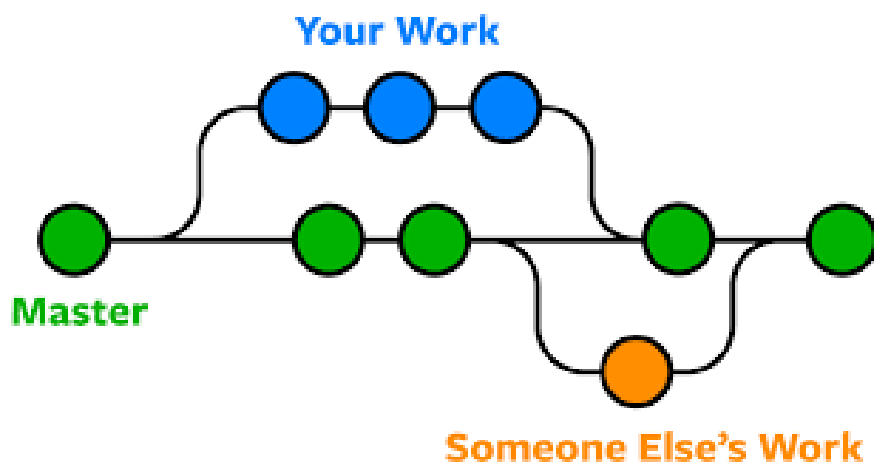


Aim: Create and visualize branches

Create branches :-

- ✧ The main branch in git is called as master branch. But we can make branches out of this main master branch. All the files present in master can be shown in branch but the file which are created in branch are not shown in master branch. We can also merge both the parent (master) and child (other branches).

Branching: 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]
- 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 act1', it shows 2 branches but the green colour and star is on master. So, we have to switch to act1 by using 'git checkout act1'. If we use 'git branch', now you can see that the green colour and star is on act1. It means you are in

activity1 branch and all the data of master branch is also on act1 branch.
Use “ls” to see the files.

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

Syntax:-

1. For creating a new branch.
git branch name of branch

Snapshots –

```
PS C:\Users\HP\OneDrive\Desktop\Coding-Ninjas-java-> pwd  
  
Path  
----  
C:\Users\HP\OneDrive\Desktop\Coding-Ninjas-java-  
  
PS C:\Users\HP\OneDrive\Desktop\Coding-Ninjas-java-> git branch activity1  
PS C:\Users\HP\OneDrive\Desktop\Coding-Ninjas-java-> |
```

2. We can also check how many branches we have.
git branch

Snapshots :-

```
PS C:\Users\HP\OneDrive\Desktop\Coding-Ninjas-java-> pwd  
  
Path  
----  
C:\Users\HP\OneDrive\Desktop\Coding-Ninjas-java-  
  
PS C:\Users\HP\OneDrive\Desktop\Coding-Ninjas-java-> git branch  
activity1  
* master  
PS C:\Users\HP\OneDrive\Desktop\Coding-Ninjas-java-> |
```

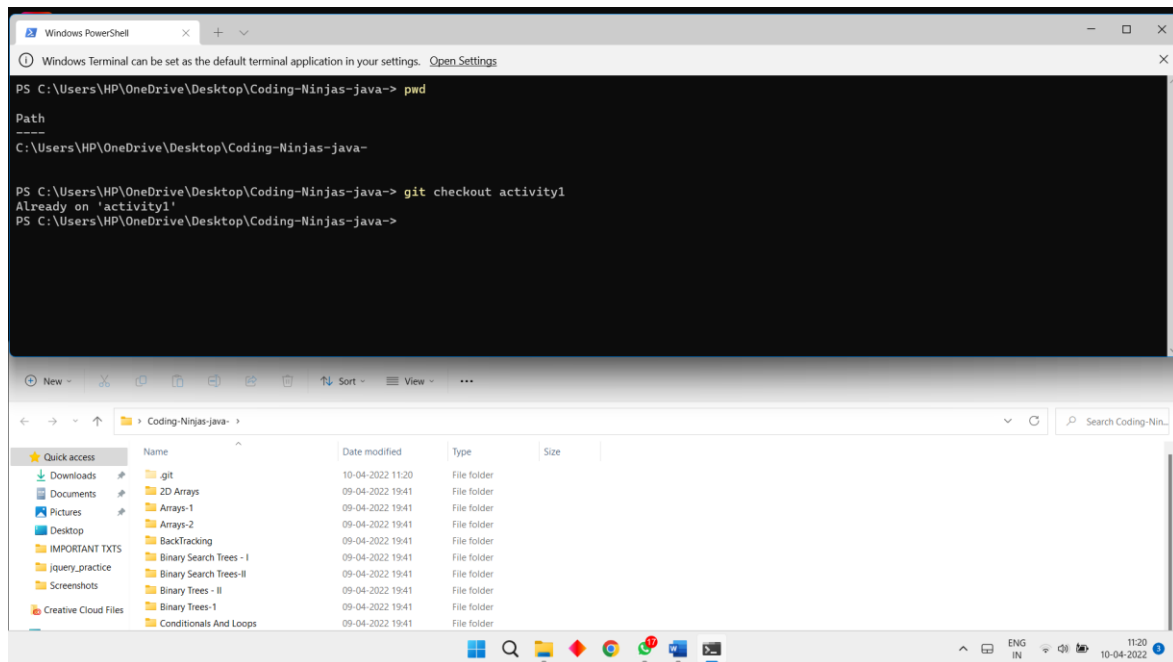
3. To change the present working branch.
git checkout name of branch.

Snapshots –

```
PS C:\Users\HP\OneDrive\Desktop\Coding-Ninjas-java-> git checkout activity1  
Switched to branch 'activity1'  
PS C:\Users\HP\OneDrive\Desktop\Coding-Ninjas-java-> |
```

Visualizing branches :-

To visualize I have created a new file in a new branch activity 1 instead of master branch.



After this I have done the 3 step architecture which is tracking the file , send it to staging area and finally we can role back to any previously saved version of this file.

```
PS C:\Users\HP\OneDrive\Desktop\Coding-Ninjas-java-> git status
On branch activity1
nothing to commit, working tree clean
PS C:\Users\HP\OneDrive\Desktop\Coding-Ninjas-java-> git log
commit fd0efed81cc5ed66b28e79324755b4b37633bd78 (HEAD -> activity1, origin/master, master)
Author: Aaryan Sood <aaryan0020.be21@chitkara.edu.in>
Date: Sat Apr 9 20:40:46 2022 +0530

    THIS IS A MIRROR REPOSITORY

commit fe7d35243ec3bfc35fc200a9319458a99e7b511c
Author: Aaryan Sood <aaryan0020.be21@chitkara.edu.in>
Date: Sat Apr 9 20:07:08 2022 +0530

    ADDED TimeComplexity.java

commit dd363c1cd7a372b2bfd4d38c85c5ff8d1f752220
Author: Aaryan Sood <aaryan0020.be21@chitkara.edu.in>
Date: Sat Apr 9 20:06:36 2022 +0530
```

After this we will change the branch from activity1 to master, but when I will switch to the master branch there will not be the same file in the master , it will not show the new file in the master branch. In this way we can create and change different branches . We can also merge the branches by using `git merge` command.