Version Control Using Git and the Command Line

First install git for windows and then initialize it.

Initialize Git:

git init

ls –a command is linux find equivalent command for windows.

git status

Red files are undirected files. To track the changes use the command git add.

git add chapter1.txt

Now the file has been added and it is green now.

```
C:\Users\M.A Computer\Desktop\Story> git add chapter1.txt
```

For all files **git add *.txt**

-m flag to add a commit message

git commit –m "what changes are saved in initial and current save point"

```
C:\Users\M.A Computer\Desktop\Story> git commit -m "Complete Chapter 1"
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 'M.A Computer@DESKTOP-6B0P4A0.(none)')

C:\Users\M.A Computer\Desktop\Story>
```

What commit you have made see by command **git log**

git add .   //to add everything in the folder (all files).

```
C:\Users\M.A Computer\Desktop\Story>git commit -m "complete chapter 2 and 3"
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 'M.A Computer@DESKTOP-6B0P4A0.(none)')

C:\Users\M.A Computer\Desktop\Story>
```

Add author name

```
$ git config --global user.name "John Doe"
```

```
$ git config --global user.email "john@doe.org"
```

```
$ git config user.name "John Doe"
```

```
$ git config user.email "john@doe.org"
```

git status

```
C:\Users\M.A Computer\Desktop\Story>git add *.txt

C:\Users\M.A Computer\Desktop\Story>git status
On branch master

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
        new file:    chapter1.txt
        new file:    chapter2.txt
        new file:    chapter3.txt
```

Let's recap what we done

Working Directory:

In which we initialize file.
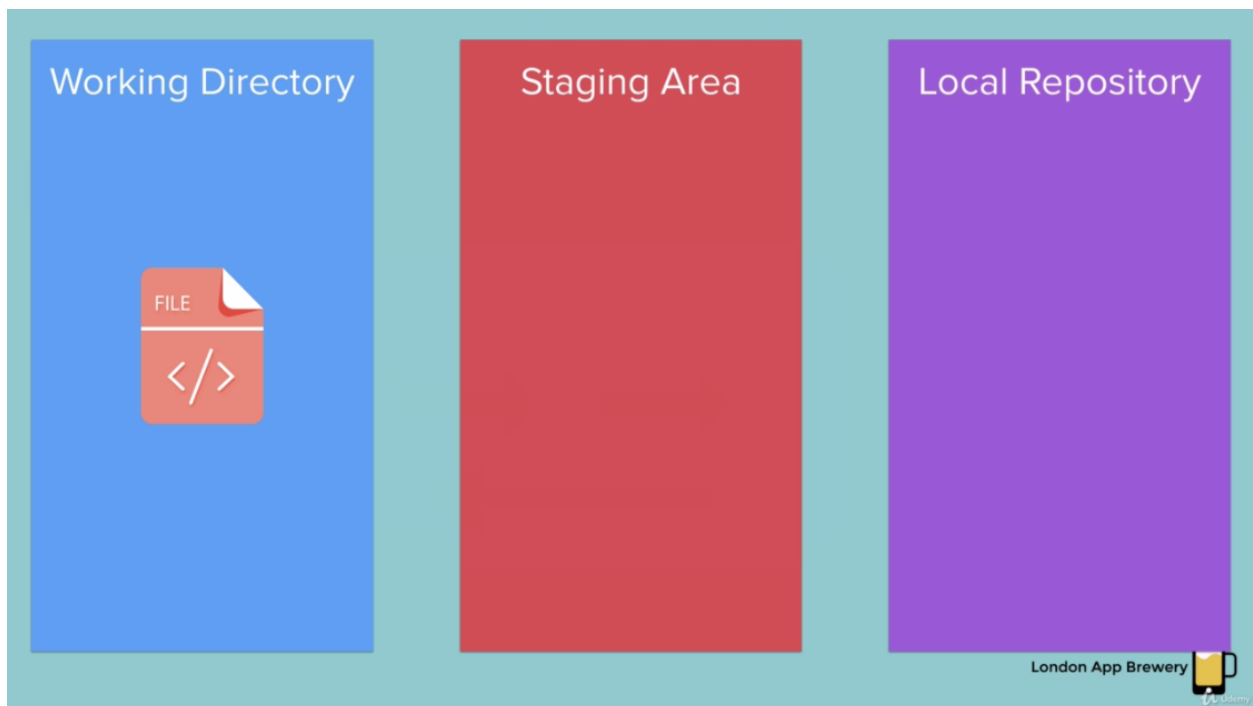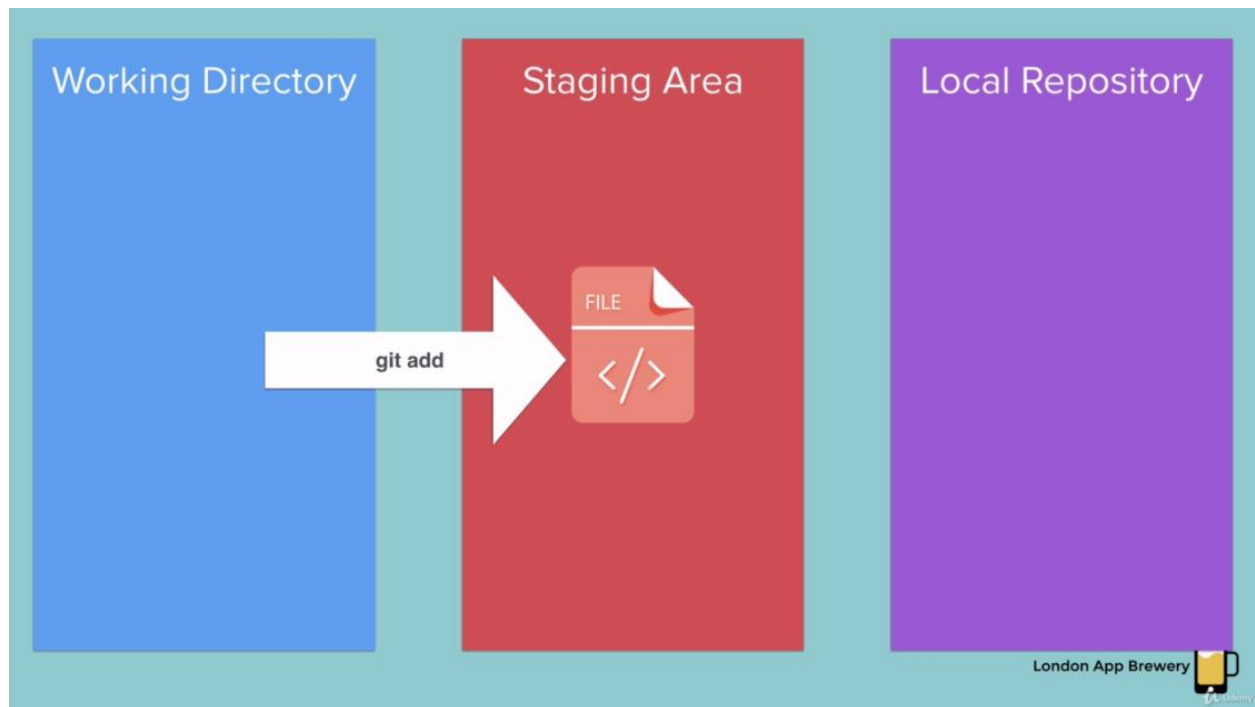
Staging Area: Sometimes you want to add all of your files to be tracked. Staging area is best place to trying figure out things you want git to ignore.
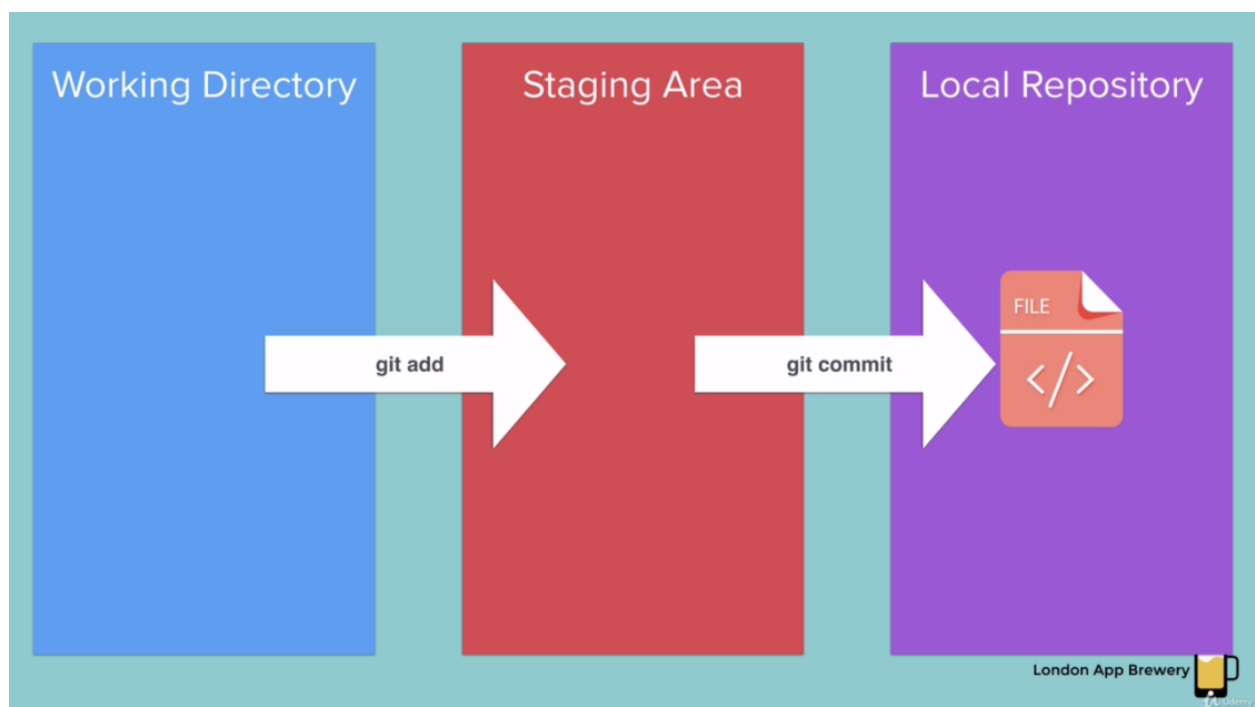
Now file is in local repository **.git**
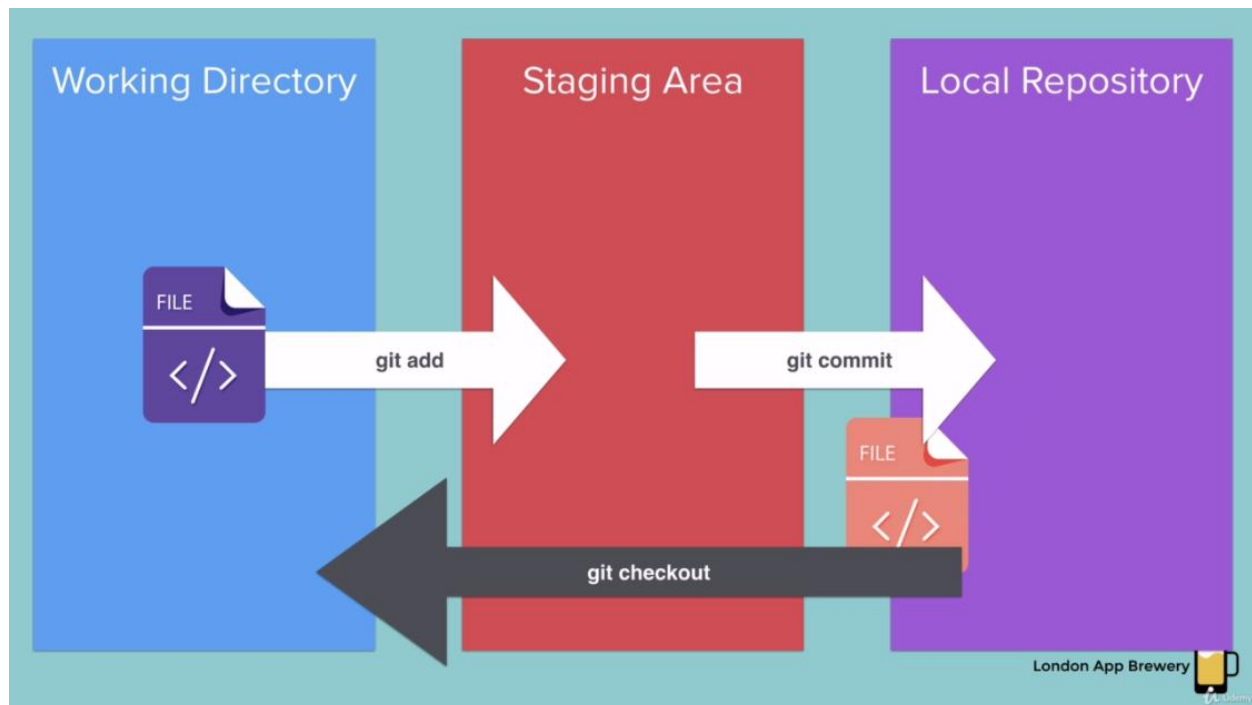
Change text in chapter3.txt and roll back using git.

Above file is currently in local repository.

Check difference between previous and current files.

Red part is the part that we deleted and green part is currently.

git checkout command

```
C:\Users\M.A Computer\Desktop\Story>git checkout chapter3.txt
Updated 1 path from the index
```

This command says to roll back the repository (chapter3.txt) to the last version committed in a local repository

Check file is roll backs.

```
C:\Users\M.A Computer\Desktop\Story>git checkout chapter3.txt
Updated 1 path from the index
```

```
C:\Users\M.A Computer\Desktop\Story>git checkout chapter3.txt
Updated 1 path from the index
```

chapter3 - Notepad

File   Edit   Format   View   Help

It was the spring of hope, it was the winter of despair.

Corrected of Above

```
Microsoft Windows [Version 10.0.19042.1826]
(c) Microsoft Corporation. All rights reserved.

C:\Users\M.A Computer>cd desktop/story

C:\Users\M.A Computer\Desktop\Story>git log
fatal: your current branch 'master' does not have any commits yet

C:\Users\M.A Computer\Desktop\Story>git remote add origin https://github
.com/MuhammadAhmad123a/Story.git
error: remote origin already exists.

C:\Users\M.A Computer\Desktop\Story>story .
'story' is not recognized as an internal or external command,
operable program or batch file.

C:\Users\M.A Computer\Desktop\Story> git commit -m "Complete Chapter 1"
[master (root-commit) 6bc1c15] Complete Chapter 1
 3 files changed, 3 insertions(+)
 create mode 100644 chapter1.txt
 create mode 100644 chapter2.txt
 create mode 100644 chapter3.txt

C:\Users\M.A Computer\Desktop\Story>git add .

C:\Users\M.A Computer\Desktop\Story>git status
On branch master
nothing to commit, working tree clean

C:\Users\M.A Computer\Desktop\Story>git checkout chapter3.txt
Updated 0 paths from the index

C:\Users\M.A Computer\Desktop\Story>git log
commit 6bc1c1554abc01943c394bf61fb0076d06db45a7 (HEAD -> master)
Author: Muhammad Ahmad <ahmad481988@gmail.com>
Date:   Sun Aug 21 16:29:08 2022 -0700

    Complete Chapter 1

C:\Users\M.A Computer\Desktop\Story>git commit -m "complete chapter 2 and 3"
On branch master
nothing to commit, working tree clean

C:\Users\M.A Computer\Desktop\Story>git log
commit 6bc1c1554abc01943c394bf61fb0076d06db45a7 (HEAD -> master)
Author: Muhammad Ahmad <ahmad481988@gmail.com>
Date:   Sun Aug 21 16:29:08 2022 -0700
```

```
C:\Users\M.A Computer\Desktop\Story>git commit -m "complete chapter 2 and 3"
On branch master
nothing to commit, working tree clean

C:\Users\M.A Computer\Desktop\Story>git log
commit 6bc1c1554abc01943c394bf61fb0076d06db45a7 (HEAD -> master)
Author: Muhammad Ahmad <ahmad481988@gmail.com>
Date:   Sun Aug 21 16:29:08 2022 -0700

    Complete Chapter 1
```

```
C:\Users\M.A Computer\Desktop\Story>git add .

C:\Users\M.A Computer\Desktop\Story>git commit -m "add chapter 4"
[master ab465b9] add chapter 4
 1 file changed, 1 insertion(+)
 create mode 100644 chapter4.txt
```

New notes 2023:

```
                        C:\Windows\system32\cmd.exe                    —    □    ✕

Microsoft Windows [Version 10.0.19045.3570]
(c) Microsoft Corporation. All rights reserved.

C:\Users\ahmad>cd desktop

C:\Users\ahmad\Desktop>mkdir story

C:\Users\ahmad\Desktop>cd story

C:\Users\ahmad\Desktop\story>dir
 Volume in drive C has no label.
 Volume Serial Number is 688F-131A

 Directory of C:\Users\ahmad\Desktop\story

10/24/2023  08:47 PM    <DIR>          .
10/24/2023  08:47 PM    <DIR>          ..
               0 File(s)              0 bytes
               2 Dir(s)  22,510,895,104 bytes free

C:\Users\ahmad\Desktop\story>nul>chapter1.txt
Access is denied.
```

```
C:\Users\ahmad>cd desktop/story

C:\Users\ahmad\Desktop\story>git -version
unknown option: -version
usage: git [-v | --version] [-h | --help] [-C <path>] [-c <name>=<value>]
           [--exec-path[=<path>]] [--html-path] [--man-path] [--info-path]
           [-p | --paginate | -P | --no-pager] [--no-replace-objects] [--bare]
           [--git-dir=<path>] [--work-tree=<path>] [--namespace=<name>]
           [--config-env=<name>=<envvar>] <command> [<args>]

C:\Users\ahmad\Desktop\story>git init
Initialized empty Git repository in C:/Users/ahmad/Desktop/story/.git/

C:\Users\ahmad\Desktop\story>git status
On branch master

No commits yet

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        chapter1.txt

nothing added to commit but untracked files present (use "git add" to track)

C:\Users\ahmad\Desktop\story>git add chapter1.txt

C:\Users\ahmad\Desktop\story>git status
On branch master

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
        new file:   chapter1.txt


C:\Users\ahmad\Desktop\story>git commit -m "Complete Chapter 1"
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"
```

```
C:\Users\ahmad\Desktop\story>nul>chapter2.txt
Access is denied.

C:\Users\ahmad\Desktop\story>nul>chapter3.txt
Access is denied.

C:\Users\ahmad\Desktop\story>notepad chapter2.txt

C:\Users\ahmad\Desktop\story>notepad chapter3.txt

C:\Users\ahmad\Desktop\story>git status
On branch master

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
        new file:   chapter1.txt

Untracked files:
  (use "git add <file>..." to include in what will be committed)
        chapter2.txt
        chapter3.txt


C:\Users\ahmad\Desktop\story>git add chapter1.txt

C:\Users\ahmad\Desktop\story>git add chapter2.txt

C:\Users\ahmad\Desktop\story>git add chapter3.txt

C:\Users\ahmad\Desktop\story>git status
On branch master

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
        new file:   chapter1.txt
        new file:   chapter2.txt
        new file:   chapter3.txt


C:\Users\ahmad\Desktop\story>
```

```
C:\Users\ahmad\Desktop\story>git commit -m "complete chapter 2 and 3"
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 'ahmad@DESKTOP-CTPTOAF.(none)')

C:\Users\ahmad\Desktop\story>
```

Now change the text of chapter3.txt file and save it. We can see that changes are not modified until we commit them.

```
No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
        new file:   chapter1.txt
        new file:   chapter2.txt
        new file:   chapter3.txt

Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
        modified:   chapter3.txt


C:\Users\ahmad\Desktop\story>git commit -a
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 'ahmad@DESKTOP-CTPTOAF.(none)')

C:\Users\ahmad\Desktop\story>git status
On branch master

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
        new file:   chapter1.txt
        new file:   chapter2.txt
        new file:   chapter3.txt

Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
        modified:   chapter3.txt
```

```
C:\Users\ahmad\Desktop\story>git add chapter3.txt

C:\Users\ahmad\Desktop\story>git status
On branch master

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
        new file:   chapter1.txt
        new file:   chapter2.txt
        new file:   chapter3.txt
```

```
nplete Chapter 1
s-MacBook-Pro:Story angelayu$ git status
nch master
s not staged for commit:
 "git add <file>..." to update what will be committed)
 "git checkout -- <file>..." to discard changes in working directory)

  modified:   chapter3.txt

nges added to commit (use "git add" and/or "git commit -a")
s-MacBook-Pro:Story angelayu$ git diff chapter3.txt
-git a/chapter3.txt b/chapter3.txt
7986d36..377339b 100644
chapter3.txt
chapter3.txt
+1 @@
s the spring of hope, it was the winter of despair.
ewline at end of file
/j dclkj dkljsd vlkaj sdvlkj fvklj dxvkl klsjd flksj dfklj sldkf sdjlf
ewline at end of file
s-MacBook-Pro:Story angelayu$
```

Now delete changes by using command (Restore the file)

git checkout chapter3.txt

```
C:\Users\ahmad\Desktop\story>git checkout chapter3.txt
Updated 0 paths from the index

C:\Users\ahmad\Desktop\story>notepad chapter3.txt

C:\Users\ahmad\Desktop\story>git status
On branch master

No commits yet

Changes to be committed:
  (use "git rm --cached <file>..." to unstage)
        new file:   chapter1.txt
        new file:   chapter2.txt
        new file:   chapter3.txt


C:\Users\ahmad\Desktop\story>
```

To check commits configure email and name by running commands config

Configure name and email

```
C:\Users\ahmad\Desktop\story>git commit -a
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 'ahmad@DESKTOP-CTPTOAF.(none)')
```

```
                                        C:\Windows\system32\cmd.exe - git commit -a

[]
# Please enter the commit message for your changes. Lines starting
# with '#' will be ignored, and an empty message aborts the commit.
#
# On branch master
#
# Initial commit
#
# Changes to be committed:
#       new file:   chapter1.txt
#       new file:   chapter2.txt
#       new file:   chapter3.txt
#
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~
.git/COMMIT_EDITMSG [unix] (21:33 24/10/2023)                                    1,0-1 All
```

Now commit running


```
C:\Users\ahmad\Desktop\story>git commit -m "Hy"
[master (root-commit) 972ebdb] Hy
 3 files changed, 4 insertions(+)
 create mode 100644 chapter1.txt
 create mode 100644 chapter2.txt
 create mode 100644 chapter3.txt

C:\Users\ahmad\Desktop\story>
```

```
C:\Users\ahmad\Desktop\story>git commit -m "Hy"
[master (root-commit) 972ebdb] Hy
 3 files changed, 4 insertions(+)
 create mode 100644 chapter1.txt
 create mode 100644 chapter2.txt
 create mode 100644 chapter3.txt

C:\Users\ahmad\Desktop\story>git log
commit 972ebdbefa421d5d8e872325508aa65f357da5bb (HEAD -> master)
Author: Muhammad Ahmad <ahmad481988@gmail.com>
Date:   Tue Oct 24 21:36:45 2023 +0500

    Hy

C:\Users\ahmad\Desktop\story>
```

```
    Hy

C:\Users\ahmad\Desktop\story>git checkout chapter3.txt
Updated 0 paths from the index

C:\Users\ahmad\Desktop\story>notepad chapter3.txt

C:\Users\ahmad\Desktop\story>
```