

Lab Exercise 1— Basic Git Commands on a Local Repository

Objective

To understand and practice fundamental Git commands for managing version control in a local repository.

Prerequisites

- Git installed on your system (git --version to verify).
 - Basic knowledge of terminal/command prompt.
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Steps

1. Configure Git (one-time setup)

```
git config --global user.name "Your Name"

git config --global user.email "your.email@example.com"

git config --list
```

This sets your identity for commits.

2. Create a New Local Repository

```
mkdir git-lab
```

```
cd git-lab
```

```
git init
```

Initializes an empty Git repository inside the git-lab folder.

3. Create Your First File and Track It

```
echo "Hello Git" > file1.txt
```

```
git status
```

```
git add file1.txt
```

```
git commit -m "Initial commit: Added file1.txt"
```

You created, staged, and committed your first file.

4. Make Changes and Commit

```
echo "This is the second line" >> file1.txt  
  
git status  
  
git add file1.txt  
  
git commit -m "Updated file1.txt with a second line"
```

Shows how to modify and track changes.

5. Create and Work with Multiple Files

```
echo "Another file" > file2.txt  
  
git add .  
  
git commit -m "Added file2.txt"
```

git add . stages all changes.

6. View History

```
git log  
  
git log --oneline  
  
Displays commit history.
```