Branching:

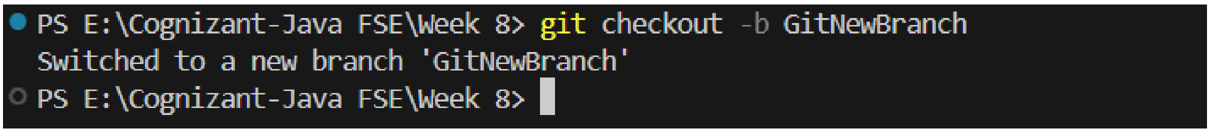
1. Create a new branch **“GitNewBranch”.**
2. List all the local and remote branches available in the current trunk. Observe the “*” mark which denote the current pointing branch.
3. Switch to the newly created branch. Add some files to it with some contents.
4. Commit the changes to the branch.
5. Check the status with **“git status”** command.

Merging:

1. Switch to the master
2. List out all the differences between trunk and branch. These provide the differences in command line interface.
3. List out all the visual differences between master and branch using **P4Merge tool**.
4. Merge the source branch to the trunk.
5. Observe the logging after merging using **“git log –oneline –graph –decorate”**
6. Delete the branch after merging with the trunk and observe the git status.

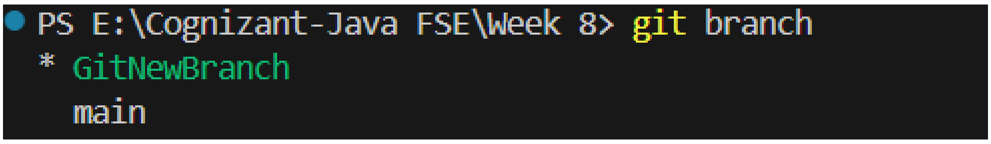
Branching:

1. Create a New Branch



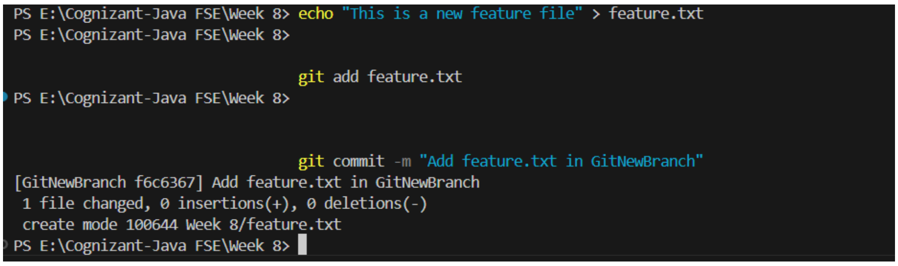
```
PS E:\Cognizant-Java FSE\Week 8> git checkout -b GitNewBranch
Switched to a new branch 'GitNewBranch'
PS E:\Cognizant-Java FSE\Week 8>
```

2. List All Local & Remote Branches



```
PS E:\Cognizant-Java FSE\Week 8> git branch
* GitNewBranch
  main
```

3. Add a File to the Branch

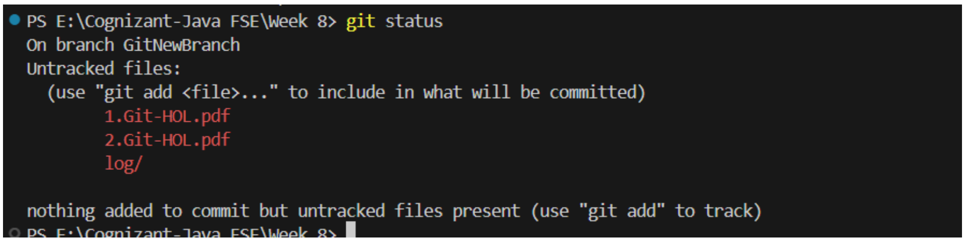


```
PS E:\Cognizant-Java FSE\Week 8> echo "This is a new feature file" > feature.txt
PS E:\Cognizant-Java FSE\Week 8>

                                 git add feature.txt
PS E:\Cognizant-Java FSE\Week 8>


                                 git commit -m "Add feature.txt in GitNewBranch"
[GitNewBranch f6c6367] Add feature.txt in GitNewBranch
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 Week 8/feature.txt
PS E:\Cognizant-Java FSE\Week 8>
```

4. Check Git Status

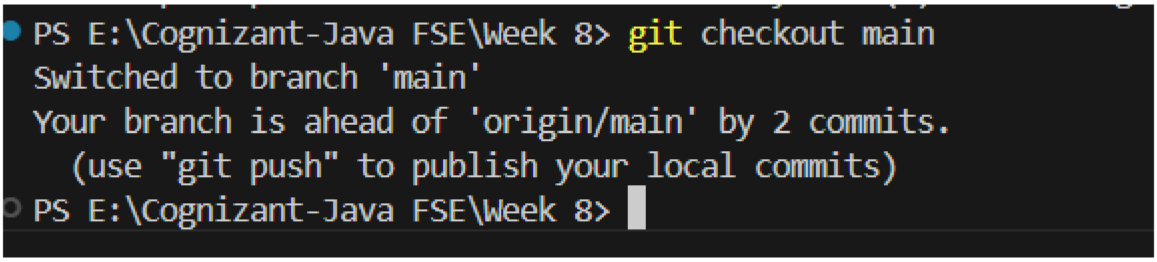


```
PS E:\Cognizant-Java FSE\Week 8> git status
On branch GitNewBranch
Untracked files:
  (use "git add <file>..." to include in what will be committed)
        1.Git-HOL.pdf
        2.Git-HOL.pdf
        log/

nothing added to commit but untracked files present (use "git add" to track)
PS E:\Cognizant-Java FSE\Week 8>
```

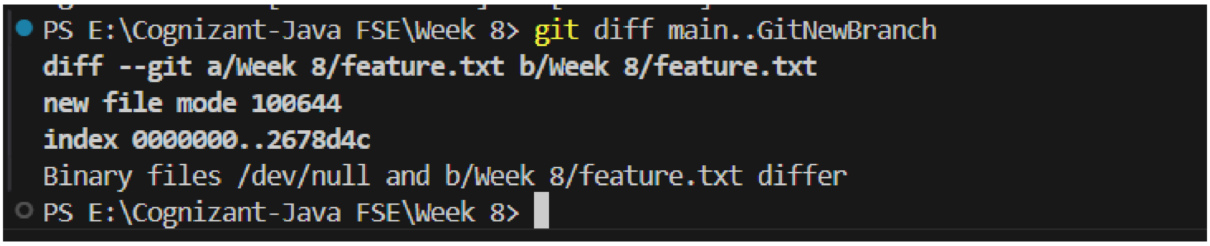
Merging:

1. Switch to Main



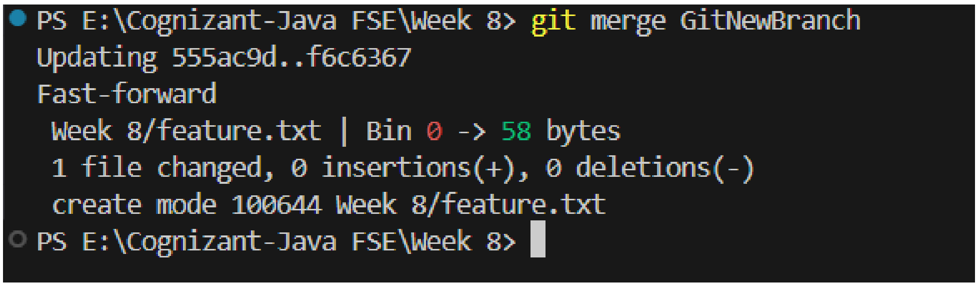
```
PS E:\Cognizant-Java FSE\Week 8> git checkout main
Switched to branch 'main'
Your branch is ahead of 'origin/main' by 2 commits.
  (use "git push" to publish your local commits)
PS E:\Cognizant-Java FSE\Week 8> 
```

2. List Command-Line Differences Between Branch and Main



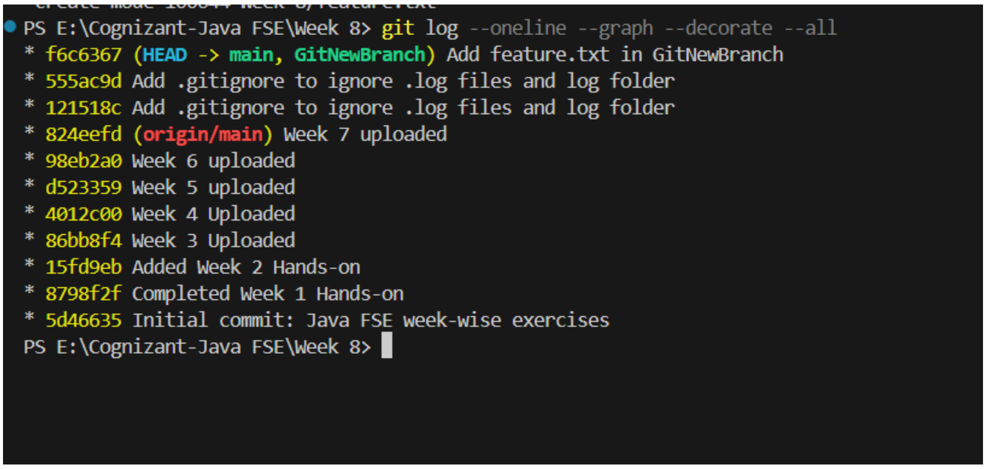
```
PS E:\Cognizant-Java FSE\Week 8> git diff main..GitNewBranch
diff --git a/Week 8/feature.txt b/Week 8/feature.txt
new file mode 100644
index 0000000..2678d4c
Binary files /dev/null and b/Week 8/feature.txt differ
PS E:\Cognizant-Java FSE\Week 8> 
```

3. Merge the Branch into Master



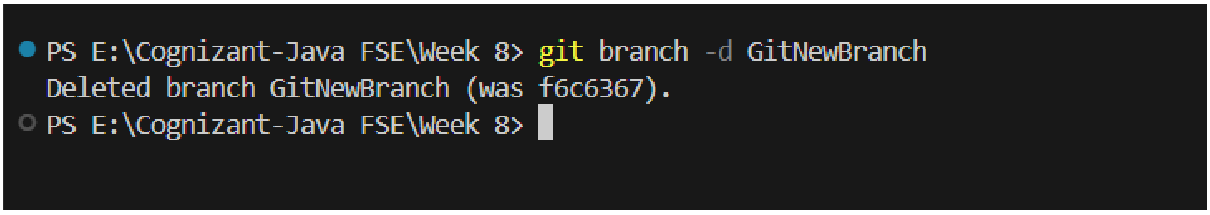
```
PS E:\Cognizant-Java FSE\Week 8> git merge GitNewBranch
Updating 555ac9d..f6c6367
Fast-forward
 Week 8/feature.txt | Bin 0 -> 58 bytes
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 Week 8/feature.txt
PS E:\Cognizant-Java FSE\Week 8> 
```

4. View Log Graph



```
PS E:\Cognizant-Java FSE\Week 8> git log --oneline --graph --decorate --all
* f6c6367 (HEAD -> main, GitNewBranch) Add feature.txt in GitNewBranch
* 555ac9d Add .gitignore to ignore .log files and log folder
* 121518c Add .gitignore to ignore .log files and log folder
* 824eefd (origin/main) Week 7 uploaded
* 98eb2a0 Week 6 uploaded
* d523359 Week 5 uploaded
* 4012c00 Week 4 Uploaded
* 86bb8f4 Week 3 Uploaded
* 15fd9eb Added Week 2 Hands-on
* 8798f2f Completed Week 1 Hands-on
* 5d46635 Initial commit: Java FSE week-wise exercises
PS E:\Cognizant-Java FSE\Week 8> 
```

5. Delete the Merged Branch



```
PS E:\Cognizant-Java FSE\Week 8> git branch -d GitNewBranch
Deleted branch GitNewBranch (was f6c6367).
PS E:\Cognizant-Java FSE\Week 8> 
```