

 <b>VIT</b> Vidyalankar Institute of Technology ACCREDITED A+ BY NAAC	<b>Department of Information Technology</b>
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Semester	T.E. Semester VI – INFT
Subject	DevOps Labs
Laboratory Teacher:	Bushra Shaikh
Laboratory	-

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Roll Number	22101A0072
Grade and Subject Teacher's Signature	

Experiment Number	2
Experiment Title	To Perform Code Collaboration of TE Mini Project using GIT workflow
Problem Statement	TechCo's development team is collaborating on a new feature for their application. However, multiple developers are working on the same parts of the codebase, causing merge conflicts, inconsistent commits, and errors in version control. The team struggles to manage branches effectively and maintain a clean history. The current workflow relies heavily on manual processes, making it difficult to track and resolve issues efficiently.
Resources / Apparatus Required	Hardware: Desktop/Laptop      Software:
Theory :	<ul style="list-style-type: none"> <li>Set up a Git repository for a project (either create a new project or use an existing one).</li> </ul>

	<ul style="list-style-type: none"> <li>· Collaborate with a team member by creating multiple branches for different features.</li> <li>· Implement the following: <ul style="list-style-type: none"> <li>• Create a feature branch and make changes to the code.</li> <li>• Push changes to the remote repository.</li> <li>• Use a Git cheat sheet to commit, merge branches, and resolve conflicts.</li> <li>• Create a pull request (PR) and ensure code review processes are followed.</li> </ul> </li> </ul>
Output:	<p>Team Members: Atharv Mahale</p> <p>Step 1 - Initialising the repo</p> <pre> Dell@DESKTOP-CVKD2HV MINGW64 /c/devOps/deliveries (main) \$ git add . warning: in the working copy of 'README.md', LF will be replaced by CRLF the next time Gi touches it  Dell@DESKTOP-CVKD2HV MINGW64 /c/devOps/deliveries (main) \$ git commit -m "initial commit" Author identity unknown  *** Please tell me who you are.  Run      git config --global user.email "you@example.com"     git config --global user.name "Your Name"  to set your account's default identity. Omit --global to set the identity only in this repository. fatal: unable to auto-detect email address (got 'Dell@DESKTOP-CVKD2HV.(none)')</pre> <p>Step 2 - Initial Commit</p> <pre> Dell@DESKTOP-CVKD2HV MINGW64 /c/DevOps/deliveries (main) \$ git config --global user.email "mahaleathu@gmail.com"  Dell@DESKTOP-CVKD2HV MINGW64 /c/DevOps/deliveries (main) \$ git config --global user.name "Atharv Mahale"  Dell@DESKTOP-CVKD2HV MINGW64 /c/DevOps/deliveries (main) \$ git checkout -b Atharv error: pathspec '-' did not match any file(s) known to git error: pathspec 'b' did not match any file(s) known to git error: pathspec 'Atharv' did not match any file(s) known to git</pre> <p>Step 3: Creating a new branch and making changes to README.md parallelly.And then pushing both branches and creating pull requests.</p>

```

De11@DESKTOP-CVKD2HV MINGW64 /c/DevOps/deliveries (main)
$ git checkout -b Atharv
Switched to a new branch 'Atharv'

De11@DESKTOP-CVKD2HV MINGW64 /c/DevOps/deliveries (Atharv)
$ echo "Changes from friend's branch" >> README.md
git add README.md
git commit -m "Friend's branch changes"
git push -u origin Atharv
warning: in the working copy of 'README.md', LF will be replaced by CRLF the next time Git
touches it
[Atharv 660a1cf] Friend's branch changes
1 file changed, 5 insertions(+)
info: please complete authentication in your browser...
remote: Permission to Bhagyoday38/deliveries.git denied to Atharv1708.
fatal: unable to access 'https://github.com/Bhagyoday38/deliveries.git/': The requested UR
L returned error: 403

```

## Step 4 - Resolving Merge Conflict:

```

De11@DESKTOP-CVKD2HV MINGW64 /c/DevOps/deliveries (Atharv)
$ echo "Changes from friend's branch" >> README.md
git add README.md
git commit -m "Friend's branch changes"
git push -u origin Atharv
warning: in the working copy of 'README.md', LF will be replaced by CRLF the next time Git
touches it
[Atharv 8027043] Friend's branch changes
1 file changed, 1 insertion(+)
info: please complete authentication in your browser...
Enumerating objects: 8, done.
Counting objects: 100% (8/8), done.
Delta compression using up to 8 threads
Compressing objects: 100% (5/5), done.
Writing objects: 100% (6/6), 634 bytes | 634.00 KiB/s, done.
Total 6 (delta 0), reused 0 (delta 0), pack-reused 0 (from 0)
remote:
remote: Create a pull request for 'Atharv' on GitHub by visiting:
remote:   https://github.com/Bhagyoday38/deliveries/pull/new/Atharv
remote:
To https://github.com/Bhagyoday38/deliveries.git
 * [new branch]   Atharv -> Atharv
branch 'Atharv' set up to track 'origin/Atharv'.

```

```

De11@DESKTOP-CVKD2HV MINGW64 /c/DevOps/deliveries (Atharv)
$ git checkout main
git pull origin main
Switched to branch 'main'
Your branch is up to date with 'origin/main'.
remote: Enumerating objects: 6, done.
remote: Counting objects: 100% (6/6), done.
remote: Compressing objects: 100% (3/3), done.
remote: Total 4 (delta 0), reused 3 (delta 0), pack-reused 0 (from 0)
Unpacking objects: 100% (4/4), 1.16 KiB | 59.00 KiB/s, done.
From https://github.com/Bhagyoday38/deliveries
 * branch      main      -> FETCH_HEAD
  13c5137..1daa508  main    -> origin/main
Updating 13c5137..1daa508
Fast-forward
 README.md | 1 +
1 file changed, 1 insertion(+)

```

## Commit History:

```
Bhagyoday@DESKTOP-AVRCTQV MINGW64 /c/git/deliveries (main)
$ git log --oneline
61f32ad (HEAD -> main, origin/main, origin/HEAD) Initial commit
c74d78f Merge remote-tracking branch 'origin/Atharv'
1daa508 Merge pull request #1 from Bhagyoday38/bhagyoday
8027043 (origin/Atharv) Friend's branch changes
660a1cf Friend's branch changes
6e420cf (origin/bhagyoday, bhagyoday) Your branch changes
13c5137 Create README.md
fed7c22 Add files via upload

Bhagyoday@DESKTOP-AVRCTQV MINGW64 /c/git/deliveries (main)
$
```