

Rajat Dua

Assignment 1: GIT Assignment

Q1. Exercise 1: Create your first Commit.

Task

- Initialize your Repository: `git init project Exercise-1`
- Create a file with name `index.html`
- Write code in newly created file
- Stage `index.html`
- Commit with message 'Initial Message'

In this question, I have created a repository on GitHub with the name of InnovationPython_Rajat and cloned it to my local server using `git clone` I could have also made a directory in my local server using `mkdir InnovationPython_Rajat` and initialized it using `git init` to make it a git repository. Rest of the logic would have been the same.

```
((base) rajats-mbp:desktop rajatdua$ cd git_practice
((base) rajats-mbp:git_practice rajatdua$ git clone https://github.com/rajatdua12/InnovationPython_Rajat.git
Cloning into 'InnovationPython_Rajat'...
remote: Enumerating objects: 6, done.
remote: Counting objects: 100% (6/6), done.
remote: Compressing objects: 100% (4/4), done.
remote: Total 6 (delta 0), reused 0 (delta 0), pack-reused 0
Receiving objects: 100% (6/6), done.
(base) rajats-mbp:git_practice rajatdua$ ls
[InnovationPython_Rajat  testrepository      trainingrepo
(base) rajats-mbp:git_practice rajatdua$ cd InnovationPython_Rajat
((base) rajats-mbp:InnovationPython_Rajat rajatdua$ ls
[README.md
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ ls -a
[.          ..          .git          README.md
```

```
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ mkdir Exercise_1
[(base) rajats-mbp:InnovationPython_Rajat rajatdua$ ls
[Exercise_1      README.md
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ cd Exercise_1
[(base) rajats-mbp:Exercise_1 rajatdua$ touch index.html
[(base) rajats-mbp:Exercise_1 rajatdua$ ls
[index.html
(base) rajats-mbp:Exercise_1 rajatdua$ cd ..
[(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git status
[On branch main
Your branch is up to date with 'origin/main'.

Untracked files:
(use "git add <file>..." to include in what will be committed)
  Exercise_1/

nothing added to commit but untracked files present (use "git add" to track)
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git add .
[(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git status
[On branch main
Your branch is up to date with 'origin/main'.

Changes to be committed:
(use "git restore --staged <file>..." to unstage)
  new file:   Exercise_1/index.html

(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git commit -m "Initial Message."
[[main d1e6624] Initial Message.
 1 file changed, 0 insertions(+), 0 deletions(-)
 create mode 100644 Exercise_1/index.html
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git status
On branch main
[Your branch is ahead of 'origin/main' by 1 commit.
 (use "git push" to publish your local commits)

nothing to commit, working tree clean
[(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git log --oneline
d1e6624 (HEAD -> main) Initial Message.
e70069d (origin/main, origin/HEAD) Changes made to README.md
9e7bf72 Initial commit
```

```
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ cd Exercise_1
(base) rajats-mbp:Exercise_1 rajatdua$ vi index.html
[(base) rajats-mbp:Exercise_1 rajatdua$ cat index.html
[<!DOCTYPE html>
<html>
<body>

<p>Browsers usually insert quotation marks around the q element.</p>

<p>WWF's goal is to: <q>Build a future where people live in harmony with nature.</q></p>

</body>
</html>
(base) rajats-mbp:Exercise_1 rajatdua$ cd ..
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git diff
diff --git a/Exercise_1/index.html b/Exercise_1/index.html
[index e69de29..8655b1d 100644
[--- a/Exercise_1/index.html
+++ b/Exercise_1/index.html
@@ -0,0 +1,10 @@
+<!DOCTYPE html>
+<html>
+<body>
+
+<p>Browsers usually insert quotation marks around the q element.</p>
+
+<p>WWF's goal is to: <q>Build a future where people live in harmony with nature.</q></p>
+
+</body>
+</html>
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git status
On branch main
Your branch is ahead of 'origin/main' by 1 commit.
  (use "git push" to publish your local commits)
[
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:   Exercise_1/index.html

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

no changes added to commit (use "git add" and/or "git commit -a")
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git add .
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git status
On branch main
Your branch is ahead of 'origin/main' by 1 commit.
[ (use "git push" to publish your local commits)
[
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   .DS_Store
    modified:   Exercise_1/index.html

(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git commit -m "Initial Message."
[main faaf3df] Initial Message.
 2 files changed, 10 insertions(+)
 create mode 100644 .DS_Store
[(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git log --oneline
faaf3df (HEAD -> main) Initial Message.
d1e6624 Initial Message.
e70069d (origin/main, origin/HEAD) Changes made to README.md
9e7bf72 Initial commit
```

Q2. Exercise 2: Commit only one file.

Task:

- Initialize your Repository: git init Exercise-2
- Create files with names index.html and about.html
- Add code in both files.
- Stage only one file.
- Commit with message: ‘File x added.’

```
[(base) rajats-mbp:InnovationPython_Rajat rajatdua$ mkdir Exercise_2
[(base) rajats-mbp:InnovationPython_Rajat rajatdua$ ls
Exercise_1      Exercise_2      README.md
[(base) rajats-mbp:InnovationPython_Rajat rajatdua$ cd Exercise_2
[(base) rajats-mbp:Exercise_2 rajatdua$ touch index.html about.html
[(base) rajats-mbp:Exercise_2 rajatdua$ ls
about.html      index.html
[(base) rajats-mbp:Exercise_2 rajatdua$ vi index.html
[(base) rajats-mbp:Exercise_2 rajatdua$ cat index.html
<!DOCTYPE html>
<html>
<body>

<p>The <abbr title="World Health Organization">WHO</abbr> was founded in 1948.</p>

<p>Marking up abbreviations can give useful information to browsers, translation systems and search-engines.</p>

</body>
</html>
(base) rajats-mbp:Exercise_2 rajatdua$ vi about.html
(base) rajats-mbp:Exercise_2 rajatdua$ cat about.html
[<!DOCTYPE html>
[<html>
<body>

<p>Browsers usually indent blockquote elements.</p>

<blockquote cite="http://www.worldwildlife.org/who/index.html">
For nearly 60 years, WWF has been protecting the future of nature. The world's leading conservation organization,
States and close to five million globally.
</blockquote>

</body>
</html>
```

```

(base) rajats-mbp:Exercise_2 rajatdua$ cd ..
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git status
[On branch main
Your branch is ahead of 'origin/main' by 2 commits.
[ (use "git push" to publish your local commits)
[
Untracked files:
  (use "git add <file>..." to include in what will be committed)
    Exercise_2/
nothing added to commit but untracked files present (use "git add" to track)
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git add Exercise_2/index.html
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git status
On branch main
Your branch is ahead of 'origin/main' by 2 commits.
  (use "git push" to publish your local commits)
[
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   Exercise_2/index.html

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    Exercise_2/about.html

(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git commit -m "File index.html added."
[main 150ada0] File index.html added.
 1 file changed, 10 insertions(+)
 create mode 100644 Exercise_2/index.html
[(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git log --oneline
150ada0 (HEAD -> main) File index.html added.
faaf3df Initial Message.
d1e6624 Initial Message.
e70069d (origin/main, origin/HEAD) Changes made to README.md
[9e7bf72 Initial commit
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git status
On branch main
Your branch is ahead of 'origin/main' by 3 commits.
  (use "git push" to publish your local commits)

[Untracked files:
  (use "git add <file>..." to include in what will be committed)
    Exercise_2/about.html

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

```

Q3. Exercise 3: Modify last commit.

Task:

- Initialize your Repository: git init project Exercise-3
- Create a file with name index.html
- Write code in newly created file
- Stage index.html
- Commit with message ‘adding index.html.’
- Add new about.html file with some code.
- Now modify message of previous commit as ‘Adding index.html and about.html’ and add about.html file in previous commit.

```
[(base) rajats-mbp:InnovationPython_Rajat rajatdua$ mkdir Exercise_3
[(base) rajats-mbp:InnovationPython_Rajat rajatdua$ cd Exercise_3
[(base) rajats-mbp:Exercise_3 rajatdua$ touch index.html
[(base) rajats-mbp:Exercise_3 rajatdua$ vi index.html
[(base) rajats-mbp:Exercise_3 rajatdua$ cat index.html
<!DOCTYPE html>
<html>
<head>
<style>
p {
    border: 2px solid powderblue;
    padding: 30px;
}
</style>
</head>
<body>

<h1>This is a heading</h1>

<p>This is a paragraph.</p>
<p>This is a paragraph.</p>
<p>This is a paragraph.</p>

</body>
</html>
[(base) rajats-mbp:Exercise_3 rajatdua$ cd ..
[(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git add .
[(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git status
On branch main
Your branch is ahead of 'origin/main' by 3 commits.
  (use "git push" to publish your local commits)

Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   Exercise_2/about.html
    new file:   Exercise_3/index.html

[(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git restore --staged Exercise_2/about.html
[(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git status
On branch main
Your branch is ahead of 'origin/main' by 3 commits.
  (use "git push" to publish your local commits)

Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   Exercise_3/index.html

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    Exercise_2/about.html

[(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git commit -m "Adding index.html."
[[main 64b760d] Adding index.html.
  1 file changed, 20 insertions(+)
  create mode 100644 Exercise_3/index.html
```

```

(base) rajats-mbp:InnovationPython_Rajat rajatdua$ cd Exercise_3
(base) rajats-mbp:Exercise_3 rajatdua$ touch about.html
((base) rajats-mbp:Exercise_3 rajatdua$ vi about.html
((base) rajats-mbp:Exercise_3 rajatdua$ cat about.html
[<!DOCTYPE html>
<html>
<body>

<h1>HTML Links</h1>

<p><a href="https://www.w3schools.com/">Visit W3Schools.com!</a></p>

</body>
</html>
(base) rajats-mbp:Exercise_3 rajatdua$ ls
about.html      index.html
((base) rajats-mbp:Exercise_3 rajatdua$ cd ..
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git status
[On branch main
Your branch is ahead of 'origin/main' by 4 commits.
  (use "git push" to publish your local commits)

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    Exercise_2/about.html
    Exercise_3/about.html

nothing added to commit but untracked files present (use "git add" to track)
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git add Exercise_3/about.html
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git commit -m "Adding index.html and about.html"
[main a2c758c] Adding index.html and about.html
[ 1 file changed, 10 insertions(+)
  create mode 100644 Exercise_3/about.html
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git status
On branch main
Your branch is ahead of 'origin/main' by 5 commits.
  (use "git push" to publish your local commits)

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    Exercise_2/about.html

nothing added to commit but untracked files present (use "git add" to track)
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git log --oneline
a2c758c (HEAD -> main) Adding index.html and about.html
64b760d Adding index.html.
[150ada0 File index.html added.
faaf3df Initial Message.
d1e6624 Initial Message.
e70069d (origin/main, origin/HEAD) Changes made to README.md
9e7bf72 Initial commit
((base) rajats-mbp:InnovationPython_Rajat rajatdua$ git commit --amend -m " Adding index.html and about.html."
[main 38f1439] Adding index.html and about.html.
  Date: Sun Feb 14 18:12:24 2021 -0600
  1 file changed, 10 insertions(+)
  create mode 100644 Exercise_3/about.html
((base) rajats-mbp:InnovationPython_Rajat rajatdua$ git log --oneline
38f1439 (HEAD -> main) Adding index.html and about.html.
64b760d Adding index.html.
[150ada0 File index.html added.
faaf3df Initial Message.
d1e6624 Initial Message.
e70069d (origin/main, origin/HEAD) Changes made to README.md
9e7bf72 Initial commit

```

Q4. Exercise 4: Create git ignore file

Task:

- Initialize your Repository: git init Exercise-4
- Create a gitignore file that will ignore
 - all files with 'exe' extension
 - all files with 'o' extension
 - all files with 'jar' extension
 - the whole libraries directory

```
[(base) rajats-mbp:InnovationPython_Rajat rajatdua$ mkdir Exercise_4
[(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git status
On branch main
Your branch is ahead of 'origin/main' by 5 commits.
(use "git push" to publish your local commits)

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    Exercise_2/about.html

nothing added to commit but untracked files present (use "git add" to track)
[(base) rajats-mbp:InnovationPython_Rajat rajatdua$ rm -rf Exercise_2/about.html
[(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git status
On branch main
Your branch is ahead of 'origin/main' by 5 commits.
(use "git push" to publish your local commits)

nothing to commit, working tree clean
[(base) rajats-mbp:Exercise_4 rajatdua$ vi .gitignore
[(base) rajats-mbp:Exercise_4 rajatdua$ git status
On branch main
Your branch is ahead of 'origin/main' by 5 commits.
(use "git push" to publish your local commits)

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

nothing added to commit but untracked files present (use "git add" to track)
[(base) rajats-mbp:Exercise_4 rajatdua$ git add .gitignore
[(base) rajats-mbp:Exercise_4 rajatdua$ git commit -m "added .gitignore file to the Exercise_4 folder in repo"
[main 8926433] added .gitignore file to the Exercise_4 folder in repo
 1 file changed, 3 insertions(+)
   create mode 100644 Exercise_4/.gitignore
[(base) rajats-mbp:Exercise_4 rajatdua$ touch a.exe b.o c.jar
[(base) rajats-mbp:Exercise_4 rajatdua$ ls
[a.exe  b.o  c.jar
[(base) rajats-mbp:Exercise_4 rajatdua$ git status
On branch main
Your branch is ahead of 'origin/main' by 6 commits.
(use "git push" to publish your local commits)

nothing to commit, working tree clean
(base) rajats-mbp:Exercise_4 rajatdua$
```

Q5. Exercise 5: Save your work with stash.

Task:

- Initialize your Repository: git init Exercise-5
- Add some random files with code
- Now use git stash command to save required files from above files.

```
((base) rajats-mbp:InnovationPython_Rajat rajatdua$ mkdir Exercise_5
((base) rajats-mbp:InnovationPython_Rajat rajatdua$ cd Exercise_5
((base) rajats-mbp:Exercise_5 rajatdua$ touch index.html sum.py test.txt
((base) rajats-mbp:Exercise_5 rajatdua$ vi index.html
((base) rajats-mbp:Exercise_5 rajatdua$ vi sum.py
((base) rajats-mbp:Exercise_5 rajatdua$ vi test.txt
((base) rajats-mbp:Exercise_5 rajatdua$ cat index.html
<!DOCTYPE html>
<html>
<body>

<h2>Image Size</h2>

<p>Here we specify the width and height of an image with the width and height attributes:</p>



</body>
</html>
(base) rajats-mbp:Exercise_5 rajatdua$ cat sum.py
[x = 10
y = 13
z = 34
t = x + y + z
print("sum of x, y, and z =", z)
(base) rajats-mbp:Exercise_5 rajatdua$ cal test.txt
[cal: year `test.txt' not in range 1..9999
(base) rajats-mbp:Exercise_5 rajatdua$ cat test.txt
>this is for creating test file
and checking stash command
(base) rajats-mbp:Exercise_5 rajatdua$ cd ..
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git add .
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git status
[On branch main
Your branch is ahead of 'origin/main' by 6 commits.
  (use "git push" to publish your local commits)

Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   Exercise_5/index.html
    new file:   Exercise_5/sum.py
    new file:   Exercise_5/test.txt

(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git commit -m "random files added to the exercise_5 folder."
[[main 9e1a5d3] random files added to the exercise_5 folder.
 3 files changed, 19 insertions(+)
 create mode 100644 Exercise_5/index.html
 create mode 100644 Exercise_5/sum.py
 create mode 100644 Exercise_5/test.txt
```

```

[(base) rajats-mbp:InnovationPython_Rajat rajatdua$ cd Exercise_5
(base) rajats-mbp:Exercise_5 rajatdua$ ls
[lsindex.html      sum.py      test.txt
[(base) rajats-mbp:Exercise_5 rajatdua$ ls
index.html      sum.py      test.txt
[(base) rajats-mbp:Exercise_5 rajatdua$ vi index.html
(base) rajats-mbp:Exercise_5 rajatdua$ vi sum.py
[(base) rajats-mbp:Exercise_5 rajatdua$ vi test.txt
[(base) rajats-mbp:Exercise_5 rajatdua$ cat index.html
[<!DOCTYPE html>
<html>
<body>

<h2>Image Size</h2>

<p>Here we specify the width and height of an image with the width and height attributes:</p>



<p>The first image uses the width attribute (set to 128 pixels).</p>

</body>
</html>
(base) rajats-mbp:Exercise_5 rajatdua$ cat sum.py
x = 10
y = 13
z = 34
t = x + y + z
print("sum of x, y, and z =", z)
print("this is for checking stash command")
(base) rajats-mbp:Exercise_5 rajatdua$ cat test.txt
this is for creating test file
and checking stash command
>this is the line for stash command
(base) rajats-mbp:Exercise_5 rajatdua$ git stash save "added new line to index.html, sum.py, and test.txt"
Saved working directory and index state On main: added new line to index.html, sum.py, and test.txt
(base) rajats-mbp:Exercise_5 rajatdua$ cat index.html
[<!DOCTYPE html>
<html>
<body>

<h2>Image Size</h2>

<p>Here we specify the width and height of an image with the width and height attributes:</p>



</body>
</html>
(base) rajats-mbp:Exercise_5 rajatdua$ cat sum.py
x = 10
y = 13
z = 34
t = x + y + z
print("sum of x, y, and z =", z)
[(base) rajats-mbp:Exercise_5 rajatdua$ cat test.txt
this is for creating test file
and checking stash command
(base) rajats-mbp:Exercise_5 rajatdua$ git stash list
stash@{0}: On main: added new line to index.html, sum.py, and test.txt

```

Q6. Exercise 6: Reset Previous Commit Keeping changes. (Soft Reset)

Task:

- Initialize your Repository: `git init Exercise-6`

- Do some series of commits.
- Now use git reset command to reset one of the commit and keep changes in staging area.

```
((base) rajats-mbp:InnovationPython_Rajat rajatdua$ mkdir Exercise_6
((base) rajats-mbp:InnovationPython_Rajat rajatdua$ cd Exercise_6
((base) rajats-mbp:Exercise_6 rajatdua$ touch index.html sum.py test.txt
((base) rajats-mbp:Exercise_6 rajatdua$ vi index.html
((base) rajats-mbp:Exercise_6 rajatdua$ vi sum.py
((base) rajats-mbp:Exercise_6 rajatdua$ vi test.txt
((base) rajats-mbp:Exercise_6 rajatdua$ cat index.html
<!DOCTYPE html>
<html>
<body>

<h2>Image Size</h2>

<p>Here we use the style attribute to specify the width and height of an image:</p>



</body>
</html>
(base) rajats-mbp:Exercise_6 rajatdua$ cat sum.py
x = 14
y = 56
z = x+ y
print("sum of x and y= ", z)
(base) rajats-mbp:Exercise_6 rajatdua$ test.txt
-bash: test.txt: command not found
((base) rajats-mbp:Exercise_6 rajatdua$ cat test.txt
this is a test file
[for checking reset command
(base) rajats-mbp:Exercise_6 rajatdua$ cd ..
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git add .
((base) rajats-mbp:InnovationPython_Rajat rajatdua$ git status
[On branch main
>Your branch is ahead of 'origin/main' by 7 commits.
(use "git push" to publish your local commits)

Changes to be committed:
(use "git restore --staged <file>..." to unstage)
  new file:   Exercise_6/index.html
  new file:   Exercise_6/sum.py
  new file:   Exercise_6/test.txt

(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git commit -m "added random files"
[main 42934ea] added random files
[ 3 files changed, 18 insertions(+)
 create mode 100644 Exercise_6/index.html
 create mode 100644 Exercise_6/sum.py
 create mode 100644 Exercise_6/test.txt
```

```
(base) rajats-mbp:InnovationPython_Rajatdua$ cd Exercise_6
(base) rajats-mbp:Exercise_6 rajatdua$ cat test.txt
this is a test file
for checking reset command
[this line is for testing reset command
[(base) rajats-mbp:Exercise_6 rajatdua$ vi test.txt
(base) rajats-mbp:Exercise_6 rajatdua$ cat test.txt
this is a test file
for checking reset command
[this line is for testing reset command
[this line is for testing reset command
[this is the second line for testing reset command
(base) rajats-mbp:Exercise_6 rajatdua$ git status
On branch main
Your branch is ahead of 'origin/main' by 9 commits.
  (use "git push" to publish your local commits)
[
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:   test.txt

no changes added to commit (use "git add" and/or "git commit -a")
(base) rajats-mbp:Exercise_6 rajatdua$ git add test.txt
(base) rajats-mbp:Exercise_6 rajatdua$ git status
On branch main
Your branch is ahead of 'origin/main' by 9 commits.
  (use "git push" to publish your local commits)
[
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    modified:   test.txt

(base) rajats-mbp:Exercise_6 rajatdua$ git reset test.txt
Unstaged changes after reset:
M       Exercise_6/test.txt
(base) rajats-mbp:Exercise_6 rajatdua$ git status
On branch main
Your branch is ahead of 'origin/main' by 9 commits.
  (use "git push" to publish your local commits)
[
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:   test.txt

no changes added to commit (use "git add" and/or "git commit -a")
```

Q7. Exercise 7: Reset Previous Commit (Hard Reset).

Task:

- Initialize your Repository: `git init Exercise-7`.
- Do some series of commits.
- Use `git reset` command to reset one of the commit without keeping changes.

```
[(base) rajats-mbp:InnovationPython_Rajat rajatdua$ mkdir Exercise_7
[(base) rajats-mbp:InnovationPython_Rajat rajatdua$ cd Exercise_7
[(base) rajats-mbp:Exercise_7 rajatdua$ touch index.html test.txt
[(base) rajats-mbp:Exercise_7 rajatdua$ vi index.html
[(base) rajats-mbp:Exercise_7 rajatdua$ vi test.txt
[(base) rajats-mbp:Exercise_7 rajatdua$ cat index.html
<!DOCTYPE html>
<html>
<body>

<h2>Image Size</h2>

<p>Here we use the style attribute to specify the width and height of an image:</p>



</body>
</html>
[(base) rajats-mbp:Exercise_7 rajatdua$ cat test.txt
  this file is made to test hard reset feature
[(base) rajats-mbp:Exercise_7 rajatdua$ cd ..
[(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git status
On branch main
Your branch is ahead of 'origin/main' by 9 commits.
  (use "git push" to publish your local commits)

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:   Exercise_6/test.txt

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    Exercise_7/

no changes added to commit (use "git add" and/or "git commit -a")
[(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git restore Exercise_6/test.txt
[(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git status
On branch main
Your branch is ahead of 'origin/main' by 9 commits.
  (use "git push" to publish your local commits)

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    Exercise_7/

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

```
[(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git add .
[(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git commit -m "added two files in Exercise_7 folder"
[main dd810a5] added two files in Exercise_7 folder
 2 files changed, 13 insertions(+)
 create mode 100644 Exercise_7/index.html
 create mode 100644 Exercise_7/test.txt
[(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git status
On branch main
Your branch is ahead of 'origin/main' by 10 commits.
  (use "git push" to publish your local commits)

nothing to commit, working tree clean
[(base) rajats-mbp:InnovationPython_Rajat rajatdua$ cd Exercise_7
[(base) rajats-mbp:Exercise_7 rajatdua$ ls
index.html      test.txt
[(base) rajats-mbp:Exercise_7 rajatdua$ vi test.txt
[(base) rajats-mbp:Exercise_7 rajatdua$ cat test.txt
this file is made to test hard reset feature
this line is to check hard reset feature
[(base) rajats-mbp:Exercise_7 rajatdua$ git add test.txt
[(base) rajats-mbp:Exercise_7 rajatdua$ git status
On branch main
Your branch is ahead of 'origin/main' by 10 commits.
  (use "git push" to publish your local commits)

Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    modified:   test.txt

[(base) rajats-mbp:Exercise_7 rajatdua$ git commit -m "modified test.txt"
[main 686e1ae] modified test.txt
 1 file changed, 2 insertions(+), 1 deletion(-)
[(base) rajats-mbp:Exercise_7 rajatdua$ git log --oneline
686e1ae (HEAD -> main) modified test.txt
dd810a5 added two files in Exercise_7 folder
151f573 made changes to Exercise_6/test.txt
42934ea added random files
9e1a5d3 random files added to the exercise_5 folder.
8926433 added .gitignore file to the Exercise_4 folder in repo
38f1439 Adding index.html and about.html.
64b760d Adding index.html.
150ada0 File index.html added.
faaf3df Initial Message.
d1e6624 Initial Message.
e70069d (origin/main, origin/HEAD) Changes made to README.md
```

```
9e7bf72 Initial commit
(base) rajats-mbp:Exercise_7 rajatdua$ git revert HEAD
[main 6843de3] Revert "modified test.txt"
 1 file changed, 1 insertion(+), 2 deletions(-)
(base) rajats-mbp:Exercise_7 rajatdua$ git log --oneline
6843de3 (HEAD -> main) Revert "modified test.txt"
686e1ae modified test.txt
dd810a5 added two files in Exercise_7 folder
151f573 made changes to Exercise_6/test.txt
42934ea added random files
9e1a5d3 random files added to the exercise_5 folder.
8926433 added .gitignore file to the Exercise_4 folder in repo
38f1439 Adding index.html and about.html.
64b760d Adding index.html.
150ada0 File index.html added.
faaf3df Initial Message.
d1e6624 Initial Message.
e70069d (origin/main, origin/HEAD) Changes made to README.md
9e7bf72 Initial commit
(base) rajats-mbp:Exercise_7 rajatdua$ git status
On branch main
Your branch is ahead of 'origin/main' by 12 commits.
  (use "git push" to publish your local commits)

nothing to commit, working tree clean
```

Q8. Exercise 8: Merge branch (No Conflicts).

Task:

- Initialize your Repository: git init Exercise-8
- Create index.html file add some code.
- Make Commit.
- Create new branch from master branch with name my-feature.
- Add about-us.html file with code and commit changes in my-feature branch.
- Now checkout master branch.
- Merge my-feature branch into master.

```
[(base) rajats-mbp:InnovationPython_Rajat rajatdua$ mkdir Exercise_8
[(base) rajats-mbp:InnovationPython_Rajat rajatdua$ cd Exercise_8
[(base) rajats-mbp:Exercise_8 rajatdua$ touch index.html
[(base) rajats-mbp:Exercise_8 rajatdua$ ls
index.html
[(base) rajats-mbp:Exercise_8 rajatdua$ vi index.html
[(base) rajats-mbp:Exercise_8 rajatdua$ cd ..
[(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git status
On branch main
Your branch is ahead of 'origin/main' by 12 commits.
  (use "git push" to publish your local commits)

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    Exercise_8/

nothing added to commit but untracked files present (use "git add" to track)
[(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git add .
[(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git status
On branch main
Your branch is ahead of 'origin/main' by 12 commits.
  (use "git push" to publish your local commits)

Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   Exercise_8/index.html

[(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git commit -m "Added index.html in Exercise_8 folder"
[main a0b086d] Added index.html in Exercise_8 folder
  1 file changed, 12 insertions(+)
   create mode 100644 Exercise_8/index.html
[(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git status
[On branch main
Your branch is ahead of 'origin/main' by 13 commits.
  (use "git push" to publish your local commits)

nothing to commit, working tree clean
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git log --oneline
[a0b086d (HEAD -> main)] Added index.html in Exercise_8 folder
6843de3 Revert "modified test.txt"
686e1ae modified test.txt
dd810a5 added two files in Exercise_7 folder
151f573 made changes to Exercise_6/test.txt
42934ea added random files
9e1a5d3 random files added to the exercise_5 folder.
8926433 added .gitignore file to the Exercise_4 folder in repo
38f1439 Adding index.html and about.html.
64b760d Adding index.html.
150ada0 File index.html added.
faaf3df Initial Message.
d1e6624 Initial Message.
e70069d (origin/main, origin/HEAD) Changes made to README.md
9e7bf72 Initial commit
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git branch
[* main
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git branch my-feature
[(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git branch
[* main
  my-feature
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git checkout my-feature
[M          .DS_Store
Switched to branch 'my-feature'
```

```
(base) rajats-mbp:Exercise_8 rajatdua$ git branch
* main
* my-feature
(base) rajats-mbp:Exercise_8 rajatdua$ touch about-us.html
((base) rajats-mbp:Exercise_8 rajatdua$ ls
[about-us.html index.html
(base) rajats-mbp:Exercise_8 rajatdua$ vi about-us.html
(base) rajats-mbp:Exercise_8 rajatdua$ cd ..
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git status
[On branch my-feature
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:   .DS_Store

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    Exercise_8/about-us.html

no changes added to commit (use "git add" and/or "git commit -a")
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git add .
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git status
On branch my-feature
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    modified:   .DS_Store
    new file:   Exercise_8/about-us.html

(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git commit -m "Added about-us.html in Exercise_8 folder for my-feature branch"
[master 717b94f] Added about-us.html in Exercise_8 folder for my-feature branch
 2 files changed, 12 insertions(+)
[ create mode 100644 Exercise_8/about-us.html
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git branch
* main
* my-feature
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git log --oneline
717b94f (HEAD -> my-feature) Added about-us.html in Exercise_8 folder for my-feature branch
[a0b086d (main)] Added index.html in Exercise_8 folder
6843de3 Revert "modified test.txt"
686e1ae modified test.txt
[dd810a5 added two files in Exercise_7 folder
151f573 made changes to Exercise_6/test.txt
42934ea added random files
9e1a5d3 random files added to the exercise_5 folder.
8926433 added .gitignore file to the Exercise_4 folder in repo
38f1439 Adding index.html and about.html.
64b760d Adding index.html.
150ada0 File index.html added.
faaf3df Initial Message.
d1e6624 Initial Message.
e70069d (origin/main, origin/HEAD) Changes made to README.md
9e7bf72 Initial commit
```

```
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git checkout main
Switched to branch 'main'
Your branch is ahead of 'origin/main' by 13 commits.
  (use "git push" to publish your local commits)
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git log --oneline
a0b086d (HEAD -> main) Added index.html in Exercise_8 folder
[6843de3] Revert "modified test.txt"
686e1ae modified test.txt
dd810a5 added two files in Exercise_7 folder
151f573 made changes to Exercise_6/test.txt
[42934ea] added random files
9e1a5d3 random files added to the exercise_5 folder.
8926433 added .gitignore file to the Exercise_4 folder in repo
38f1439 Adding index.html and about.html.
64b760d Adding index.html.
150ada0 File index.html added.
faaf3df Initial Message.
d1e6624 Initial Message.
e70069d (origin/main, origin/HEAD) Changes made to README.md
9e7bf72 Initial commit
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git merge my-feature
Updating a0b086d..717b94f
Fast-forward
  .DS_Store           | Bin 6148 -> 8196 bytes
  Exercise_8/about-us.html | 12 ++++++++-
  2 files changed, 12 insertions(+)
[ create mode 100644 Exercise_8/about-us.html
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git branch -d my-feature
Deleted branch my-feature (was 717b94f).
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git branch
* main
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git status
On branch main
[Your branch is ahead of 'origin/main' by 14 commits.
  (use "git push" to publish your local commits)
[
nothing to commit, working tree clean
[(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git log --oneline
717b94f (HEAD -> main) Added about-us.html in Exercise_8 folder for my-feature branch
a0b086d Added index.html in Exercise_8 folder
6843de3 Revert "modified test.txt"
686e1ae modified test.txt
dd810a5 added two files in Exercise_7 folder
[151f573] made changes to Exercise_6/test.txt
[42934ea] added random files
9e1a5d3 random files added to the exercise_5 folder.
8926433 added .gitignore file to the Exercise_4 folder in repo
38f1439 Adding index.html and about.html.
64b760d Adding index.html.
150ada0 File index.html added.
faaf3df Initial Message.
d1e6624 Initial Message.
e70069d (origin/main, origin/HEAD) Changes made to README.md
9e7bf72 Initial commit
```

Q9. Exercise 9: Merge branch (Conflicts).

Task:

- Initialize your Repository: `git init Exercise-9`
- Create `index.html` file add some code.
- Make Commit.
- Create new branch from master branch with name `my-feature`.
- Add `about-us.html` file with code

- Make changes in index.html
- Commit changes in my-feature branch.
- Now checkout master branch.
- Do some code changes in index.html
- Commit changes.
- Now merge my-feature branch into master.
- You will get conflicts for index.html file. Resolve conflict by selecting both changes for the same index.html file.

```
((base) rajats-mbp:InnovationPython_Rajat rajatdua$ mkdir Exercise_9
((base) rajats-mbp:InnovationPython_Rajat rajatdua$ cd Exercise_9
((base) rajats-mbp:Exercise_9 rajatdua$ touch index.html
((base) rajats-mbp:Exercise_9 rajatdua$ vi index.html
<!DOCTYPE html>
<html>
<body>

<h2>Image Size</h2>

<p>Here we use the style attribute to specify the width and height of an image:</p>



</body>
</html>
(base) rajats-mbp:Exercise_9 rajatdua$ cd ..
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git status
[On branch main
Your branch is ahead of 'origin/main' by 14 commits.
  (use "git push" to publish your local commits)

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    Exercise_9/

nothing added to commit but untracked files present (use "git add" to track)
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git add .
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git status
[On branch main
Your branch is ahead of 'origin/main' by 14 commits.
  (use "git push" to publish your local commits)

Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    new file:   Exercise_9/index.html

(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git commit -m "Added index.html in Ecercise_9 folder."
[main 41b9803] Added index.html in Ecercise_9 folder.
1 file changed, 12 insertions(+)
  create mode 100644 Exercise_9/index.html
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git checkout -b my-feature
Switched to a new branch 'my-feature'
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git branch
* main
  my-feature
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ cd Exercise_9
(base) rajats-mbp:Exercise_9 rajatdua$ touch about-us.html
(base) rajats-mbp:Exercise_9 rajatdua$ vi about-us.html
```

```

[(base) rajats-mbp:Exercise_9 rajatdua$ cat about-us.html
[<!DOCTYPE html>
[<html>
[<body>

<h2>Image Size</h2>

<p>Here we specify the width and height of an image with the width and height attributes:</p>



</body>
</html>
(base) rajats-mbp:Exercise_9 rajatdua$ vi index.html
(base) rajats-mbp:Exercise_9 rajatdua$ cat index.html
<!DOCTYPE html>
<html>
[<body>
[
<h2>Image Size</h2>

<p>Here we use the style attribute to specify the dimensions of an image:</p>



</body>
</html>
(base) rajats-mbp:Exercise_9 rajatdua$ cd ..
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git status
On branch my-feature
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:   Exercise_9/index.html

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    Exercise_9/about-us.html

no changes added to commit (use "git add" and/or "git commit -a")
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git add .
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git status
On branch my-feature
Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
[     new file:   Exercise_9/about-us.html
[     modified:   Exercise_9/index.html

(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git commit -m "Added about-us.html and modified index.html in Exercise_9 folder for my-feature branch.
[my-feature 415363f] Added about-us.html and modified index.html in Exercise_9 folder for my-feature branch.
2 files changed, 14 insertions(+), 2 deletions(-)
 create mode 100644 Exercise_9/about-us.html
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git checkout main
Switched to branch 'main'
Your branch is ahead of 'origin/main' by 15 commits.
  (use "git push" to publish your local commits)
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git branch
* main
  my-feature
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ cd Exercise_9
(base) rajats-mbp:Exercise_9 rajatdua$ vi index.html
(base) rajats-mbp:Exercise_9 rajatdua$ cat index.html
<!DOCTYPE html>
[<html>
[<body>

<h2>Image Size</h2>
[
<p>Here we use the style attribute to specify the dimensions, that is, width and height of an image:</p>



</body>
</html>

```

```
(base) rajats-mbp:Exercise_9 rajatdua$ cd ..
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git status
On branch main
Your branch is ahead of 'origin/main' by 15 commits.
  (use "git push" to publish your local commits)

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:   Exercise_9/index.html
[

no changes added to commit (use "git add" and/or "git commit -a")
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git add .
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git status
On branch main
Your branch is ahead of 'origin/main' by 15 commits.
  (use "git push" to publish your local commits)

Changes to be committed:
  (use "git restore --staged <file>..." to unstage)
    modified:   Exercise_9/index.html
[     -
[

!(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git commit -m "Modified index.html file in Exercise_9 folder in main branch."
[main dacb2c0] Modified index.html file in Exercise_9 folder in main branch.
  1 file changed, 1 insertion(+), 1 deletion(-)
```

```
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git merge my-feature
Auto-merging Exercise_9/index.html
[CONFLICT (content): Merge conflict in Exercise_9/index.html
Automatic merge failed; fix conflicts and then commit the result.
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git mergetool

[This message is displayed because 'merge.tool' is not configured.
See 'git mergetool --tool-help' or 'git help config' for more details.
'git mergetool' will now attempt to use one of the following tools:
tortoisemerge emerge vimdiff nvimdiff
[Merging:
Exercise_9/index.html

Normal merge conflict for 'Exercise_9/index.html':
[ {local}: modified file
{remote}: modified file
Hit return to start merge resolution tool (vimdiff):
4 files to edit
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git status
On branch main
Your branch is ahead of 'origin/main' by 16 commits.
(use "git push" to publish your local commits)

All conflicts fixed but you are still merging.
(use "git commit" to conclude merge)

Changes to be committed:
      new file:   Exercise_9/about-us.html
[      modified:   Exercise_9/index.html

Untracked files:
  (use "git add <file>..." to include in what will be committed)
    Exercise_9/index.html.orig

(base) rajats-mbp:InnovationPython_Rajat rajatdua$ rm -rf Exercise_9/index.html.orig
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git status
On branch main
Your branch is ahead of 'origin/main' by 16 commits.
(use "git push" to publish your local commits)

All conflicts fixed but you are still merging.
(use "git commit" to conclude merge)

Changes to be committed:
[      new file:   Exercise_9/about-us.html
      modified:   Exercise_9/index.html
[

(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git commit -m "merge conflict resolved"
[main 4881264] merge conflict resolved
```

```
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git status
On branch main
Your branch is ahead of 'origin/main' by 18 commits.
  (use "git push" to publish your local commits)

nothing to commit, working tree clean
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ git log --oneline
4881264 (HEAD -> main) merge conflict resolved
dacb2c0 Modified index.html file in Exercise_9 folder in main branch.
[415363f (my-feature)] Added about-us.html and modified index.html in Exercise_9 folder for my-feature branch.
41b9803 Added index.html in Ecercise_9 folder.
717b94f Added about-us.html in Exercise_8 folder for my-feature branch
[a0b086d] Added index.html in Exercise_8 folder
6843de3 Revert "modified test.txt"
686e1ae modified test.txt
dd810a5 added two files in Exercise_7 folder
151f573 made changes to Exercise_6/test.txt
42934ea added random files
[9e1a5d3] random files added to the exercise_5 folder.
8926433 added .gitignore file to the Exercise_4 folder in repo
38f1439 Adding index.html and about.html.
64b760d Adding index.html.
150ada0 File index.html added.
faaf3df Initial Message.
d1e6624 Initial Message.
e70069d (origin/main, origin/HEAD) Changes made to README.md
9e7bf72 Initial commit
(base) rajats-mbp:InnovationPython_Rajat rajatdua$ cat Exercise_9/index.html
<!DOCTYPE html>
<html>
<body>

<h2>Image Size</h2>

<p>Here we use the style attribute to specify the dimensions, that is, width and height of an image:</p>



</body>
</html>
```