

## DEPARTMENT OF INFORMATION TECHNOLOGY

Semester	S.E. Semester IV – Information Technology Engineering
Subject	Computer Networks and Network Design Lab
Subject Professor In-charge	Unnati Gohil
Assisting Teachers	-
Laboratory	MS Teams

Student Name	Sanika Kate
Roll Number	22101A2005
Grade and Subject Teacher's Signature	

Experiment Number	1
Experiment Title	Using GitHub and Git tools
Resources / Apparatus Required	<div>Hardware: Basic Desktop with Windows or Linux.</div> <div>Software: Java/ Python/Wireshark/Cisco Packet Tracer</div>
Objectives (Skill Set / Knowledge Tested / Imparted)	
Theory:	<p><b>DevOps</b></p> <p><b>What is DevOps</b></p> <p>DevOps is a set of practices, tools, and a cultural philosophy that automate and integrate the processes between software development and IT teams. It emphasizes team empowerment, cross-team communication and collaboration, and technology automation.</p>

The DevOps movement began around 2007 when the software development and IT operations communities raised concerns about the traditional software development model, where developers who wrote code worked apart from operations who deployed and supported the code. The term DevOps, a combination of the words development and operations, reflects the process of integrating these disciplines into one, continuous process.

### **What Is Git?**

Git is a specific open-source version control system created by Linus Torvalds in 2005. Specifically, Git is a distributed version control system, which means that the entire codebase and history is available on every developer's computer, which allows for easy branching and merging. According to a Stack Overflow developer survey, over 87% of developers use Git.

### **What Is GitHub?**

GitHub is a for-profit company that offers a cloud-based Git repository hosting service. Essentially, it makes it a lot easier for individuals and teams to use Git for version control and collaboration. GitHub's interface is user-friendly enough so even novice coders can take advantage of Git. Without GitHub, using Git generally requires a bit more technical savvy and use of the command line.

## **Repository**

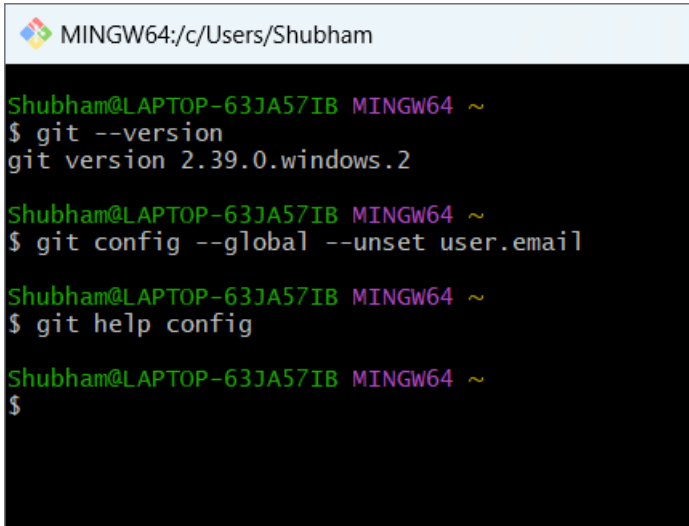
A GitHub repository can be used to store a development project. It can contain folders and any type of files (HTML, CSS, JavaScript, Documents, Data, Images). A GitHub repository should also include a licence file and a README file about the project. A GitHub repository can also be used to store ideas, or any resources that you want to share.

## **Branch**

A GitHub branch is used to work with different versions of a repository at the same time. By default a repository has a master branch (a production branch). Any other branch is a copy of the master branch (as it was at a point in time). New Branches are for bug fixes and feature work separate from the master branch. When changes are ready, they can be merged into the master branch. If you make changes to the master branch while working on a new branch, these updates can be pulled in.

## **Commits**

At GitHub, changes are called commits. Each commit (change) has a description explaining why a change was made.

Output	 <pre>MINGW64:/c/Users/Shubham  Shubham@LAPTOP-63JA57IB MINGW64 ~ \$ git --version git version 2.39.0.windows.2  Shubham@LAPTOP-63JA57IB MINGW64 ~ \$ git config --global --unset user.email  Shubham@LAPTOP-63JA57IB MINGW64 ~ \$ git help config  Shubham@LAPTOP-63JA57IB MINGW64 ~ \$</pre>

## NAME

## SYNOPSIS

```

C:\Users\Shubham\FirstDevOps
shubham@LAPTOP-612A571B: MINGW64 ~
$ git --version
git version 2.39.0.windows.2
shubham@LAPTOP-612A571B: MINGW64 ~
$ git config --global --unset user.email
shubham@LAPTOP-612A571B: MINGW64 ~
$ git help config
shubham@LAPTOP-612A571B: MINGW64 ~
$ mkdir firstDevops
shubham@LAPTOP-612A571B: MINGW64 ~
$ cd firstDevops
shubham@LAPTOP-612A571B: MINGW64 ~/firstDevops
$ git init
Initialized empty Git repository in C:/Users/Shubham/firstDevops/.git/
shubham@LAPTOP-612A571B: MINGW64 ~/firstDevops (master)
$ git config --global user.email "shubhankatkar098@gmail.com"
shubham@LAPTOP-612A571B: MINGW64 ~/firstDevops (master)
$ git config --global user.name "katkar098"
shubham@LAPTOP-612A571B: MINGW64 ~/firstDevops (master)
$ git add first_practical.txt
fatal: pathspec 'first_practical.txt' did not match any files
shubham@LAPTOP-612A571B: MINGW64 ~/firstDevops (master)
$ git add first_practical.txt
fatal: pathspec 'first_practical.txt' did not match any files
shubham@LAPTOP-612A571B: MINGW64 ~/firstDevops (master)
$ git add first_practical.txt
fatal: pathspec 'first_practical.txt' did not match any files
shubham@LAPTOP-612A571B: MINGW64 ~/firstDevops (master)
$ git add first_practical.txt
fatal: pathspec 'first_practical.txt' did not match any files
shubham@LAPTOP-612A571B: MINGW64 ~/firstDevops (master)
$ git init
Reinitialized existing Git repository in C:/Users/Shubham/firstDevops/.git/
shubham@LAPTOP-612A571B: MINGW64 ~/firstDevops (master)
$ git add first_practical.txt
shubham@LAPTOP-612A571B: MINGW64 ~/firstDevops (master)
$ git status
On branch master

no commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)

```

```
MINGW64/C:/Users/Shubham/firstDevOps
$ git add first_practical.txt
fatal: pathspec 'first_practical.txt' did not match any files

Shubham@APTOP-631A57B8 VINGW64 ~/firstDevOps (master)
$ git add first_practical.txt
fatal: pathspec 'first_practical.txt' did not match any files

Shubham@APTOP-631A57B8 VINGW64 ~/firstDevOps (master)
$ git add first_practical.txt
fatal: pathspec 'first_practical.txt' did not match any files

Shubham@APTOP-631A57B8 VINGW64 ~/firstDevOps (master)
$ git init
Reinitialized existing Git repository in C:/Users/Shubham/firstDevOps/.git/

Shubham@APTOP-631A57B8 VINGW64 ~/firstDevOps (master)
$ git add first_practical.txt

Shubham@APTOP-631A57B8 VINGW64 ~/firstDevOps (master)
$ git status
On branch master
no commits yet


Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
        new file:   first_practical.txt

Shubham@APTOP-631A57B8 VINGW64 ~/firstDevOps (master)
$ git commit -m "My first Practical"
[master (root-commit) 22aa694] My first Practical
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 first_practical.txt

Shubham@APTOP-631A57B8 VINGW64 ~/firstDevOps (master)
$ git status
On branch master
nothing to commit, working tree clean

Shubham@APTOP-631A57B8 VINGW64 ~/firstDevOps (master)
$ git remote add origin https://github.com/katkar098/DevOps

Shubham@APTOP-631A57B8 VINGW64 ~/firstDevOps (master)
$ git push origin master
Enumerating objects: 3, done.
Counting objects: 100% (3/3), done.
Writing objects: 100% (3/3), 233 bytes | 233.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/katkar098/DevOps
 * (new branch)  master -> master
$
```

 katkar098 / DevOps

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 katkar098 My first Practical 22aa694 12 minutes ago 1 commit

 first\_practical.txt My first Practical 12 minutes ago

Help people interested in this repository understand your project by adding a README. [Add a README](#)

Conclusion

In this experiment , we have created a repository and run git commands.