Files in Linux

Project description

In this scenario, the analyst team tasked me to execute some organizational tasks. The following are as follows:

1. Find and search les
2. Create and remove a directory
3. Move and remove a le
4. Create and edit a le

The operating system is Linux, indicating that the tasks require a command-line interface (Linux Bash shell) approach via Linux Terminal.

```
analyst@ec0337e39025:~$ ls
logs  project  reports  temp
analyst@ec0337e39025:~$ ls -la
total 44
drwxr-xr-x 6 analyst analyst 4096 Dec 20 06:40 .
drwxr-xr-x 1 root    root    4096 Dec 20 05:24 ..
-rw------- 1 analyst analyst    9 Dec 20 06:40 .bash_history
-rw-r--r-- 1 analyst analyst  220 Apr 18  2019 .bash_logout
-rw-r--r-- 1 analyst analyst 3597 Dec 20 05:24 .bashrc
-rw-r--r-- 1 analyst analyst 3597 Dec 20 05:24 .profile
drwxr-xr-x 2 analyst root    4096 Dec 20 05:24 logs
drwxr-xr-x 2 analyst root    4096 Dec 20 05:24 project
drwxr-xr-x 3 analyst root    4096 Dec 20 05:24 reports
drwxr-xr-x 2 analyst root    4096 Dec 20 05:24 temp
analyst@ec0337e39025:~$
```

Find and search les

The analyst team asked me to locate a log le whose lines contain the text string `error`. The le is `server_logs.txt`.within the directory `logs`. We can examine the actual lines within the le by using `cat server_logs.txt` a er cd `logs` / `cat /home/analyst/logs/server_logs.txt` command. The image below shows the entire lines of the text.

```
analyst@ec0337e39025:~/logs$ cat server_logs.txt
2022-09-28 13:55:55 info    User logged on successfully
2022-09-28 13:56:22 error   The password is incorrect
2022-09-28 13:56:48 warning The file storage is 75% full
2022-09-28 15:55:55 info    User logged on successfully
2022-09-28 15:56:22 error   The username is incorrect
2022-09-28 15:56:48 warning The file storage is 90% full
2022-09-28 16:55:55 info    User navigated to settings page
2022-09-28 16:56:22 error   The password is incorrect
2022-09-28 16:56:48 warning The current user's password expires in 15 days
2022-09-29 13:55:55 info    User logged on successfully
2022-09-29 13:56:22 error   An unexpected error occurred
2022-09-29 13:56:48 warning The file storage is 90% full
2022-09-29 15:55:55 info    User navigated to settings page
2022-09-29 15:56:22 error   Unauthorized access
2022-09-29 15:56:48 warning The file storage is 75% full
2022-09-29 16:55:55 info    User requested security reports
2022-09-29 16:56:22 error   Unauthorized access
2022-09-29 16:56:48 warning The current user's password expires in 15 daysanalyst@ec0337e3902
5:~/logs$
```

Now, let's lter this le so it will return a list of the lines that match the text string "error" in that le. The command `grep error server_logs.txt` will make it happen. As the result shows below, there are six lines that match the text string "error".

```
analyst@ec0337e39025:~/logs$ grep error server_logs.txt
2022-09-28 13:56:22 error   The password is incorrect
2022-09-28 15:56:22 error   The username is incorrect
2022-09-28 16:56:22 error   The password is incorrect
2022-09-29 13:56:22 error   An unexpected error occurred
2022-09-29 15:56:22 error   Unauthorized access
2022-09-29 16:56:22 error   Unauthorized access
```

The analyst team also would like me to locate les whose names contain `Q1` and `access` within the `users` directory. First, let's write the command `cd /home/analyst/reports/users` to enter `users` directory and `ls /ls -la` commands to view all the les within the directory.

```
analyst@ec0337e39025:~/logs$ cd /home/analyst/reports/users
analyst@ec0337e39025:~/reports/users$ ls
Q1_access.txt          Q2_access.txt          Q3_access.txt          Q4_access.txt
Q1_added_users.txt     Q2_added_users.txt     Q3_added_users.txt     Q4_added_users.txt
Q1_deleted_users.txt   Q2_deleted_users.txt   Q3_deleted_users.txt   Q4_deleted_users.txt
analyst@ec0337e39025:~/reports/users$ ls -la
total 56
drwxr-xr-x 2 analyst root 4096 Dec 20 05:24 .
drwxr-xr-x 3 analyst root 4096 Dec 20 05:24 ..
-rw-r--r-- 1 analyst root   85 Dec 20 05:24 Q1_access.txt
-rw-r--r-- 1 analyst root  251 Dec 20 05:24 Q1_added_users.txt
-rw-r--r-- 1 analyst root  219 Dec 20 05:24 Q1_deleted_users.txt
-rw-r--r-- 1 analyst root   86 Dec 20 05:24 Q2_access.txt
-rw-r--r-- 1 analyst root  251 Dec 20 05:24 Q2_added_users.txt
-rw-r--r-- 1 analyst root  220 Dec 20 05:24 Q2_deleted_users.txt
-rw-r--r-- 1 analyst root   85 Dec 20 05:24 Q3_access.txt
-rw-r--r-- 1 analyst root  251 Dec 20 05:24 Q3_added_users.txt
-rw-r--r-- 1 analyst root  220 Dec 20 05:24 Q3_deleted_users.txt
-rw-r--r-- 1 analyst root   86 Dec 20 05:24 Q4_access.txt
-rw-r--r-- 1 analyst root  251 Dec 20 05:24 Q4_added_users.txt
-rw-r--r-- 1 analyst root  220 Dec 20 05:24 Q4_deleted_users.txt
```

This command (`grep`) will allow us to nd the les whose names contain `Q1`:

ls | grep Q1 (make sure you're already in the directory) or ls /home/analyst/reports/users | grep Q1. There are three les associated with Q1.

```
analyst@ec0337e39025:~/reports/users$ ls | grep Q1
Q1_access.txt
Q1_added_users.txt
Q1_deleted_users.txt
```

Using the same logic, we can locate a le whose name contains access: ls | grep access (make sure you're already in the directory) or ls /home/analyst/reports/users | grep access As the result shows, there are four les associated with access.

```
analyst@ec0337e39025:~/reports/users$ ls | grep access
Q1_access.txt
Q2_access.txt
Q3_access.txt
Q4_access.txt
analyst@ec0337e39025:~/reports/users$
```

Last but not least, the analyst team would like to search information contained in user les and report on users that were added and deleted from the system. They would like to search the Q2_deleted_users.txt le within the users directory for the username jhill. As the result shows, we found jhill in this le. grep jhill Q2_deleted_users.txt

```
analyst@ec0337e39025:~/reports/users$ grep jhill Q2_deleted_users.txt
1025        jhill     Sales
```

To see whose people have been added to the Human Resources department, we can use grep command. For more than one word, we should use "" to execute the command.

grep "Human Resources" Q4_added_users.txt

```
analyst@ec0337e39025:~/reports/users$ grep "Human Resources" Q4_added_users.txt
1151        sshah     Human Resources
1145        msosa     Human Resources
analyst@ec0337e39025:~/reports/users$
```

Create and remove a directory

The analyst team would like me to create a new directory named logs and remove temp directory from the system. Here's the command line to create and remove directory:

mkdir logs (create)

rmdir temp (remove)

```
analyst@95cc38ed66c7:~$ mkdir logs
analyst@95cc38ed66c7:~$ ls
logs  notes  reports  temp
analyst@95cc38ed66c7:~$
```

```
analyst@95cc38ed66c7:~$ rmdir temp
analyst@95cc38ed66c7:~$ ls
logs  notes  reports
analyst@95cc38ed66c7:~$
```

Move and remove a le

The team would like to move Q3patches.txt le to another directory. In the Notes directory (please navigate here), the command mv Q3patches.txt /home/analyst/report will move the le to the notes directory.

```
analyst@95cc38ed66c7:~$ cd /home/analyst/notes
analyst@95cc38ed66c7:~/notes$ cd /home/analyst/notes
analyst@95cc38ed66c7:~/notes$ cd notes
-bash: cd: notes: No such file or directory
analyst@95cc38ed66c7:~/notes$ mv Q3patches.txt /home/analyst/reports/
analyst@95cc38ed66c7:~/notes$ ls /home/analyst/reports
Q1patches.txt  Q2patches.txt  Q3patches.txt
analyst@95cc38ed66c7:~/notes$
```

The team would like me to remove tempnotes as it is no longer required in the notes directory. The command rm tempnotes.txt will allow us to delete it (please make sure to use cd command to navigate to notes directory).

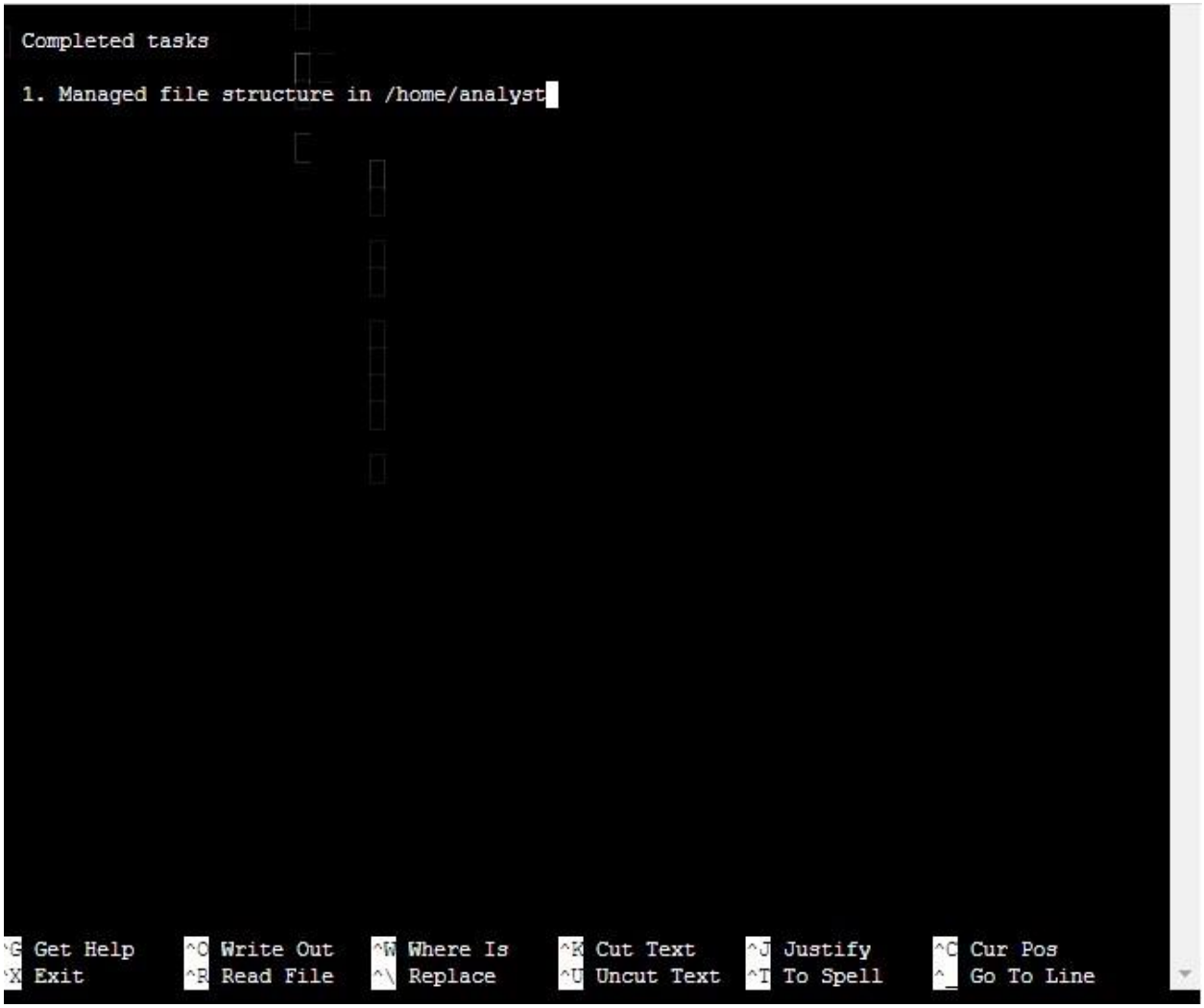
```
analyst@95cc38ed66c7:~/notes$ rm tempnotes.txt
analyst@95cc38ed66c7:~/notes$ ls
analyst@95cc38ed66c7:~/notes$
```

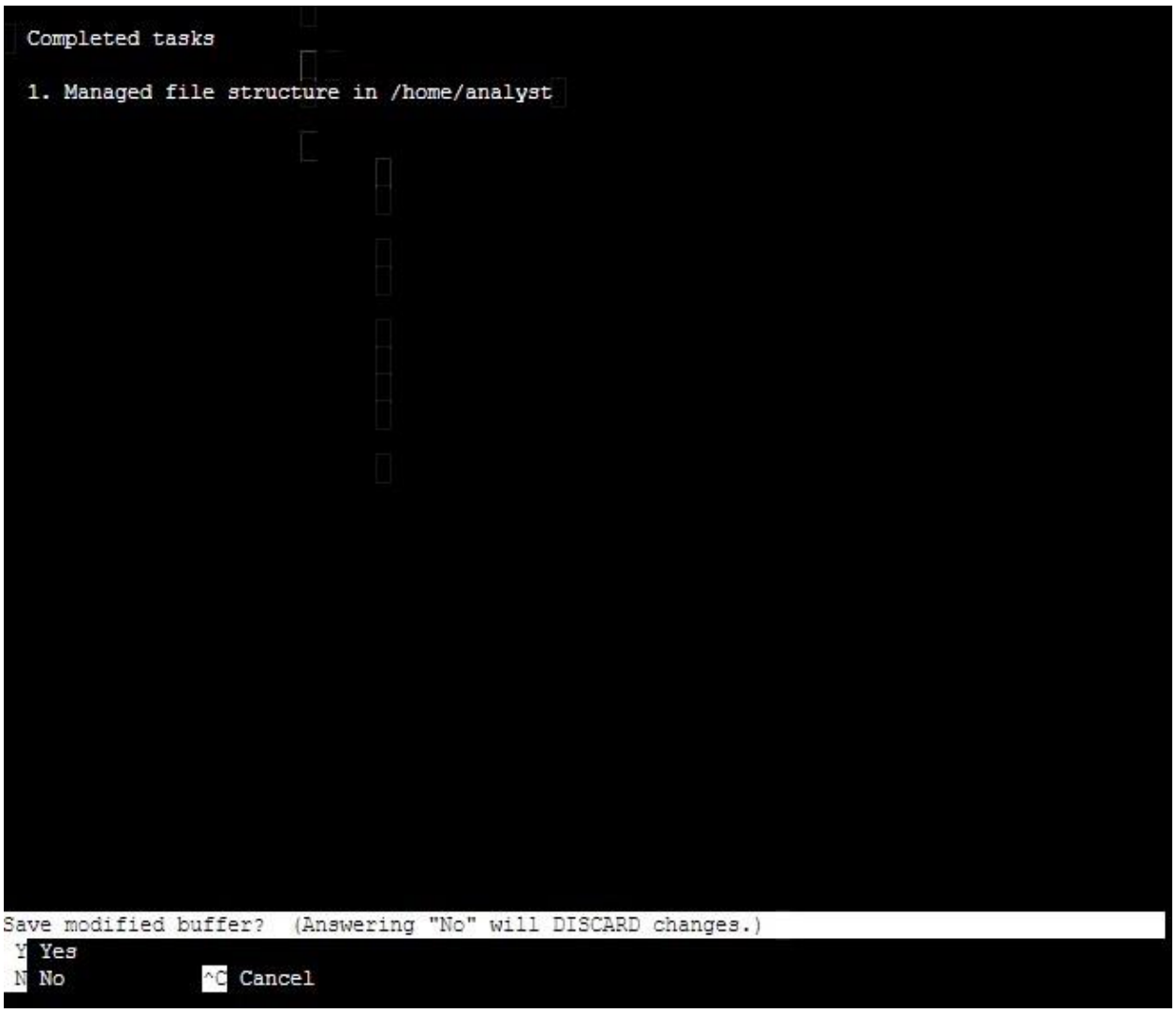
Create and edit a le

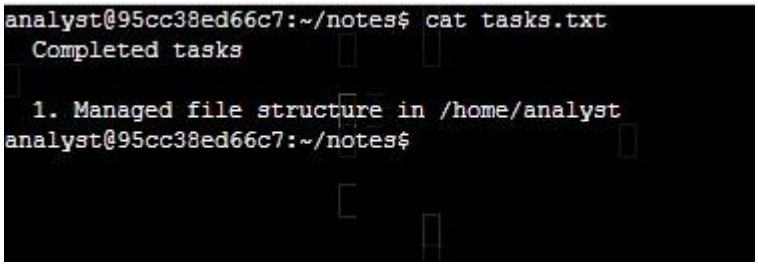
The analyst team would like me to create a new le and edit it. The command touch tasks.txt allows us to create a le. On the other hand, the command nano tasks.txt allows us to edit a le. Make sure to press CTRL + X to exit from the nano editor. When being asked “Save modi ed bu erer”, press Y to save the new data to the le. Then, please press enter to con rm that the le name to write is tasks.txt.

Use cat tasks.txt command to display the contents of the tasks.txt.

```
analyst@95cc38ed66c7:~/notes$ touch tasks.txt
analyst@95cc38ed66c7:~/notes$ ls
tasks.txt
analyst@95cc38ed66c7:~/notes$
```







Summary

Here, I successfully found and searched les, created and removed a directory, moved and removed a le, and created and edited a le on Linux Terminal.