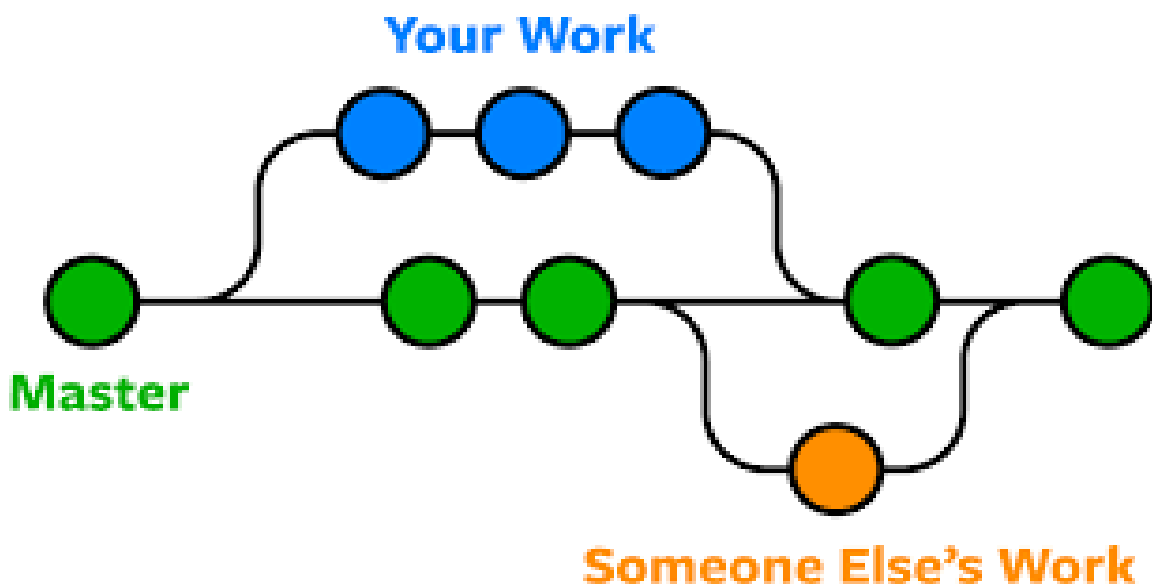


Experiment – 4

Aim: Create and visualize branches in Git

Git Branches:

A branch in Git is an independent line of work (a pointer to a specific commit). It allows users to create a branch from the original code (master branch) and isolate their work. Branches allow you to work on different parts of a project without impacting the main branch.



Let us see the command of it:

Firstly, add a new branch, let us suppose the branch name is activity1.

For this use command →

git branch name [adding new branch]

git branch [use to see the branch's names]

git checkout branch name [use to switch to the given branch]

MINGW64:/d/Cpp Questions

```
WA@DESKTOP-C2SA05G MINGW64 /d/Cpp Questions (master)
$ git branch
* master

WA@DESKTOP-C2SA05G MINGW64 /d/Cpp Questions (master)
$ git branch main

WA@DESKTOP-C2SA05G MINGW64 /d/Cpp Questions (master)
$ git branch
  main
* master

WA@DESKTOP-C2SA05G MINGW64 /d/Cpp Questions (master)
$ git checkout main
Switched to branch 'main'

WA@DESKTOP-C2SA05G MINGW64 /d/Cpp Questions (main)
$ git branch
* main
  master

WA@DESKTOP-C2SA05G MINGW64 /d/Cpp Questions (main)
$ ls
Array.txt  Loops.txt

WA@DESKTOP-C2SA05G MINGW64 /d/Cpp Questions (main)
$ |
```

In this you can see that firstly 'git branch' shows only one branch in green colour but when we add a new branch using 'git branch main', it shows 2 branches but the green colour and star is on master. So, we have to switch to main by using 'git checkout main'. If we use 'git branch', now you can see that the green colour and star is on main. It means you are in main branch and all the data of master branch is also on activity1 branch.

Now add a new file in activity1 branch, do some changes in file and commit the file.

MINGW64:/d/Cpp Questions

```
WA@DESKTOP-C2SA05G MINGW64 /d/Cpp Questions (main)
$ ls
Array.txt  Loops.txt  Patterns.txt

WA@DESKTOP-C2SA05G MINGW64 /d/Cpp Questions (main)
$
```

If we switched to master branch, 'Patterns.txt' file is not there. But the file is in main branch.

MINGW64:/d/Cpp Questions

```
WA@DESKTOP-C2SA05G MINGW64 /d/Cpp Questions (main)
$ git checkout master
Switched to branch 'master'

WA@DESKTOP-C2SA05G MINGW64 /d/Cpp Questions (master)
$ git branch
  main
* master

WA@DESKTOP-C2SA05G MINGW64 /d/Cpp Questions (master)
$ ls
Array.txt  Loops.txt

WA@DESKTOP-C2SA05G MINGW64 /d/Cpp Questions (master)
$
```

To add these files in master branch, we have to do merging. For this firstly switch to master branch and then use command:

Git merge branch name [use to merge branch]

MINGW64:/d/Cpp Questions

```
WA@DESKTOP-C2SA05G MINGW64 /d/Cpp Questions (master)
$ git branch
  main
* master

WA@DESKTOP-C2SA05G MINGW64 /d/Cpp Questions (master)
$ ls
Array.txt  Loops.txt

WA@DESKTOP-C2SA05G MINGW64 /d/Cpp Questions (master)
$ git merge main
Updating 578dd81..4d21dd0
Fast-forward
 Patterns.txt | 0
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 Patterns.txt

WA@DESKTOP-C2SA05G MINGW64 /d/Cpp Questions (master)
$ git branch
  main
* master

WA@DESKTOP-C2SA05G MINGW64 /d/Cpp Questions (master)
$ ls
Array.txt  Loops.txt  Patterns.txt

WA@DESKTOP-C2SA05G MINGW64 /d/Cpp Questions (master)
$ |
```