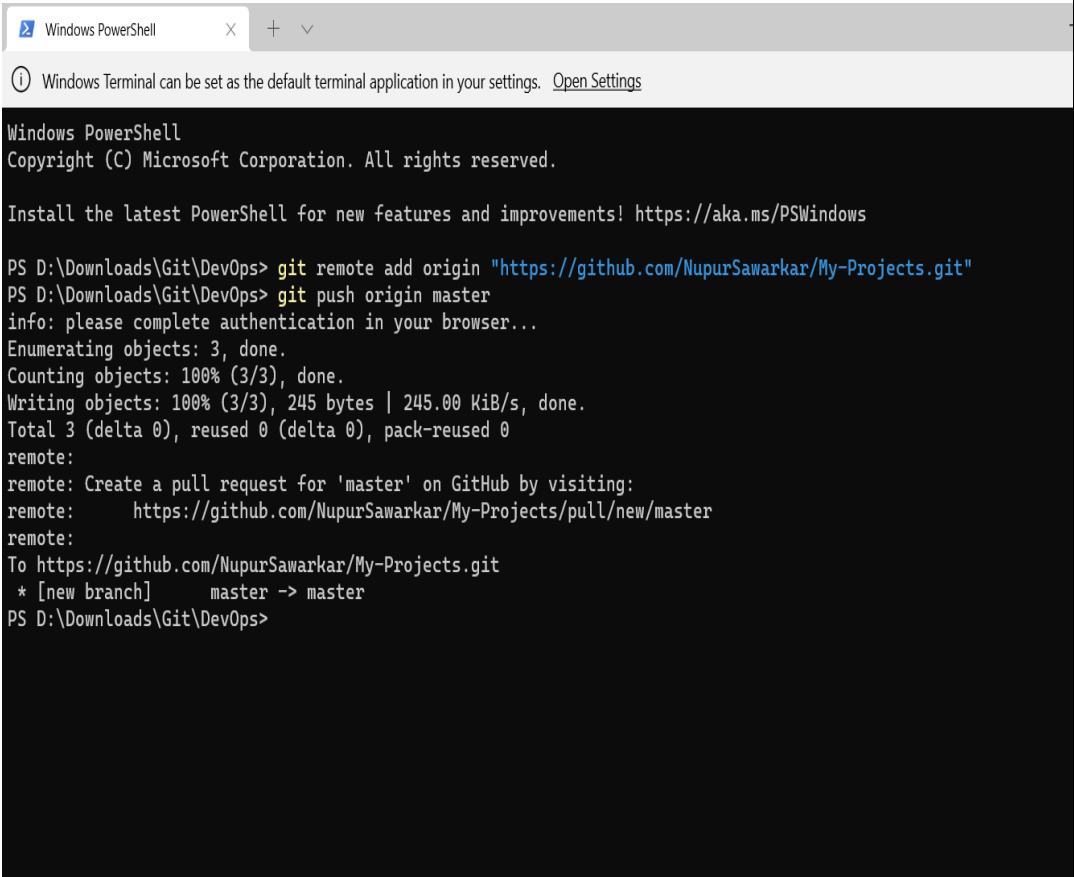


	<b>Department of Information Technology</b>
---	---

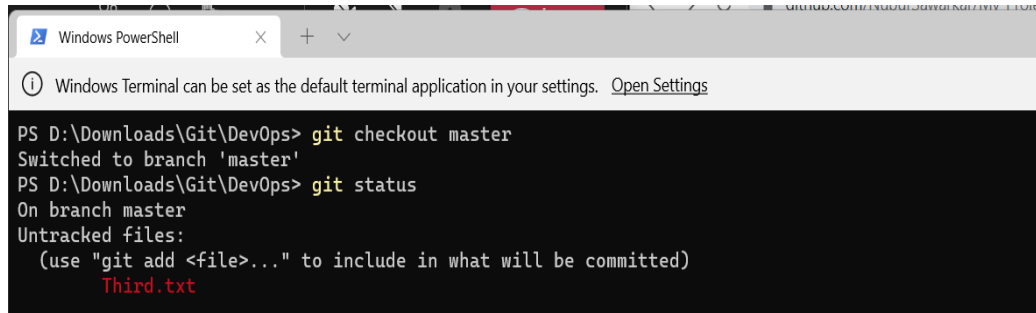
Semester	B.E. Semester VIII – INFT
Subject	DevOps Lab
Subject Professor In -charge	Prof. Rohit Barve

Student Name	Nupur Sawarkar
Roll Number	18101B0030
Grade and Subject Teacher's Signature	

Experiment Number	02	
Experiment Title	To perform version control using GitHub.	
Resources / Apparatus Required	<b>Hardware:</b> <ul style="list-style-type: none"> <li>Intel Core i3/i5/i7 Processor with Intel VT-X support.</li> <li>4 GB RAM</li> <li>500 GB Hard disk</li> </ul>	<b>Software:</b> Operating systems: Windows or Linux Desktop OS for Client machines.
Theory	<b>GitHub:</b> <ul style="list-style-type: none"> <li>GitHub is a web-based version-control and collaboration platform for software developers.</li> <li>GitHub allows developers to change, adapt and improve software from its public repositories for free, but it charges for private repositories, offering various paid plans. Each public or private repository contains all of a project's files, as well as each file's revision history. Repositories can have multiple collaborators and can be either public or private.</li> </ul>	

	<ul style="list-style-type: none"><li>• GitHub facilitates social coding by providing a web interface to the Git code repository and management tools for collaboration. GitHub can be thought of as a serious social networking site for software developers. Members can follow each other, rate each other's work, receive updates for specific projects and communicate publicly or privately.</li><li>• Three important terms used by developers in GitHub are fork, pull request and merge. A fork, also known as a branch, is simply a repository that has been copied from one member's account to another member's account. Forks and 2 branches allow a developer to make modifications without affecting the original code. If the developer would like to share the modifications, she can send a pull request to the owner of the original repository. If, after reviewing the modifications, the original owner would like to pull the modifications into the repository, she can accept the modifications and merge them with the original repository.</li></ul>
Steps	<p>Create a git repository and remote add it to the local computer.</p>  <pre>Windows PowerShell Copyright (C) Microsoft Corporation. All rights reserved.  Install the latest PowerShell for new features and improvements! https://aka.ms/PSWindows  PS D:\Downloads\Git\DevOps&gt; git remote add origin "https://github.com/NupurSawarkar/My-Projects.git" PS D:\Downloads\Git\DevOps&gt; git push origin master info: please complete authentication in your browser... Enumerating objects: 3, done. Counting objects: 100% (3/3), done. Writing objects: 100% (3/3), 245 bytes   245.00 KiB/s, done. Total 3 (delta 0), reused 0 (delta 0), pack-reused 0 remote: remote: Create a pull request for 'master' on GitHub by visiting: remote:   https://github.com/NupurSawarkar/My-Projects/pull/new/master remote: To https://github.com/NupurSawarkar/My-Projects.git  * [new branch]      master -&gt; master PS D:\Downloads\Git\DevOps&gt;</pre>

To push the new/modified file into the repository.



```
Windows PowerShell
Windows Terminal can be set as the default terminal application in your settings. Open Settings

PS D:\Downloads\Git\DevOps> git checkout master
Switched to branch 'master'
PS D:\Downloads\Git\DevOps> git status
On branch master
Untracked files:
  (use "git add <file>..." to include in what will be committed)
       Third.txt
```

Add and commit the Third.txt file and push it to the repository.

```
nothing added to commit but untracked files present (use "git add" to track)
PS D:\Downloads\Git\DevOps> git add Third.txt
PS D:\Downloads\Git\DevOps> git commit -m "First Commit for Third File"
[master 0d64396] First Commit for Third File
 1 file changed, 1 insertion(+)
 create mode 100644 Third.txt
PS D:\Downloads\Git\DevOps> git status
On branch master
nothing to commit, working tree clean
PS D:\Downloads\Git\DevOps> git push origin master
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 301 bytes | 301.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/NupurSawarkar/My-Projects.git
 cccb6ff..0d64396 master -> master
PS D:\Downloads\Git\DevOps>
```

Similarly, push it into branch b1 and branch b2.

```
PS D:\Downloads\Git\DevOps> git push origin b1
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 312 bytes | 312.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
remote:
remote: Create a pull request for 'b1' on GitHub by visiting:
remote:      https://github.com/NupurSawarkar/My-Projects/pull/new/b1
remote:
To https://github.com/NupurSawarkar/My-Projects.git
 * [new branch]      b1 -> b1
PS D:\Downloads\Git\DevOps>
```

```
Windows PowerShell
Windows Terminal can be set as the default terminal application in your settings. Open Settings

PS D:\Downloads\Git\DevOps> git checkout b2
Switched to branch 'b2'
PS D:\Downloads\Git\DevOps> git add 4_b2.txt
PS D:\Downloads\Git\DevOps> git commit -m "First commit"
[b2 2ccdffd] First commit
1 file changed, 1 insertion(+)
create mode 100644 4_b2.txt
PS D:\Downloads\Git\DevOps> git status
On branch b2
nothing to commit, working tree clean
PS D:\Downloads\Git\DevOps>
```

Create the other branches (i.e b3 and b4) and push one text file in each branch.

```
PS D:\Downloads\Git\DevOps> git branch b3
PS D:\Downloads\Git\DevOps> git checkout b3
Switched to branch 'b3'
PS D:\Downloads\Git\DevOps> git add 5_b3.txt
PS D:\Downloads\Git\DevOps> git commit -m "First commit"
[b3 4e5a740] First commit
1 file changed, 1 insertion(+)
create mode 100644 5_b3.txt
PS D:\Downloads\Git\DevOps> git status
On branch b3
nothing to commit, working tree clean
PS D:\Downloads\Git\DevOps>
```

```
Windows PowerShell
Windows Terminal can be set as the default terminal application in your settings. Open Settings

PS D:\Downloads\Git\DevOps> git push origin b2
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 297 bytes | 297.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
remote:
remote: Create a pull request for 'b2' on GitHub by visiting:
remote:      https://github.com/NupurSawarkar/My-Projects/pull/new/b2
remote:
To https://github.com/NupurSawarkar/My-Projects.git
 * [new branch]      b2 -> b2
PS D:\Downloads\Git\DevOps> git push origin b3
Enumerating objects: 4, done.
Counting objects: 100% (4/4), done.
Delta compression using up to 8 threads
Compressing objects: 100% (2/2), done.
Writing objects: 100% (3/3), 321 bytes | 321.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
remote:
remote: Create a pull request for 'b3' on GitHub by visiting:
remote:      https://github.com/NupurSawarkar/My-Projects/pull/new/b3
remote:
To https://github.com/NupurSawarkar/My-Projects.git
 * [new branch]      b3 -> b3
PS D:\Downloads\Git\DevOps>
```

## GitHub Pages:

### Master Branch:



Search or jump to...



Pulls Issues Mar



NupurSawarkar /



Pin



Unwatch 1

My-Projects

Public

<> Code



Issues



Pull requests



Actions



b1 had recent pushes 11 minutes ago

Compare & pull request



b2 had recent pushes 2 minutes ago


Compare & pull request



b3 had recent pushes 2 minutes ago

Compare & pull request


Branch 1:



 b1 ▾



Go to file

Add file ▾


Code ▾

This branch is 2 commits ahead, 1 commit behind main.  Contribute ▾

 **NupurSawarkar** First commit fo... ... 6 days ago  2

 First.txt	This is first commit	6 days ago
 Second.txt	First commit for Second.t...	6 days ago


Branch 2:



 b2 ▾



Go to file

Add file ▾














Code ▾

This branch is 2 commits ahead, 1 commit behind main.  Contribute ▾

 **NupurSawarkar** First commit ... 7 minutes ago  2

 4_b2.txt	First commit	7 minutes ago
 First.txt	This is first commit	6 days ago

Branch 3:

	<div><div><div> b3 ▾</div><div>Go to file</div><div>Add file ▾</div><div>Code ▾</div></div><div><div>This branch is 3 commits ahead, 1 commit behind main.</div><div> Contribute ▾</div></div><div><div> <b>NupurSawarkar</b> First commit ... 6 minutes ago  3</div><table><tr><td> 4_b2.txt</td><td>First commit</td><td>8 minutes ago</td></tr><tr><td> 5_b3.txt</td><td>First commit</td><td>6 minutes ago</td></tr><tr><td> First.txt</td><td>This is first commit</td><td>6 days ago</td></tr></table></div></div>	 4_b2.txt	First commit	8 minutes ago	 5_b3.txt	First commit	6 minutes ago	 First.txt	This is first commit	6 days ago
 4_b2.txt	First commit	8 minutes ago								
 5_b3.txt	First commit	6 minutes ago								
 First.txt	This is first commit	6 days ago								
Conclusion:	We came to know about how to use GitHub for version-control. GitHub is a web-based version-control and collaboration platform for software developers.									