

Git/Vim Assignments

Assignment 1: (Complex)

1. Commit a repository with a single file change.

```
PS E:\Ramana\EmbedUR\Assignment> cd sample_repo
PS E:\Ramana\EmbedUR\Assignment\sample_repo> git init
Reinitialized existing Git repository in E:/Ramana/EmbedUR/Assignment/sample_repo/.git/
PS E:\Ramana\EmbedUR\Assignment\sample_repo> git add README.md
PS E:\Ramana\EmbedUR\Assignment\sample_repo> 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)
        modified:   README.md

PS E:\Ramana\EmbedUR\Assignment\sample_repo> git commit -m "Added sub heading"
[main 00e2b14] Added sub heading
1 file changed, 6 insertions(+), 1 deletion(-)

PS E:\Ramana\EmbedUR\Assignment\sample_repo> git log
commit 00e2b14b5019493da81a3d933a792550347ac2df (HEAD -> main)
Author: ramana0110 <ramanasrivats@gmail.com>
Date: Thu Jun 6 20:38:49 2024 +0530

    Added sub heading
```

2. Create 2 new directories in local PC and clone the repository on both directories.

```
Initial commit
PS E:\Ramana\EmbedUR\Assignment\sample_repo> cd E:\Ramana\EmbedUR\Assignment\directory1
PS E:\Ramana\EmbedUR\Assignment\directory1> git clone https://github.com/ramana0110/sample_repo.git
Cloning into 'sample_repo'...
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
Receiving objects: 100% (3/3), done.
PS E:\Ramana\EmbedUR\Assignment\directory1> cd E:\Ramana\EmbedUR\Assignment\directory2
PS E:\Ramana\EmbedUR\Assignment\directory2> git clone https://github.com/ramana0110/sample_repo.git
Cloning into 'sample_repo'...
remote: Enumerating objects: 3, done.
remote: Counting objects: 100% (3/3), done.
remote: Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
Receiving objects: 100% (3/3), done.
```

3. Make changes in one of the directories and commit and merge the changes.

```
PS E:\Ramana\EmbedUR\Assignment\directory2> cd E:\Ramana\EmbedUR\Assignment\directory1
PS E:\Ramana\EmbedUR\Assignment\directory1> git add README.md
fatal: pathspec 'README.md' did not match any files
PS E:\Ramana\EmbedUR\Assignment\directory1> cd E:\Ramana\EmbedUR\Assignment\directory1\sample_repo
PS E:\Ramana\EmbedUR\Assignment\directory1\sample_repo> git add README.md
PS E:\Ramana\EmbedUR\Assignment\directory1\sample_repo> 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)
        modified:   README.md

PS E:\Ramana\EmbedUR\Assignment\directory1\sample_repo> git commit -m "Added text"
[main 2babd4e] Added text
1 file changed, 2 insertions(+), 1 deletion(-)
```

```
PS E:\Ramana\EmbedUR\Assignment\directory1\sample_repo> git push origin main
info: please complete authentication in your browser...
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Writing objects: 100% (3/3), 261 bytes | 261.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/ramana0110/sample_repo.git
   bf61380..2babd4e  main -> main
PS E:\Ramana\EmbedUR\Assignment\directory1\sample_repo> cd E:\Ramana\EmbedUR\Assignment\directory2\sample_repo
PS E:\Ramana\EmbedUR\Assignment\directory2\sample_repo> git pull origin main
remote: Enumerating objects: 5, done.
remote: Counting objects: 100% (5/5), done.
remote: Total 3 (delta 0), reused 3 (delta 0), pack-reused 0
Unpacking objects: 100% (3/3), 241 bytes | 48.00 KiB/s, done.
From https://github.com/ramana0110/sample_repo
 * branch            main       -> FETCH_HEAD
   bf61380..2babd4e  main       -> origin/main
Updating bf61380..2babd4e
Fast-forward
 README.md | 3 ++-
 1 file changed, 2 insertions(+), 1 deletion(-)
```

```
PS E:\Ramana\EmbedUR\Assignment\directory2\sample_repo> git log
commit 2babd4e12986f4188da895156f7b43f17a382810 (HEAD -> main, origin/main, origin/HEAD)
Author: ramana0110 <ramanasrivats@gmail.com>
Date: Thu Jun 6 21:11:17 2024 +0530

    Added text

commit bf61380f605671a4d30550199d48adc87ed0b25a
Author: ramana0110 <109732758+ramana0110@users.noreply.github.com>
Date: Thu Jun 6 20:10:51 2024 +0530

    Initial commit
```

4. Parallely make a change in the same file in another directory and when the changes are pushed, there should be merge conflict noticed which should be resolved and pushed changes again.

```
PS E:\Ramana\EmbedUR\Assignment\directory1\sample_repo> cd E:\Ramana\EmbedUR\Assignment\directory1
PS E:\Ramana\EmbedUR\Assignment\directory1> git clone https://github.com/ramana0110/sample_repo.git
Cloning into 'sample_repo'...
remote: Enumerating objects: 12, done.
remote: Counting objects: 100% (12/12), done.
remote: Compressing objects: 100% (4/4), done.
remote: Total 12 (delta 0), reused 6 (delta 0), pack-reused 0
Receiving objects: 100% (12/12), done.
PS E:\Ramana\EmbedUR\Assignment\directory1> cd E:\Ramana\EmbedUR\Assignment\directory2
PS E:\Ramana\EmbedUR\Assignment\directory2> git clone https://github.com/ramana0110/sample_repo.git
Cloning into 'sample_repo'...
remote: Enumerating objects: 12, done.
remote: Counting objects: 100% (12/12), done.
remote: Compressing objects: 100% (4/4), done.
remote: Total 12 (delta 0), reused 6 (delta 0), pack-reused 0
Receiving objects: 100% (12/12), done.
PS E:\Ramana\EmbedUR\Assignment\directory2> cd E:\Ramana\EmbedUR\Assignment\directory1\sample_repo
PS E:\Ramana\EmbedUR\Assignment\directory1\sample_repo> git add README.md
PS E:\Ramana\EmbedUR\Assignment\directory1\sample_repo> git commit -m "Added 1"
[main a97339f] Added 1
 1 file changed, 1 insertion(+), 1 deletion(-)
PS E:\Ramana\EmbedUR\Assignment\directory1\sample_repo> git push origin main
Enumerating objects: 5, done.
Counting objects: 100% (5/5), done.
Writing objects: 100% (3/3), 261 bytes | 261.00 KiB/s, done.
Total 3 (delta 0), reused 0 (delta 0), pack-reused 0
To https://github.com/ramana0110/sample_repo.git
e5154cf..a97339f  main -> main

commit a97339fda3e03ce42329c50f0a7a59fe89aaa8a0 (HEAD -> main, origin/main, origin/HEAD)
Author: ramana0110 <ramanasrivats@gmail.com>
Date:   Fri Jun 7 08:43:00 2024 +0530

    Added 1

PS E:\Ramana\EmbedUR\Assignment\directory1\sample_repo> cd E:\Ramana\EmbedUR\Assignment\directory2\sample_repo
PS E:\Ramana\EmbedUR\Assignment\directory2\sample_repo> git add README.md
PS E:\Ramana\EmbedUR\Assignment\directory2\sample_repo> git commit -m "Added 2"
[main 117d38b] Added 2
 1 file changed, 1 insertion(+), 1 deletion(-)
PS E:\Ramana\EmbedUR\Assignment\directory2\sample_repo> git push origin main
To https://github.com/ramana0110/sample_repo.git
! [rejected]        main -> main (fetch first)
error: failed to push some refs to 'https://github.com/ramana0110/sample_repo.git'
hint: Updates were rejected because the remote contains work that you do not
hint: have locally. This is usually caused by another repository pushing to
hint: the same ref. If you want to integrate the remote changes, use
hint: 'git pull' before pushing again.
hint: See the 'Note about fast-forwards' in 'git push --help' for details.
```

5. Merge the changes

```
PS E:\Ramana\EmbedUR\Assignment\directory1\sample_repo> cd E:\Ramana\EmbedUR\Assignment\directory2\sample_repo
PS E:\Ramana\EmbedUR\Assignment\directory2\sample_repo> git add README.md
PS E:\Ramana\EmbedUR\Assignment\directory2\sample_repo> git commit -m "Added 2"
[main 117d38b] Added 2
 1 file changed, 1 insertion(+), 1 deletion(-)
PS E:\Ramana\EmbedUR\Assignment\directory2\sample_repo> git push origin main
To https://github.com/ramana0110/sample_repo.git
 ! [rejected]        main -> main (fetch first)
error: failed to push some refs to 'https://github.com/ramana0110/sample_repo.git'
hint: Updates were rejected because the remote contains work that you do not
hint: have locally. This is usually caused by another repository pushing to
hint: the same ref. If you want to integrate the remote changes, use
hint: 'git pull' before pushing again.
hint: See the 'Note about fast-forwards' in 'git push --help' for details.
PS E:\Ramana\EmbedUR\Assignment\directory2\sample_repo> git pull origin main
remote: Enumerating objects: 5, done.
remote: Counting objects: 100% (5/5), done.
remote: Total 3 (delta 0), reused 3 (delta 0), pack-reused 0
Unpacking objects: 100% (3/3), 241 bytes | 34.00 KiB/s, done.
From https://github.com/ramana0110/sample_repo
 * branch            main      -> FETCH_HEAD
   e5154cf..a97339f  main      -> origin/main
Auto-merging README.md
CONFLICT (content): Merge conflict in README.md
Automatic merge failed; fix conflicts and then commit the result.
PS E:\Ramana\EmbedUR\Assignment\directory2\sample_repo> git add README.md
PS E:\Ramana\EmbedUR\Assignment\directory2\sample_repo> git commit -m "Current"
[main 2063136] Current
PS E:\Ramana\EmbedUR\Assignment\directory2\sample_repo> git add README.md
PS E:\Ramana\EmbedUR\Assignment\directory2\sample_repo> git commit -m "Current"
On branch main
Your branch is ahead of 'origin/main' by 2 commits.
(use "git push" to publish your local commits)

nothing to commit, working tree clean
PS E:\Ramana\EmbedUR\Assignment\directory2\sample_repo> git push origin main
Enumerating objects: 10, done.
Counting objects: 100% (10/10), done.
Delta compression using up to 12 threads
Compressing objects: 100% (3/3), done.
Writing objects: 100% (6/6), 579 bytes | 289.00 KiB/s, done.
Total 6 (delta 0), reused 2 (delta 0), pack-reused 0
To https://github.com/ramana0110/sample_repo.git
   a97339f..2063136  main -> main

commit 2063136c08153e38d1485fcd84e529b09be00154 (HEAD -> main, origin/main, origin/HEAD)
Merge: 117d38b a97339f
Author: ramana0110 <ramanasrivats@gmail.com>
Date:   Fri Jun 7 08:54:19 2024 +0530

    Current
```

Note:

Share the repository name along with the output/screen shot of the history of commands executed.

Capture the commit history after each commit.

Assignment 2: (Simple)

Create a story.txt file using below lines, save and quit the file

=====

The quick brown fox jumps over the lazy dog.

The quick brown fox is fast and clever.

Lazy dogs often lie in the sun all day.

The dog chased the fox through the field.

A quick fox can outsmart a lazy dog.

Dogs are loyal and friendly animals.

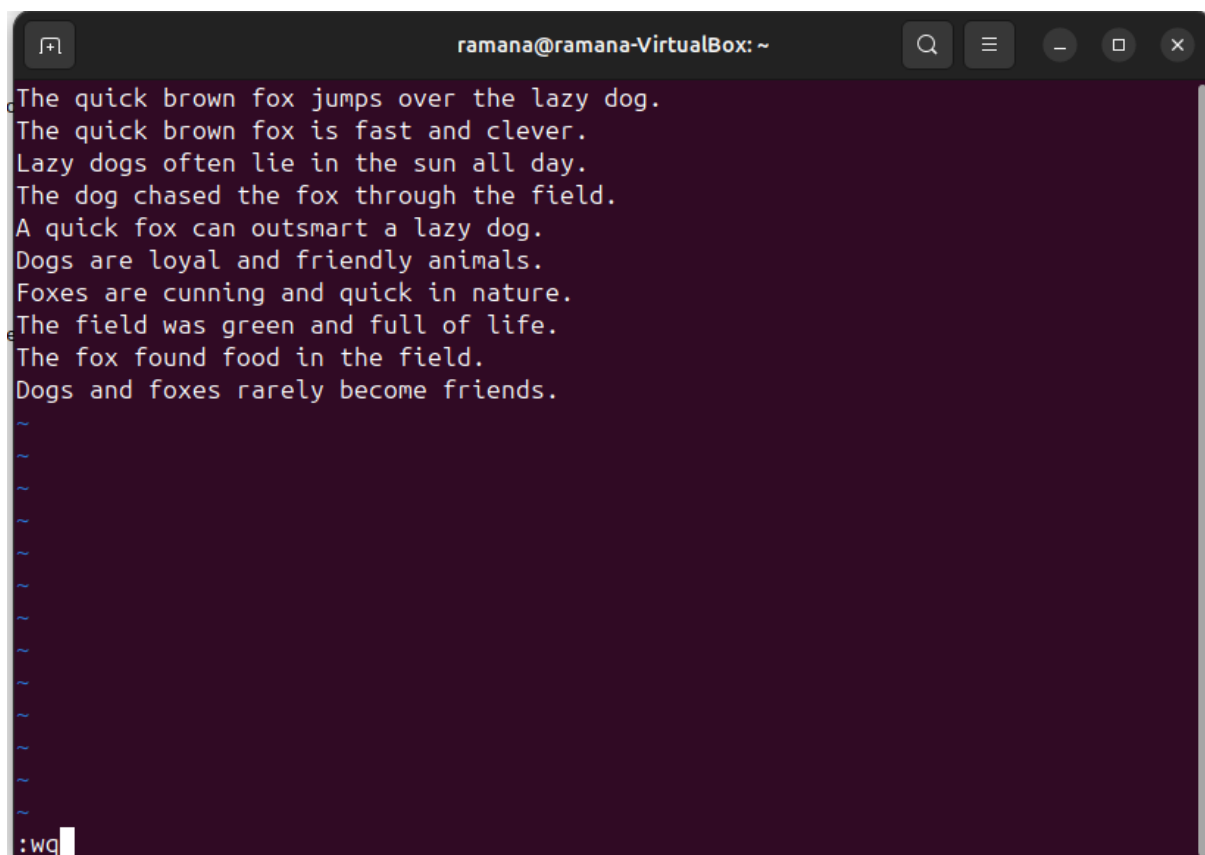
Foxes are cunning and quick in nature.

The field was green and full of life.

The fox found food in the field.

Dogs and foxes rarely become friends.

=====



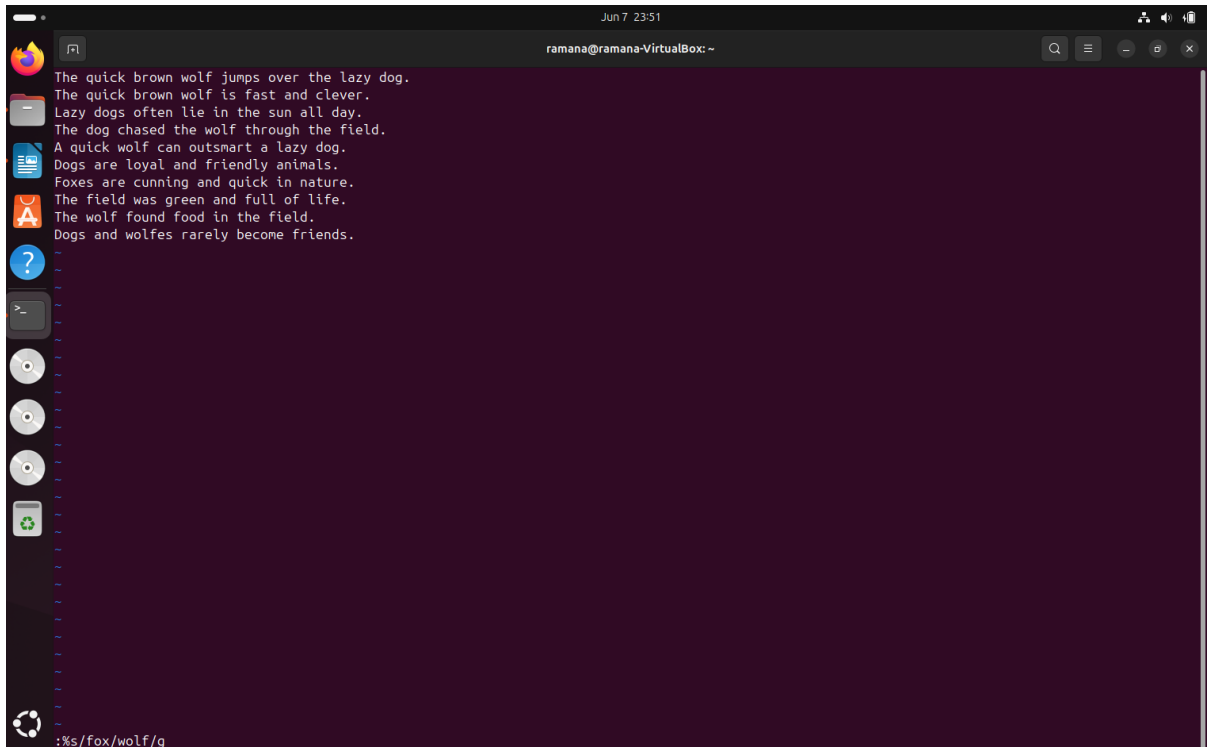
The screenshot shows a terminal window titled 'ramana@ramana-VirtualBox: ~'. The window contains the following text, which matches the content of the assignment: 'The quick brown fox jumps over the lazy dog.', 'The quick brown fox is fast and clever.', 'Lazy dogs often lie in the sun all day.', 'The dog chased the fox through the field.', 'A quick fox can outsmart a lazy dog.', 'Dogs are loyal and friendly animals.', 'Foxes are cunning and quick in nature.', 'The field was green and full of life.', 'The fox found food in the field.', 'Dogs and foxes rarely become friends.' Below this text, there are several tilde characters '~' and a cursor at the bottom left next to the text ':wq'. The terminal window has standard Linux window controls (search, menu, zoom, close) in the top right corner.

- Type vim in command line to open vim

- :edit story.txt to create a new file with the text
- After typing in the text click ESC and type :wq to write and quit

Open story.txt file and do the following,

1. Replace fox with wolf, save and quit the file. Open and see if the changes gets reflected.



The screenshot shows a terminal window titled 'ramana@ramana-VirtualBox: ~'. The terminal displays the following text:

```
The quick brown wolf jumps over the lazy dog.  
The quick brown wolf is fast and clever.  
Lazy dogs often lie in the sun all day.  
The dog chased the wolf through the field.  
A quick wolf can outsmart a lazy dog.  
Dogs are loyal and friendly animals.  
Foxes are cunning and quick in nature.  
The field was green and full of life.  
The wolf found food in the field.  
Dogs and wolves rarely become friends.
```

At the bottom of the terminal, the command `:%s/fox/wolf/g` is entered, which replaces all occurrences of 'fox' with 'wolf' in the file.

- To replace fox with wolf, go to command and type `:%s/fox/wolf/g`
- To save and quit click ESC and type `:wq`
- Then to again access it type `vi story.txt` in the command line

- To copy the line, move the cursor to the line to be copied and press yy in normal mode
- Then move the cursor to the last line and press o to create a new line and press p to paste it
- Then to save go to command mode and type :w

4. Replace all the vowels with letter "x" in the file.

```

ramana@ramana-VirtualBox: ~
Thx qxxck brxwn wxlf jxmps xvvr thx lxzy dxg.
Thx qxxck brxwn wxlf xs fxst xnd clxvvr.
Lxzy dxgs xftxn lxx xn thx sxn xll dxy.
Thx dxg chxsxd thx wxlf thrxxgh thx fxxld.
x qxxck wxlf cxn xxtsmxrt x lxzy dxg.
Dxgs xrx lxyxl xnd frxxndly xnxmxls.
Fxxxs xrx cxnnxng xnd qxxck xn ntxrx.
Thx fxxld wxs grxxn xnd fxll xf lxfx.
Thx wxlf fxxnd fxxd xn thx fxxld.
Dxgs xnd wxlfxs rxxly bxcxmx frxxnds.
x qxxck wxlf cxn xxtsmxrt x lxzy dxg.
~
~
~
~
~
~
~
:w

```

- To replace all the vowels, go to command line and type :%s/[aeiouAEIOU]/x/g

Note: Use only commands to do above operations and share the commands, screenshots of the file while and after the execution of the command.