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I confirm that I understand my coursework needs to be submitted online via Google Classroom under the relevant module page before the deadline for my assignment to be accepted and marked. I am fully aware that late submissions will be treated as non-submission and a mark of zero will be awarded.

Table of contents

1.Introduction	4
2. Objectives	4
3. Required Tools and Concepts	4
4. Conclusion.....	7
5. References	8

Table of figures

Figure 1 Creating directory using "mkdir"	4
Figure 2 Changing directory 1level3.....	5
Figure 3 Creating text file Using command "cat"	5
Figure 4 Transferring the file from 1level3 to 1level3 with file1 and file to 2level3	5
Figure 5 Shifting the file from 1level3 to 4level3	5
Figure 6 Printing text using the echo command	5
Figure 7 Operating the commands a, d, g, l, r	6
Figure 8 Trying out commands like displaying access permissions and trying to read and write files	6
Figure 9 Removing access permissions, trying to read the file from 1level3 with the cat command, and so on	7

1.Introduction

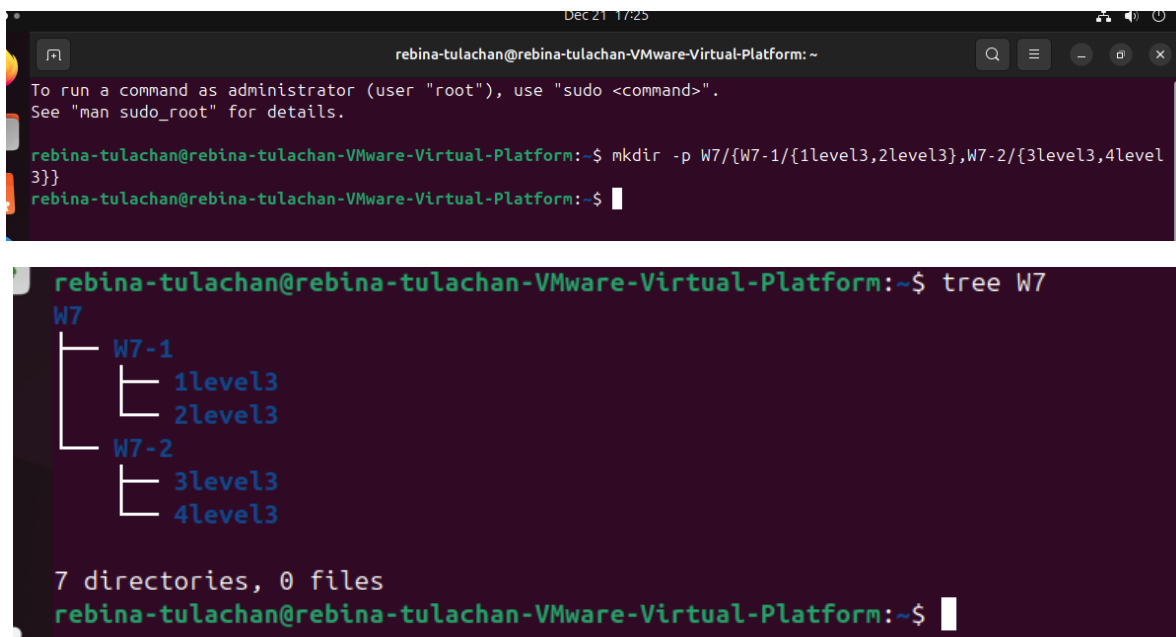
The purpose of this report is to provide an understanding of directories in the Linux Operating System. In this report, we learn how to create directories using the mkdir command. The mkdir command in Linux/Unix is a command-line utility that enables users to create new directories, with "mkdir" standing for "make directory" (William E. Shotts, 2009). We also explore how to modify file permissions and navigate directory structures. Additionally, this log covers tasks such as copying files from one directory to another, granting and removing access permissions, and adding text to files. We utilized the echo command to insert text into files. The echo command is used to display text, variables, and special characters to the standard output, typically the terminal (Sobell, 2006). The chmod command is employed to change file and directory permissions, with "chmod" being short for "change mode," and it is used to manage file system access permissions on Unix and Unix-like systems (Westfall, 2021).

2. Objectives

The main objective of this report is to become familiar with directory. Giving read and write permission to directory removing read and write permission. Adding text in file copying file form one directory to another directory.

3. Required Tools and Concepts

1. Create the directory structure using the "mkdir" command with relative pathnames from your home directory.



```
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform: ~  
To run a command as administrator (user "root"), use "sudo <command>".  
See "man sudo_root" for details.  
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~$ mkdir -p W7/{W7-1/{1level3,2level3},W7-2/{3level3,4level3}}  
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~$  
  
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~$ tree W7  
W7  
├── W7-1  
│   ├── 1level3  
│   └── 2level3  
└── W7-2  
    ├── 3level3  
    └── 4level3  
  
7 directories, 0 files  
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~$
```

Figure 1 Creating directory using "mkdir"

2. Navigate the 1level3 directory by moving back and forth using "..".

```
7 directories, 0 files
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~$ cd W7/W7-1/1level3/
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~/W7/W7-1/1level3$ cd ../../W7-2/4level3/
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~/W7/W7-2/4level3$
```

Figure 2 Changing directory 1level3

3. Change into the 1level3 directory and create a text file using the cat command.

```
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~/W7/W7-2/4level3$ cd ../../W7-1/1level3/
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~/W7/W7-1/1level3$ cat>file
This is my file.
^Z
[1]+  Stopped                  cat > file
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~/W7/W7-1/1level3$
```

Figure 3 Creating text file Using command "cat"

4. Copy the file from 1level3 to 1level3 with the name file1 and also copy it to 2level3.

```
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~/W7/W7-1/1level3$ cp file file1
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~/W7/W7-1/1level3$ ls
file file1
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~/W7/W7-1/1level3$ cp file ../2level3/
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~/W7/W7-1/1level3$ ls ../2level3/
file
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~/W7/W7-1/1level3$
```

Figure 4 Transferring the file from 1level3 to 1level3 with file1 and file to 2level3

5. Move the file from 1level3 to 4level3.

```
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~/W7/W7-1/1level3$ mv file ../../W7-2/4level3/
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~/W7/W7-1/1level3$ ls ../../W7-2/4level3/
file
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~/W7/W7-1/1level3$ ls
file1
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~/W7/W7-1/1level3$
```

Figure 5 Shifting the file from 1level3 to 4level3

6. Print text using the echo command.

```
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~/W7/W7-1/1level3$ echo -e "Hi everyone."
Hi everyone.
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~/W7/W7-1/1level3$ echo -e "This is me\n Rebina"
This is me
Rebina
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~/W7/W7-1/1level3$
```

Figure 6 Printing text using the echo command

7. Use the commands a, d, g, l, r.

```
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~/W7/W7-1/1level3$ ls -a
. . . file1
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~/W7/W7-1/1level3$ ls -d
.
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~/W7/W7-1/1level3$ ls -g
total 4
-rw-rw-r-- 1 rebina-tulachan 17 Dec 21 17:44 file1
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~/W7/W7-1/1level3$ ls -l
total 4
-rw-rw-r-- 1 rebina-tulachan rebina-tulachan 17 Dec 21 17:44 file1
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~/W7/W7-1/1level3$ ls -L
file1
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~/W7/W7-1/1level3$ ls -R
.:
file1
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~/W7/W7-1/1level3$
```

Figure 7 Operating the commands a, d, g, l, r

8. Set display access permissions for the file file1 in 1level3 and remove all access permissions for this file. Try to read and write this file using the cat command. Then, add read and write access permissions for yourself and display access permissions for this file, and attempt to read and write it using any utility.

```
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~/W7/W7-1/1level3$ cd ..
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~/W7/W7-1$ ls -l 1level3/
total 4
-rw-rw-r-- 1 rebina-tulachan rebina-tulachan 17 Dec 21 17:44 file1
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~/W7/W7-1$ chmod -rw 1level3/file1
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~/W7/W7-1$ ls -l 1level3/
total 4
----- 1 rebina-tulachan rebina-tulachan 17 Dec 21 17:44 file1
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~/W7/W7-1$ cat 1level3/file1
cat: 1level3/file1: Permission denied
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~/W7/W7-1$ cat>> 1level3/file1
bash: 1level3/file1: Permission denied
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~/W7/W7-1$ cat>>1level3/file1
bash: 1level3/file1: Permission denied
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~/W7/W7-1$ chmod u+rw 1level3/file1
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~/W7/W7-1$ ls -l 1level3/
total 4
-rw----- 1 rebina-tulachan rebina-tulachan 17 Dec 21 17:44 file1
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~/W7/W7-1$ cat 1level3/file1
This is my file.
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~/W7/W7-1$ cat>>1level3/file1
This is my second file.
^Z
[2]+  Stopped                  cat >> 1level3/file1
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~/W7/W7-1$
```

Figure 8 Trying out commands like displaying access permissions and trying to read and write files

9. Display access permissions for 1level3 and remove all access permissions for this directory. Show the access permissions for 1level3 and try to read a file from 1level3 using the cat command. Attempt to put a file into 1level3 using any

cat command. Finally, add read, write, and execute access permissions for yourself for the directory.

```
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~/W7/W7-1$ ls -l
total 8
drwxrwxr-x 2 rebina-tulachan rebina-tulachan 4096 Dec 21 17:50 1level3
drwxrwxr-x 2 rebina-tulachan rebina-tulachan 4096 Dec 21 17:48 2level3
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~/W7/W7-1$ chmod -rwx 1level3/
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~/W7/W7-1$ ls -l
total 8
d----- 2 rebina-tulachan rebina-tulachan 4096 Dec 21 17:50 1level3
drwxrwxr-x 2 rebina-tulachan rebina-tulachan 4096 Dec 21 17:48 2level3
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~/W7/W7-1$ cat 1level3/file1
cat: 1level3/file1: Permission denied
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~/W7/W7-1$ cat>>1level3/file1
bash: 1level3/file1: Permission denied
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~/W7/W7-1$ ls 1level3/
ls: cannot open directory '1level3/': Permission denied
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~/W7/W7-1$ chmod u+rwx 1level3/
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~/W7/W7-1$ ls -l
total 8
drwx----- 2 rebina-tulachan rebina-tulachan 4096 Dec 21 17:50 1level3
drwxrwxr-x 2 rebina-tulachan rebina-tulachan 4096 Dec 21 17:48 2level3
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~/W7/W7-1$ cat 1level3/file1
This is my file.
This is my second file.
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~/W7/W7-1$ cat>1level3/file1
This is my third file.
^Z
[3]+  Stopped                  cat > 1level3/file1
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~/W7/W7-1$ ls 1level3/
file1
rebina-tulachan@rebina-tulachan-VMware-Virtual-Platform:~/W7/W7-1$
```

Figure 9 Removing access permissions, trying to read the file from 1level3 with the cat command, and so on

4. Conclusion

To sum up, I have successfully created a directory in Linux. I have learned how to modify directories and manage access permissions. While working on this report, I encountered several challenges when copying files from one directory to another. Overall, I have gained an understanding of how to use Linux commands for managing files and directories.

5. References

Sobell, M. G., 2006. *A practical guide to Linux Commands, Editors and Shell Programming*. s.l.:s.n.

Westfall, J., 2021. *Basic Linux Administration via the Command line*.

William E. Shotts, J., 2009. *The Linux Command Line*. s.l.:s.n.