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G1

CS

Assignment 1

## **Components of Linux System?**

**Kernel**: is the core part of Linux. It is responsible for all major activities of this operating system. It consists of various modules and it interacts directly with the underlying hardware. Kernel provides the required abstraction to hide low level hardware details to system or application programs

**System Library**: System libraries are special functions or programs using which application programs or system utilities accesses Kernel's features. These libraries implement most of

the functionalities of the operating system and do not requires kernel module's code access rights.

**. *System Utility***: System Utility programs are responsible to do specialized, individual level task

***What are the most important subdirectories that you deal with them most of the time?***

**/root:** The home directory of the all-powerful root user

**/etc:** Generally, contains the Linux configuration files—files that control when and how programs start up

**/home:** The user's home directory

**/mnt:** Where other filesystems are attached or mounted to the filesystem

***/media:*** Where CDs and USB devices are usually attached or mounted to the filesystem

**/bin:** Where application binaries (the equivalent of executables in Microsoft Windows) reside

**/lib:** Where you'll find libraries (shared programs that are like Windows DLLs)

***Explain what are those commands do in***

***Linux?***

**Ls:** List all files and directories in the present working directory

**ls -R:** Lists file in sub-directories as well

**ls -a:** Lists hidden files as well

**cd ..:** Move one level up

**cd ~:** navigate to home directory

**cd /:** Move to the root directory

**cat file.txt**: Display the file content

**cat > file.txt**: create new file with name file

**Env**: Display all environment variables

**ssh username@ip-address or hostname**: login to remote linux

machine using ssh

**mkdir dirname**: creates a new directory in the working directory

with name dirname

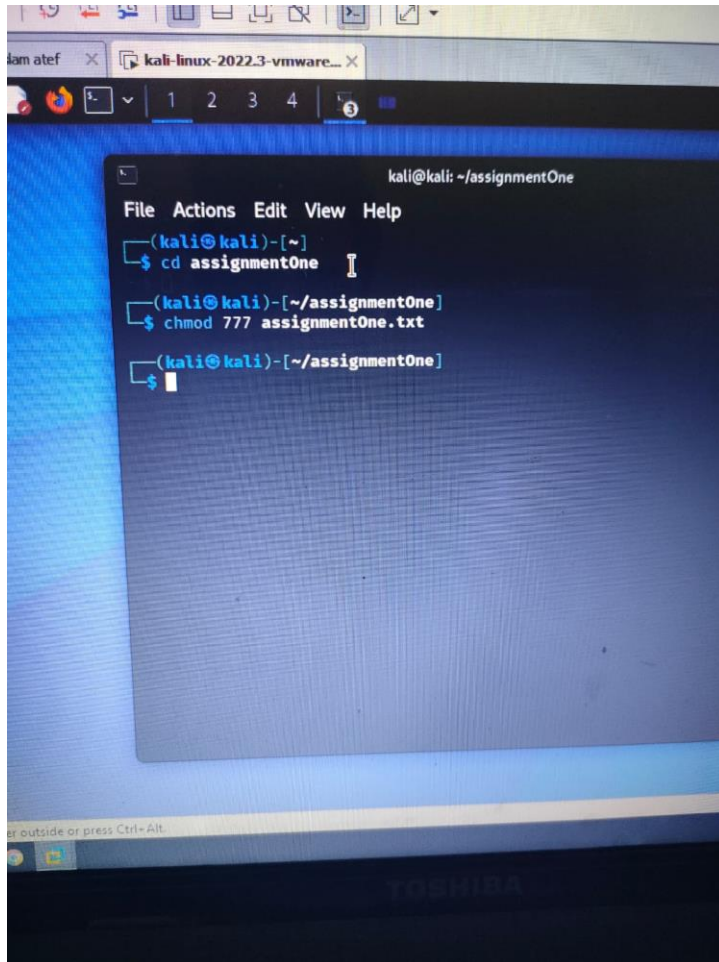
**chmod 777**: used to give ALL RIGHTS to the user, group, and

others

**rm filename**: delete file filename

**cat file1 file2 > file3**: merge file1 and file2 in file3

**mv file.txt newFile.txt**: rename the file file.txt to newFile.txt

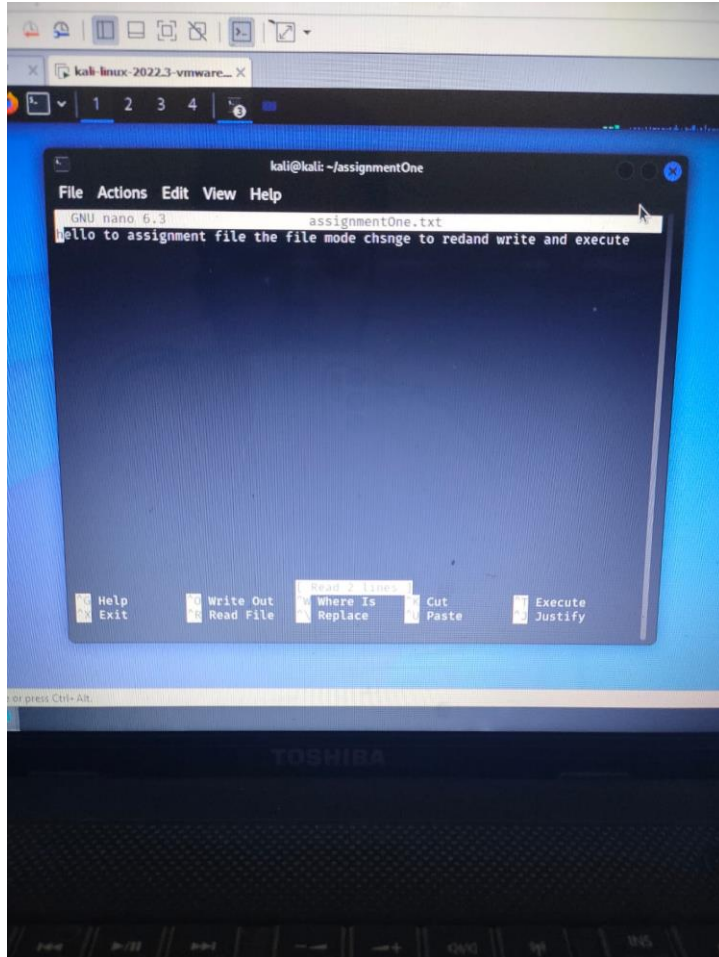
A photograph of a computer monitor displaying a Kali Linux terminal window. The terminal window has a title bar that reads "kali@kali: ~/assignmentOne". Inside the terminal, the user has navigated to the "assignmentOne" directory and changed the permissions of "assignmentOne.txt" to 777. The terminal output shows the following commands and their results:

```
kali@kali: ~/assignmentOne
File Actions Edit View Help
(kali@kali)-[~]
$ cd assignmentOne
(kali@kali)-[~/assignmentOne]
$ chmod 777 assignmentOne.txt
(kali@kali)-[~/assignmentOne]
$
```

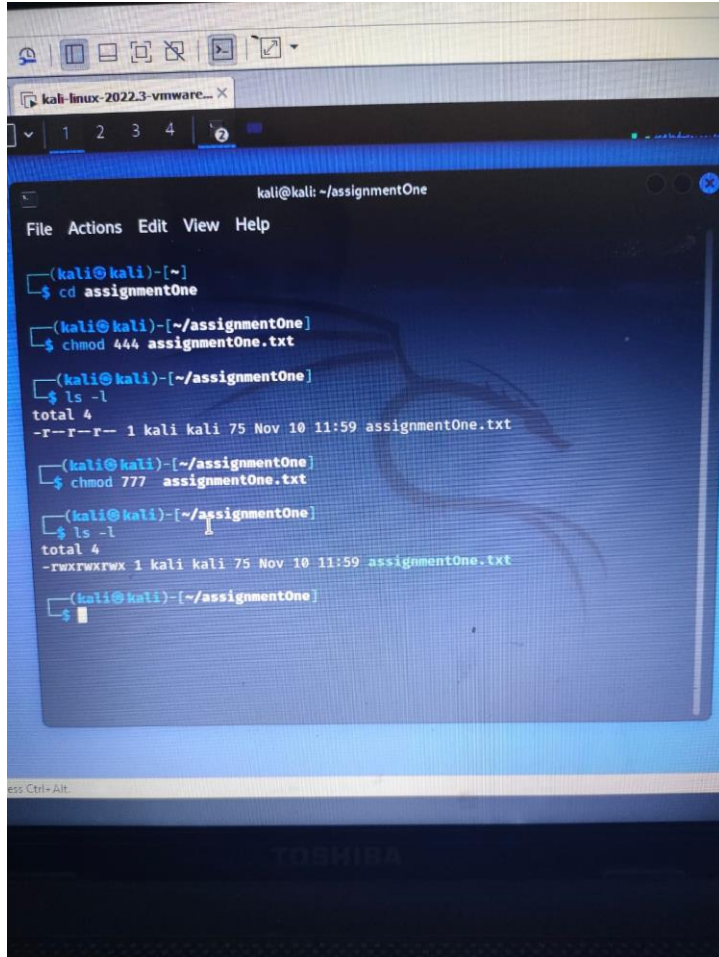
The terminal window is open on a desktop environment with a blue background. The monitor is a Toshiba, as indicated by the logo at the bottom. The terminal window is titled "kali@kali: ~/assignmentOne". The user has navigated to the "assignmentOne" directory and changed the permissions of "assignmentOne.txt" to 777. The terminal output shows the following commands and their results:

```
kali@kali: ~/assignmentOne
File Actions Edit View Help
(kali@kali)-[~]
$ cd assignmentOne
(kali@kali)-[~/assignmentOne]
$ chmod 777 assignmentOne.txt
(kali@kali)-[~/assignmentOne]
$
```

Here after u creat direction i Enter AssignmentOne directory and Create “Assignment Create  
“Assignment Change the file permissions to read, write and execute.txt” file.txt” file but from  
device not from terminal and Change the file permissions to read, write and execute



Open “AssignmentOne.txt” using nano command and write the following text “Hello to Assignment1 file the file mode changed to read, write and execute”



The screenshot shows a terminal window titled "kali@kali: ~/assignmentOne". The user has navigated to the "assignmentOne" directory and performed the following commands and outputs:

```
(kali@kali)-[~]  
$ cd assignmentOne  
(kali@kali)-~/assignmentOne  
$ chmod 444 assignmentOne.txt  
(kali@kali)-~/assignmentOne  
$ ls -l  
total 4  
-r--r--r-- 1 kali kali 75 Nov 10 11:59 assignmentOne.txt  
(kali@kali)-~/assignmentOne  
$ chmod 777 assignmentOne.txt  
(kali@kali)-~/assignmentOne  
$ ls -l  
total 4  
-rwxrwxrwx 1 kali kali 75 Nov 10 11:59 assignmentOne.txt  
(kali@kali)-~/assignmentOne  
$
```

Here Change the file mode to read only and Use the command that shows all files inside “Assignmentone” directory and their permissions and What are the permissions you see for “Assignmentone.txt” file, take screenshot and Back the permissions to “Assignemntone.txt” file like step 4, take screen shot to the permissions again