DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abcrepo/my_repository (main) f git push -u origin main Enumerating objects: 5, done. Counting objects: 100% (5/5), done. Delta compression using up to 8 threads Compressing objects: 100% (3/3), done. Writing objects: 100% (4/4), 394 bytes | 394.00 KiB/s, done. Total 4 (delta 0), reused 0 (delta 0), pack-reused 0 To https://github.com/shelkeAkshay-2022mt93331/abc-repo.git 6cad0b8..elca78a main -> main branch 'main' set up to track 'origin/main'. DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abcrepo/my_repository (main) \$

```
MINGW64:/d/IntoductionToDevops-Assignement/abc-repo/my_repository
  DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (main)
 $ mkdir Tow
  DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (main)
$ touch Tow/python_code_1.py
 DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (main)
 $ touch Tow/python_code_2.py
 DELL@DESKTOP-UH6PTID MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (main)
$ git add Tow/
 DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (main)
$ git status
On branch main
 Your branch is up to date with 'origin/main'.
Changes to be committed:
(use "git restore --staged <file>..." to unstage)
new file: Tow/python_code_1.py
new file: Tow/python_code_2.py
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (main)

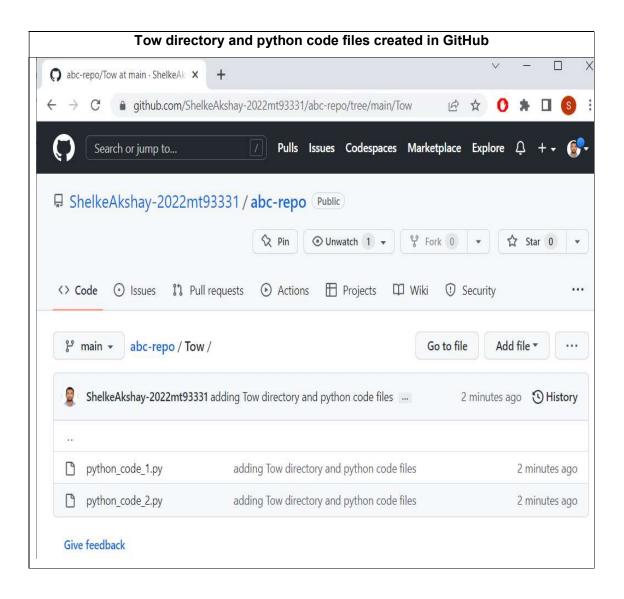
§ git commit -m "adding Tow directory and python code files"

[main e1ca78a] adding Tow directory and python code files

2 files changed, 0 insertions(+), 0 deletions(-)

create mode 100644 Tow/python_code_1.py

create mode 100644 Tow/python_code_2.py
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (main) $ git remote add origin https://github.com/ShelkeAkshay-2022mt93331/abc-repo.git error: remote origin already exists.
 DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (main)
DELL@DESKTOP-UH6PTID MINGW64 /d/IntoductionToDevops-Assigneme
§ git push -u origin main
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Delta compression using up to 8 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (4/4), 394 bytes | 394.00 KiB/s, done.
Total 4 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/ShelkeAkshay-2022mt93331/abc-repo.git
6cad0b8..elca78a main -> main
branch 'main' set up to track 'origin/main'.
 DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (main)
```

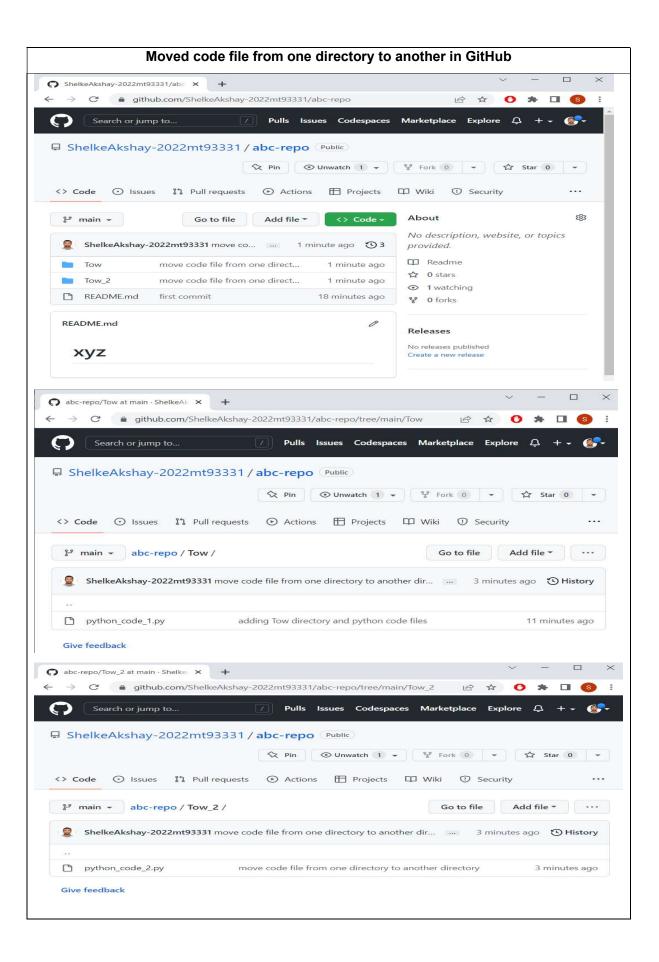


GIT Commands from local Git Bash

```
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-
repo/my_repository (main)
$ 1s
README.md Tow/
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-
repo/my_repository (main)
$ mkdir Tow_2
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-
repo/my_repository (main)
$ git mv Tow/python_code_2.py Tow_2/
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-
repo/my_repository (main)
$ git status
On branch main
Your branch is up to date with 'origin/main'.
Changes to be committed:
    (use "git restore --staged <file>..." to unstage)
        renamed: Tow/python_code_2.py -> Tow_2/python_code_2.py
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-
repo/my_repository (main)
$ git commit -m "move code file from one directory to another directory"
[main da897e9] move code file from one directory to another directory 1 file changed, 0 insertions(+), 0 deletions(-) rename {Tow => Tow_2}/python_code_2.py (100%)
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-
repo/my_repository (main)
$ git push -u origin main
Enumerating objects: 6, done.
Counting objects: 100% (6/6), done.
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (4/4), 463 bytes | 463.00 KiB/s, done.
Total 4 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/shelkeAkshay-2022mt93331/abc-repo.git
e1ca78a..da897e9 main -> main
branch 'main' set up to track 'origin/main'.
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-
repo/my_repository (main)
$ git status
On branch main
Your branch is up to date with 'origin/main'.
nothing to commit, working tree clean
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-
repo/my_repository (main)
$
```

```
MINGW64:/d/IntoductionToDevops-Assignement/abc-repo/my_repository
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (main)
README.md Tow/
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (main)
$ mkdir Tow_2
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (main)
$ git mv Tow/python_code_2.py Tow_2/
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (main)
$ git status
On branch main
Your branch is up to date with 'origin/main'.
Changes to be committed:
(use "git restore --staged <file>..." to unstage)
                           Tow/python_code_2.py -> Tow_2/python_code_2.py
DELL@DESKTOP-UH6PTID MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (main)

§ git commit -m "move code file from one directory to another directory"
[main da897e9] move code file from one directory to another directory 1 file changed, 0 insertions(+), 0 deletions(-) rename {Tow => Tow_2}/python_code_2.py (100%)
 DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (main)
$ git push -u origin main
s git push -u origin main
Enumerating objects: 6, done.
Counting objects: 100% (6/6), done.
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (4/4), 463 bytes | 463.00 KiB/s, done.
Total 4 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/ShelkeAkshay-2022mt93331/abc-repo.git
elca78a..da897e9 main -> main
branch 'main' set up to track 'origin/main'.
 DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (main)
$ git status
On branch main
Your branch is up to date with 'origin/main'.
nothing to commit, working tree clean
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (main)
```



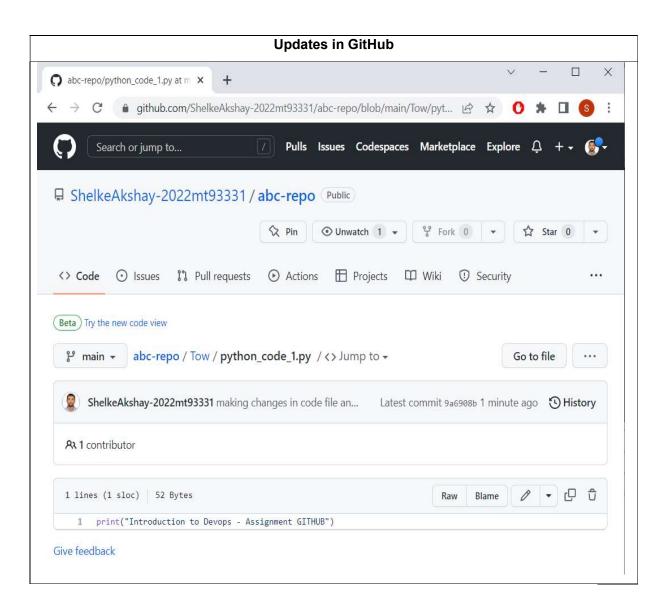
GIT Commands from local Git Bash DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abcrepo/my_repository (main) \$ 1s README.md Tow/ Tow 2/ DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abcrepo/my_repository (main) \$ cd Tow DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abcrepo/my_repository/Tow (main) python_code_1.py DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abcrepo/my_repository/Tow (main) \$ vim python_code_1.py DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abcrepo/my_repository/Tow (main) \$ git diff warning: in the working copy of 'Tow/python_code_1.py', LF will be replaced by CRLF the next time Git touches it diff --git a/Tow/python_code_1.py b/Tow/python_code_1.py index e69de29..6b4929c_100644 --- a/Tow/python_code_1.py +++ b/Tow/python_code_1.py @@ -0,0 +1 @@ +print("Introduction to Devops - Assignment GITHUB") DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abcrepo/my_repository/Tow (main) \$ git status 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) python_code_1.py modified: no changes added to commit (use "git add" and/or "git commit -a") DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abcrepo/my_repository/Tow (main) \$ git add python_code_1.py warning: in the working copy of 'Tow/python_code_1.py', LF will be replaced by CRLF the next time Git touches it DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abcrepo/my_repository/Tow (main) \$ git commit -m "making changes in code file and displaying difference" [main 9a6908b] making changes in code file and displaying difference 1 file changed, 1 insertion(+) DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abcrepo/my_repository/Tow (main) git push -u origin main Enumerating objects: 7, done. Counting objects: 100% (7/7), done. Counting objects: 100% (///), done. Delta compression using up to 8 threads Compressing objects: 100% (3/3), done. Writing objects: 100% (4/4), 472 bytes | 472.00 KiB/s, done. Total 4 (delta 0), reused 0 (delta 0), pack-reused 0 To https://github.com/ShelkeAkshay-2022mt93331/abc-repo.git da897e9..9a6908b main -> main branch 'main' set up to track 'origin/main'.

```
MINGW64:/d/IntoductionToDevops-Assignement/abc-repo/my_repository/Tow
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (main)
README.md Tow/ Tow_2/
 DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (main)
$ cd Tow
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository/Tow (main)
$ ls
python_code_1.py
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository/Tow (main)
  vim python_code_1.py
 ELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository/Tow (main)
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository/Tow (main)
$ git status
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: nython code 1.py
no changes added to commit (use "git add" and/or "git commit -a")
 DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository/Tow (main)
S git add python_code_1.py
warning: in the working copy of 'Tow/python_code_1.py', LF will be replaced by CRLF the next time Git touches it
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository/Tow (main) $ git commit -m "making changes in code file and displaying difference" [main 9a6908b] making changes in code file and displaying difference 1 file changed, 1 insertion(+)
 DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository/Tow (main)
 git push -u origin main
$ git push -u origin main
Enumerating objects: 7, done.
Counting objects: 100% (7/7), done.
Delta compression using up to 8 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (4/4), 472 bytes | 472.00 KiB/s, done.
Total 4 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/ShelkeAkshay-2022mt93331/abc-repo.git
    da897e9..9a6908b main -> main
branch 'main' set up to track 'origin/main'.
```



GIT Commands from local Git Bash DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abcrepo/my_repository (main) README.md Tow/ Tow_2/ DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abcrepo/my_repository (main) \$ git branch feature-akshay DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abcrepo/my_repository (main) \$ git checkout feature-akshay Switched to branch 'feature-akshay' DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abcrepo/my_repository (feature-akshay) \$ 1s README.md Tow/ Tow_2/ DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abcrepo/my_repository (feature-akshay) README.md Tow/ Tow_2/ DELL@DESKTOP-UH6PT1D_MINGW64 /d/IntoductionToDevops-Assignement/abcrepo/my_repository (feature-akshay) \$ mkdir Tow_3 DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abcrepo/my_repository (feature-akshay) \$ touch Tow_3/python_code_3.py DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abcrepo/my_repository (feature-akshay) \$ 1s README.md Tow/ Tow_2/ Tow_3/ DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (feature-akshay) \$ git add Tow_3 DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abcrepo/my_repository (feature-akshay) \$ git commit -m "committing code file to feature branch" [feature-akshay 6aed72e] committing code file to feature branch 1 file changed, 0 insertions(+), 0 deletions(-) create mode 100644 Tow_3/python_code_3.py DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abcrepo/my_repository (feature-akshay) § git push -u origin feature-akshay 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), 371 bytes | 371.00 KiB/s, done. Total 4 (delta 1), reused 0 (delta 0), pack-reused 0 remote: Resolving deltas: 100% (1/1), completed with 1 local object. remote: remote: Create a pull request for 'feature-akshay' on GitHub by visiting: remote: https://github.com/ShelkeAkshay-2022mt93331/abcrepo/pull/new/feature-akshay remote: To https://github.com/ShelkeAkshay-2022mt93331/abc-repo.git * [new branch] feature-akshay -> feature-akshay * [new branch] feature-akshay -> feature-akshay branch 'feature-akshay' set up to track 'origin/feature-akshay'.

```
MINGW64:/d/IntoductionToDevops-Assignement/abc-repo/my_repository
                         T1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (main)
README.md Tow/ Tow_2/
DELL@DESKTOP-UH6PTID MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (main) $ git branch feature-akshay
           SKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (main)
$ git checkout feature-akshay
Switched to branch 'feature-akshay'
 DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (feature-akshay)
README.md Tow/ Tow_2/
 DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (feature-akshay)
$ touch Tow_3/python_code_3.py
touch: cannot touch 'Tow_3/python_code_3.py': No such file or directory
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (feature-akshay)
README.md Tow/ Tow_2/
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (feature-akshay)
$ mkdir Tow_3
DELL@DESKTOP-UH6PTID MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (feature-akshay)
$ touch Tow_3/python_code_3.py
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (feature-akshay)
README.md Tow/ Tow_2/ Tow_3/
 DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (feature-akshay)
$ git add Tow_3
DELL@DESKTOP-UH6PTID MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (feature-akshay)

$ git commit -m "committing code file to feature branch"

[feature-akshay 6aed72e] committing code file to feature branch

1 file changed, 0 insertions(+), 0 deletions(-)

create mode 100644 Tow_3/python_code_3.py
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (feature-akshay)
$ git push -u_origin feature-akshay
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Countring objects: 100% (3/3), done.

Delta compression using up to 8 threads

Compressing objects: 100% (2/2), done.

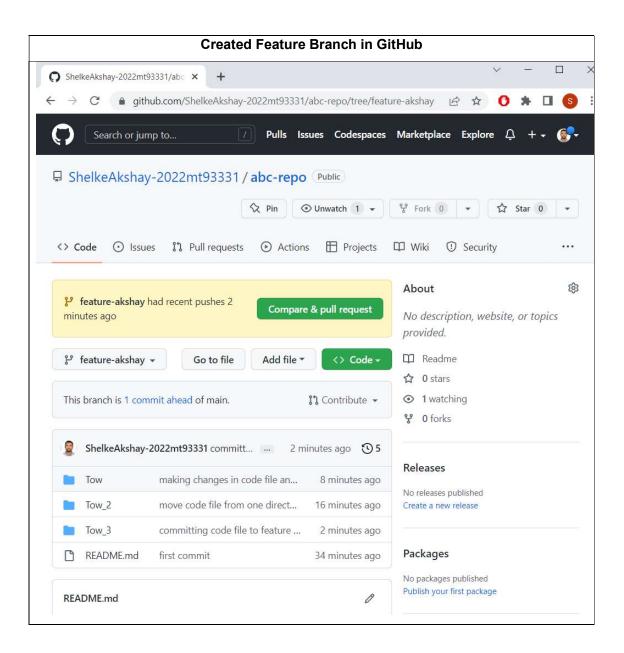
Writing objects: 100% (4/4), 371 bytes | 371.00 KiB/s, done.

Total 4 (delta 1), reused 0 (delta 0), pack-reused 0

remote: Resolving deltas: 100% (1/1), completed with 1 local object.
remote:
remote: Create a pull request for 'feature-akshay' on GitHub by visiting:
remote: https://github.com/ShelkeAkshay-2022mt93331/abc-repo/pull/new/feature-akshay
 emote:
To https://github.com/ShelkeAkshay-2022mt93331/abc-repo.git

* [new branch] feature-akshay -> feature-akshay

branch 'feature-akshay' set up to track 'origin/feature-akshay'.
```



GIT Commands from local Git Bash DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abcrepo/my_repository (main) README.md Tow/ Tow_2/ DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abcrepo/my_repository (main) \$ git branch feature-akshay DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abcrepo/my_repository (main) \$ git checkout feature-akshay Switched to branch 'feature-akshay' DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abcrepo/my_repository (feature-akshay) \$ 1s README.md Tow/ Tow_2/ DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abcrepo/my_repository (feature-akshay) \$ 1s README.md Tow/ Tow_2/ DELL@DESKTOP-UH6PT1D_MINGW64 /d/IntoductionToDevops-Assignement/abcrepo/my_repository (feature-akshay) \$ mkdir Tow_3 DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abcrepo/my_repository (feature-akshay) \$ touch Tow_3/python_code_3.py DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abcrepo/my_repository (feature-akshay) \$ 1s README.md Tow/ Tow_2/ Tow_3/ DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (feature-akshay) \$ git add Tow_3 DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abcrepo/my_repository (feature-akshay) \$ git commit -m "committing code file to feature branch" [feature-akshay 6aed72e] committing code file to feature branch 1 file changed, 0 insertions(+), 0 deletions(-) create mode 100644 Tow_3/python_code_3.py DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abcrepo/my_repository (feature-akshay) § git push -u origin feature-akshay 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), 371 bytes | 371.00 KiB/s, done. Total 4 (delta 1), reused 0 (delta 0), pack-reused 0 remote: Resolving deltas: 100% (1/1), completed with 1 local object. remote: remote: Create a pull request for 'feature-akshay' on GitHub by visiting: remote: https://github.com/ShelkeAkshay-2022mt93331/abcrepo/pull/new/feature-akshay remote: To https://github.com/ShelkeAkshay-2022mt93331/abc-repo.git * [new branch] feature-akshay -> feature-akshay * [new branch] feature-akshay -> feature-akshay branch 'feature-akshay' set up to track 'origin/feature-akshay'.

```
MINGW64:/d/IntoductionToDevops-Assignement/abc-repo/my_repository
                         T1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (main)
README.md Tow/ Tow_2/
DELL@DESKTOP-UH6PTID MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (main) $ git branch feature-akshay
           SKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (main)
$ git checkout feature-akshay
Switched to branch 'feature-akshay'
 DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (feature-akshay)
README.md Tow/ Tow_2/
 DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (feature-akshay)
$ touch Tow_3/python_code_3.py
touch: cannot touch 'Tow_3/python_code_3.py': No such file or directory
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (feature-akshay)
README.md Tow/ Tow_2/
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (feature-akshay)
$ mkdir Tow_3
DELL@DESKTOP-UH6PTID MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (feature-akshay)
$ touch Tow_3/python_code_3.py
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (feature-akshay)
README.md Tow/ Tow_2/ Tow_3/
 DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (feature-akshay)
$ git add Tow_3
DELL@DESKTOP-UH6PTID MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (feature-akshay)

$ git commit -m "committing code file to feature branch"

[feature-akshay 6aed72e] committing code file to feature branch

1 file changed, 0 insertions(+), 0 deletions(-)

create mode 100644 Tow_3/python_code_3.py
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (feature-akshay)
$ git push -u_origin feature-akshay
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Countring objects: 100% (3/3), done.

Delta compression using up to 8 threads

Compressing objects: 100% (2/2), done.

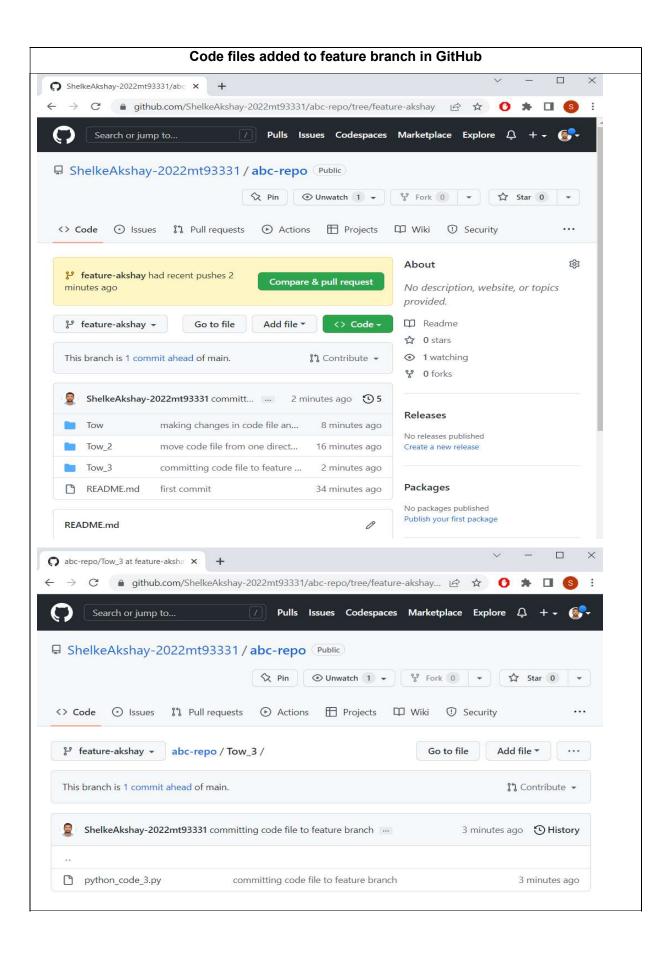
Writing objects: 100% (4/4), 371 bytes | 371.00 KiB/s, done.

Total 4 (delta 1), reused 0 (delta 0), pack-reused 0

remote: Resolving deltas: 100% (1/1), completed with 1 local object.
remote:
remote: Create a pull request for 'feature-akshay' on GitHub by visiting:
remote: https://github.com/ShelkeAkshay-2022mt93331/abc-repo/pull/new/feature-akshay
 emote:
To https://github.com/ShelkeAkshay-2022mt93331/abc-repo.git

* [new branch] feature-akshay -> feature-akshay

branch 'feature-akshay' set up to track 'origin/feature-akshay'.
```

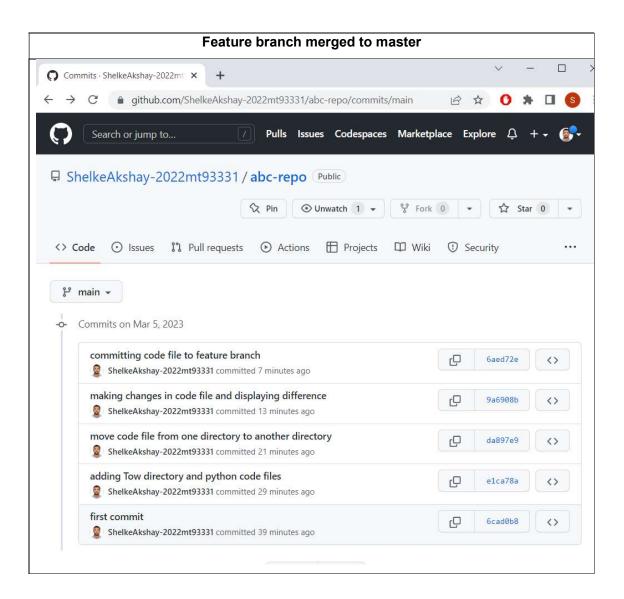


GIT Commands from local Git Bash

```
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-
repo/my_repository (feature-akshay)
$ git status
On branch feature-akshay
Your branch is up to date with 'origin/feature-akshay'.
nothing to commit, working tree clean
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-
repo/my_repository (feature-akshay)
$ git checkout main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-
repo/my_repository (main)
$ git merge feature-akshay
Updating 9a6908b..6aed72e
Fast-forward
Tow_3/python_code_3.py | 0
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 Tow_3/python_code_3.py
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-
repo/my_repository (main)
git push -u origin main
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/ShelkeAkshay-2022mt93331/abc-repo.git
    9a6908b..6aed72e main -> main
branch 'main' set up to track 'origin/main'.
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-
repo/my_repository (main)
$ git status
On branch main
Your branch is up to date with 'origin/main'.
nothing to commit, working tree clean
DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-
repo/my_repository (main)
$
```

```
MINGW64:/d/IntoductionToDevops-Assignement/abc-repo/my_repository
 ELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (feature-akshay)
$ git status
on branch feature-akshay
Your branch is up to date with 'origin/feature-akshay'.
nothing to commit, working tree clean
 DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (feature-akshay)
S git checkout main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.
 ELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (main)
$ git merge feature-akshay
Updating 9a6908b..6aed72e
opdating 9a09001.0aed/2e
Fast-forward
Tow_3/python_code_3.py | 0
1 file changed, 0 insertions(+), 0 deletions(-)
create mode 100644 Tow_3/python_code_3.py
  ELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (main)
DELLEMESKTOP-UHBFILD MINGMOU / U/Intoduceton observed.

$ git push -u origin main
Total 0 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/ShelkeAkshay-2022mt93331/abc-repo.git
9a6908b..6aed/2e main -> main
branch 'main' set up to track 'origin/main'.
  ELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (main)
$ git status
On branch main
Your branch is up to date with 'origin/main'.
nothing to commit, working tree clean
 DELL@DESKTOP-UH6PT1D MINGW64 /d/IntoductionToDevops-Assignement/abc-repo/my_repository (main)
```



Summary:

Advantages of moving from Centralized Source Code to Distributed Version Control

1.	Distributed Version Control System has the biggest advantage in that it allows you to work
	offline and gives flexibility. You have the entire history of the code in your own hard drive, so
	all the changes you will be making in your own server or to your own repository which doesn't
	require an internet connection, but this is not in the case of Centralized Source Code.
2.	Distributed Version Control System is faster than Centralized Source Code because you don't
	need to communicate with the remote server for every command. You do everything locally
	which gives you the benefit to work faster than Centralized Source Code.
3.	Working on branches is easy in Distributed Version Control System. Every developer has an
	entire history of the code in Distributed Version Control System, so developers can share their
	changes before merging all the 'sets of changes to the remote server. In Centralized Source
	Code it's difficult and time-consuming to work on branches because it requires to
	communicate with the server directly.
4.	If the main server goes down or it crashes in Distributed Version Control System, you can still
	get the backup or entire history of the code from your local repository or server where the
	full revision of the code is already saved. This is not in the case of Centralized Source Code,
	there is just a single remote server that has entire code history.
5.	Merge conflicts with other developer's code are less in Distributed Version Control System.
	Because every developer work on their own piece of code. Merge conflicts are more in
	Centralized Source Code in comparison to Distributed Version Control System.
6.	In Distributed Version Control System, sometimes developers take the advantage of having
	the entire history of the code and they may work for too long in isolation which is not a good
	thing. This is not in the case of Centralized Source Code.

THANK YOU!!

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GitHub Public profile	https://github.com/ShelkeAkshay-2022mt93331
GitHub Solution Repository	https://github.com/ShelkeAkshay-2022mt93331/abc-repo