Git Basics Lab – From Local Folder to GitHub Push

This is a simple hands-on guide used during Day-3 DevOps training. The goal is to help understand how Git works in real projects using Git Bash. Follow each section step-by-step and commands along with the trainer.

What you will learn in this lab

By the end of this practice session you should be able to:

- Create a working folder from terminal
- Turn a normal folder into a Git repository
- Track files using Git
- Save versions using commit
- Connect your local project with GitHub
- Push code from your system to GitHub

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1. Check whether Git is installed

Open **Git Bash** and type:

```
git --version
```

If a version number appears, Git is ready to use.

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2. Set your Git username and email (first time only)

Git needs your identity before allowing commits.

```
git config --global user.name "Your Name"
git config --global user.email "youremail@gmail.com"
```

You only need to do this once on your laptop.

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3 . Create a working folder

```
mkdir devops_project
cd devops_project
```

This will create a new folder and move you inside it.

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4 . Create and edit a file

Create a basic file:

```
touch index.html
```

Open it in nano editor:

```
nano index.html
```

Add some sample content:

```
<h1>Hello DevOps</h1>
```

Save and exit using:

- CTRL + O → Enter
- CTRL + X

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5 . Start Git inside the folder

```
git init
```

Now your folder is a Git repository.

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6. Check current file status

```
git status
```

This shows which files are new or modified.

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7. Add files to staging area

```
git add .
```

This prepares your files for commit.

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8. Save your first version (commit)

```
git commit -m "Day3 first commit"
```

A commit is like saving a checkpoint of your project.

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9. Create a repository on GitHub

Go to GitHub and:

1. Click **New Repository**
2. Repository name: devops-day 3
3. Select Public
4. Do not add README file
5. Click Create Repository

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10. Link local project with GitHub

Copy your repository URL and run:

```
git branch -M main
git remote add origin https://github.com/USERNAME/devops-day3.git
```

Replace USERNAME with your GitHub username.

11. Push code to GitHub

```
git push -u origin main
```

Refresh your GitHub page to confirm the files are uploaded.

Practice activity for students

Try creating another folder and repeat the process:

```
mkdir practice
cd practice
touch about.html
git init
git add .
git commit -m "practice commit"
```

This helps you understand the workflow better.

Common issues students face

Git asking for identity

Run:

```
git config --global user.name "Your Name"
git config --global user.email "youremail@gmail.com"
```

Repository not found

- Make sure the repo exists on GitHub
- Check spelling of repo name

Push failed with refspec error

- You need at least one commit before pushing

Quick recap

Basic Git flow used in class:

Create folder → Create file → git init → git add → git commit → connect GitHub → git push

This is the same workflow followed in many beginner DevOps projects.