Lab 4 Report

Muhammad Shafeen
Roll No: 22P-9278
Bachelor of Artificial Intelligence

September 13, 2024
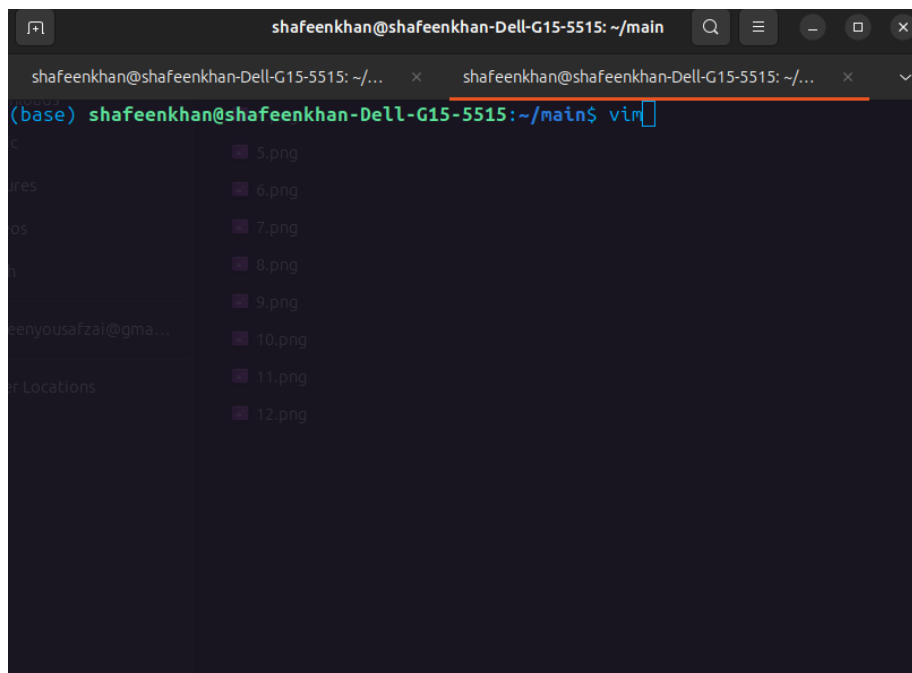
1 Introduction

This document is about Lab task 4 in Operating System Labs at FAST NUCES PWR taught by Sir.Saad Ahmad.
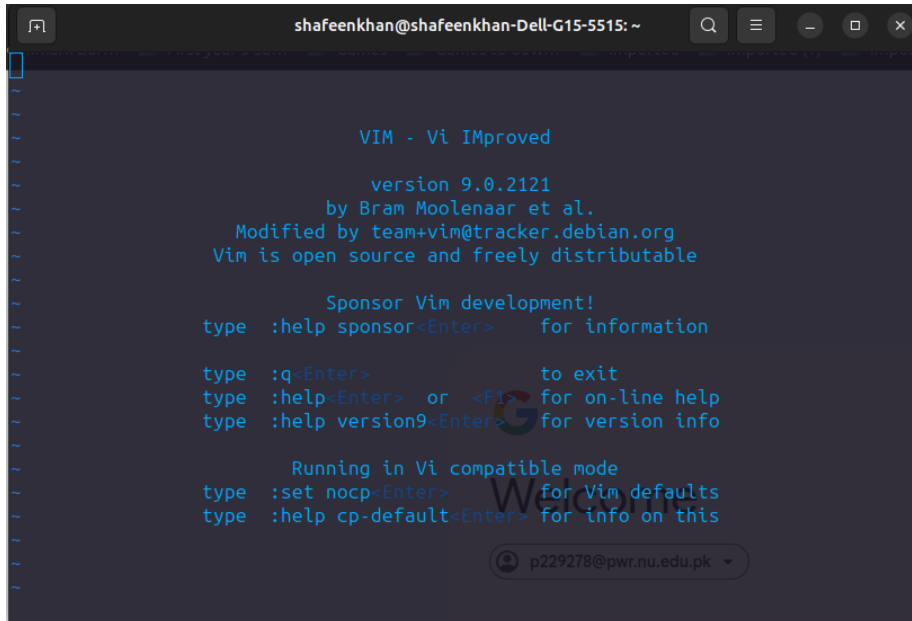
2 Commands and Outputs

2.1 Command: `vim`

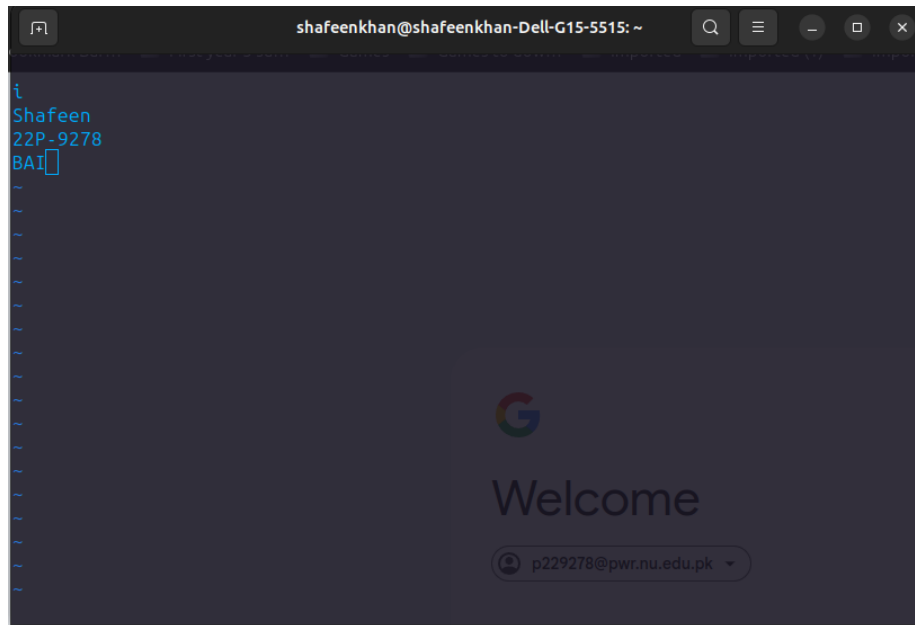Vim is a text editor used on terminal on linux .
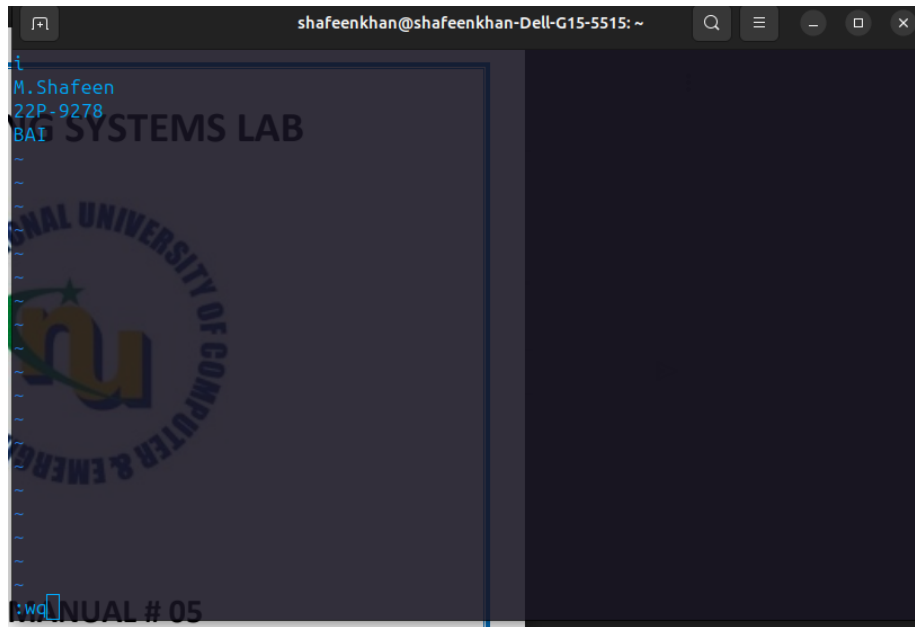
2.2

This is the interface of Vim

2.3   Command: `i`

Inside the Vim interface , Press i and enter " Insert " mode then press enter and type what you want to type
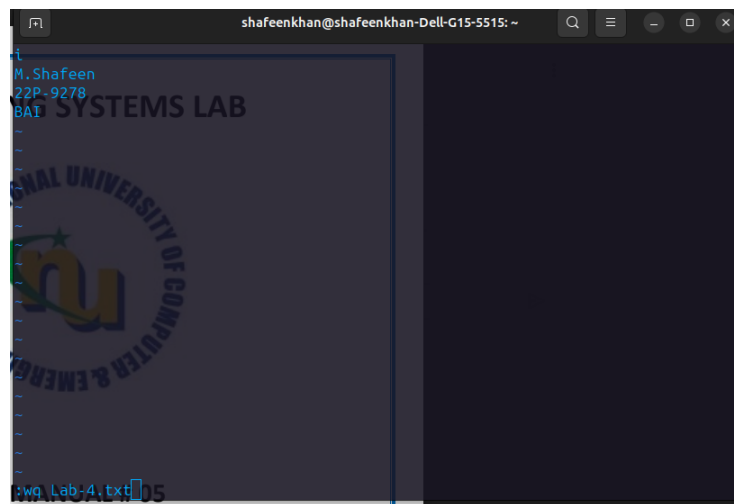
2.4   Command: `wq`

First press " Enter " after completing typing in text file then press " ESC " key on keyboard Then press " SHIFT + : " you will enter this small command line interface at the bottom By Pressing wq you will write the command followed by a name of the textfile and

2.5   Command: `wq`

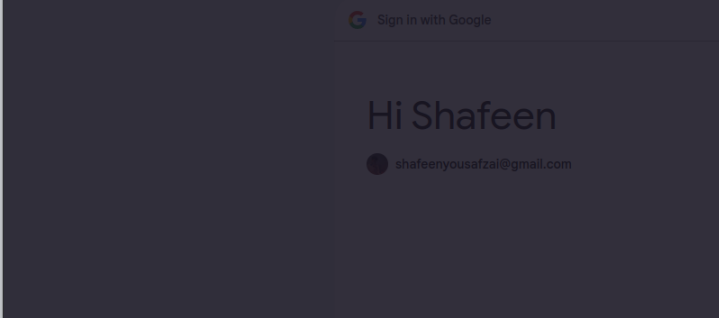By Pressing wq you will write the command followed by a name of the textfile and

2.6   File Created Through Vim

As you can see on the Screen on line number 7

2.7 Content in the File

2.8 Command: `ls -i`

This command shows the location of the files present in this directory

2.9 Command: `mkdir main` , `touch lab4.txt` , `nano lab4` , `cat lab4`

Creating Directory Creating file editing file showing content

2.10 Command: `ln lab4 lab4link`

Creating hard link for the file then editing soft link and showing the content of

hard link

2.11 Command: `rm lab4`

Checking if deleting the original file disables the link or not it does not as you can see

hard link

2.12   Command: `ln -s lab4link lab4linksoft`

making soft link of the file and link

```
(base) shafeenkhan@shafeenkhan-Dell-G15-5515:~/main$ ln -s lab4link lab4linksoft
(base) shafeenkhan@shafeenkhan-Dell-G15-5515:~/main$ ls
lab4link  lab4linksoft  newfile2soft
(base) shafeenkhan@shafeenkhan-Dell-G15-5515:~/main$ nano lab4linksoft
(base) shafeenkhan@shafeenkhan-Dell-G15-5515:~/main$ cat lab4linksoft
Muhammad Shafeen
22P-9278
Original
Making Changes through Soft link

(base) shafeenkhan@shafeenkhan-Dell-G15-5515:~/main$ cat lab4link
Muhammad Shafeen
22P-9278
Original
Making Changes through Soft link

hard link (base) shafeenkhan@shafeenkhan-Dell-G15-5515:~/main$
```

2.13   Command: `ln -s lab4 , ls -lh`

The second command shows teh files and all of its links

```
(base) shafeenkhan@shafeenkhan-Dell-G15-5515:~/main$ ls
lab4link  newfile2soft
(base) shafeenkhan@shafeenkhan-Dell-G15-5515:~/main$ ls -s lab4link lab4linksoft
ls: cannot access 'lab4linksoft': No such file or directory
4 lab4link
(base) shafeenkhan@shafeenkhan-Dell-G15-5515:~/main$ ln -s lab4link lab4linksoft
(base) shafeenkhan@shafeenkhan-Dell-G15-5515:~/main$ ls
lab4link  lab4linksoft  newfile2soft
(base) shafeenkhan@shafeenkhan-Dell-G15-5515:~/main$ rm lab4link
(base) shafeenkhan@shafeenkhan-Dell-G15-5515:~/main$ ls
lab4linksoft  newfile2soft
(base) shafeenkhan@shafeenkhan-Dell-G15-5515:~/main$ ls -lh
total 0
lrwxrwxrwx 1 shafeenkhan shafeenkhan 8 Sep 13 09:33 lab4linksoft -> lab4link
lrwxrwxrwx 1 shafeenkhan shafeenkhan 8 Sep 13 09:19 newfile2soft -> newfile2
hard link (base) shafeenkhan@shafeenkhan-Dell-G15-5515:~/main$
```

2.14   Command: `cat lab4linksoft`

showing that deleting the original file deletes the file for softlink as well

```
(base) shafeenkhan@shafeenkhan-Dell-G15-5515:~/main$ cat lab4linksoft
cat: lab4linksoft: No such file or directory
hard link (base) shafeenkhan@shafeenkhan-Dell-G15-5515:~/main$
```

2.15   Command: `Soft link working`

The second command shows teh files and all of its links

7

hard link

2.16   Command: `ln -s lab4` , `ls -lh`

The second command shows teh files and all of its links

hard link

2.17   Command: `ls /etc -lh more`

It represents all the files in etc

hard link

2.18   Command: `ls /etc -lh less`

It represents all the files in etc but in a scrollable interface

hard link

2.19   Command: `ls /etc -lh > temp.txt`

Save in temp.txt

hard link

2.20   Command: `less temp.txt`

Scrollable interface

hard link

2.21   Command: `find Desktop -name hello`

when in the parent folder you can searhc for a file in sub folder through this command

hard link

2.22   Command: `find / -name .pdf"`

this command finds the file with any extension of pdf

hard link

2.23   Command: `sudo find / -name prog`

Find files with pdf file extension and the paths

hard link

2.24   Command: `sudo find .  -name "*.txt"`

find all the files with extension of .txt and show its path in the current directory

hard link

2.25   Command: `locate *.pdf`

It will locate all the files with the extension .pdf

```
See 'snap info <snapname>' for additional versions.
(base) shafeenkhan@shafeenkhan-Dell-G15-5515:~/Desktop/main$ locate *.pdf
/home/shafeenkhan/.local/share/JetBrains/Toolbox/apps/clion/help/ReferenceCard.pdf
/home/shafeenkhan/.local/share/JetBrains/Toolbox/apps/clion/help/ReferenceCardForMac.pdf
/home/shafeenkhan/.local/share/JetBrains/Toolbox/apps/phpstorm/help/ReferenceCard.pdf
/home/shafeenkhan/.local/share/JetBrains/Toolbox/apps/phpstorm/help/ReferenceCardForMac.pdf
/home/shafeenkhan/.local/share/JetBrains/Toolbox/apps/pycharm-community/help/ReferenceCard.pdf
/home/shafeenkhan/.local/share/JetBrains/Toolbox/apps/pycharm-community/help/ReferenceCardForM
ac.pdf
/home/shafeenkhan/AL2002-Artificial-Intelligence---Lab/01-Lab/AI_Lab01.pdf
/home/shafeenkhan/AL2002-Artificial-Intelligence---Lab/01-Lab/AL2002_outline.pdf
/home/shafeenkhan/AL2002-Artificial-Intelligence---Lab/01-Lab/Lab_1_task.pdf
/home/shafeenkhan/AL2002-Artificial-Intelligence---Lab/02-Lab/AI_Lab 02.pdf
/home/shafeenkhan/AL2002-Artificial-Intelligence---Lab/02-Lab/JawadAhmed_20P-0165_BCS-6A.pdf
/home/shafeenkhan/AL2002-Artificial-Intelligence---Lab/03-Lab/AI_Lab 03.pdf
/home/shafeenkhan/AL2002-Artificial-Intelligence---Lab/03-Lab/JawadAhmed_20P-0165 (1).pdf
/home/shafeenkhan/AL2002-Artificial-Intelligence---Lab/04-Lab/JawadAhmed_20P-0165.pdf
/home/shafeenkhan/AL2002-Artificial-Intelligence---Lab/05-Lab/JawadAhmed_20P-0165.pdf
/home/shafeenkhan/AL2002-Artificial-Intelligence---Lab/06-Lab/AI_Lab 06.pdf
/home/shafeenkhan/AL2002-Artificial-Intelligence---Lab/06-Lab/JawadAhmed_20P-0165_Lab06_Task.p
df
/home/shafeenkhan/AL2002-Artificial-Intelligence---Lab/07-Lab/AI_Lab 07.pdf
/home/shafeenkhan/AL2002-Artificial-Intelligence---Lab/07-Lab/JawadAhmed_20P-0165.pdf
/home/shafeenkhan/AL2002-Artificial-Intelligence---Lab/08-Lab/AI_Lab 08.pdf
```

hard link