

CYSE 270: Linux System for Cybersecurity

Assignment: Lab 4 - Group and User Accounts

CYSE 270: Linux System for Cybersecurity

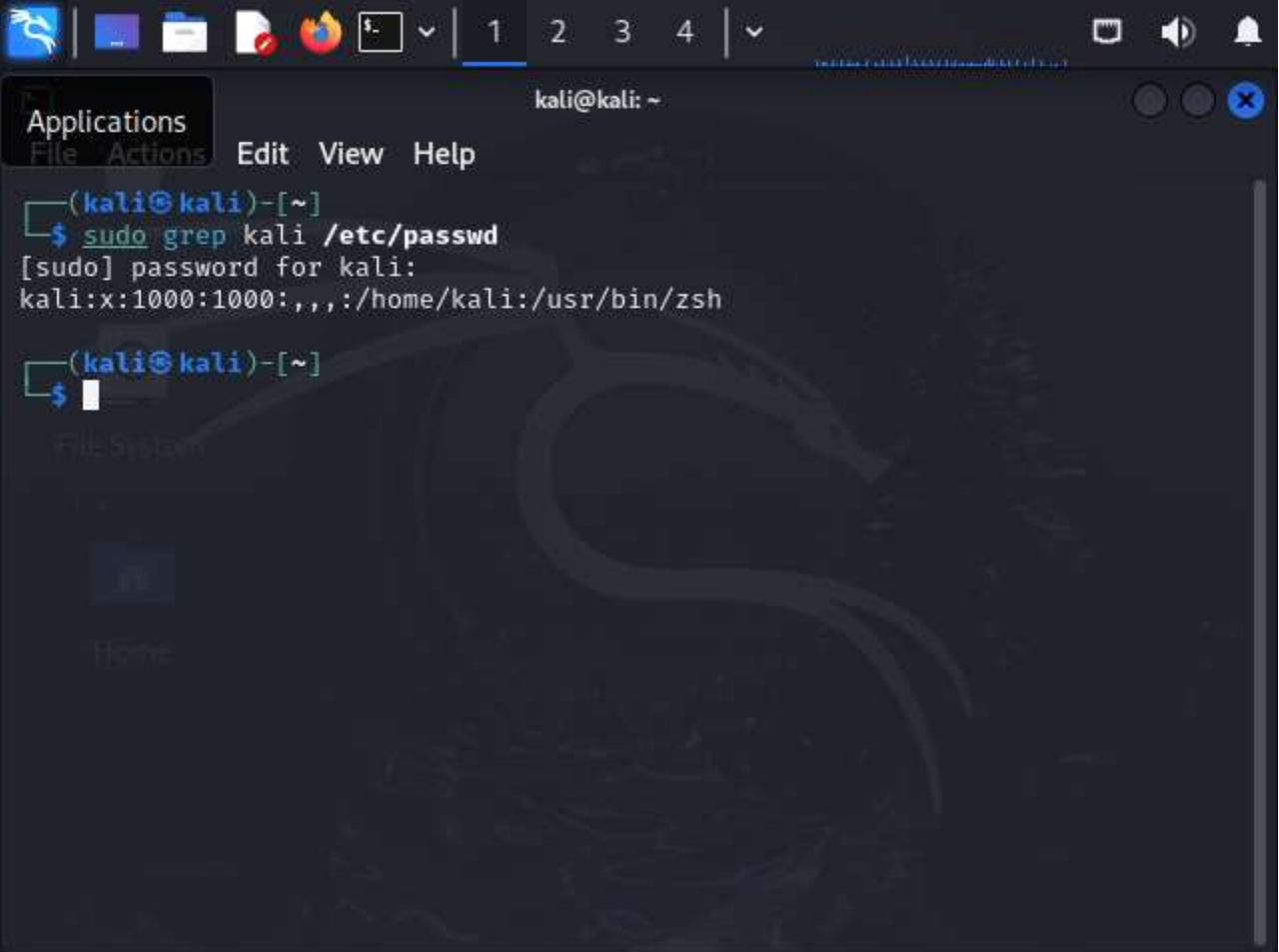
The goal of this lab is to practice basic group and account management. You can choose the Ubuntu VM on your local PC or VMware to complete this assignment.

In this assignment, you should replace **xxxxx** with your MIDAS ID in all occurrences.

Note: used UID (01287843) where MIDAS ID occurs instead because a group with my MIDAS ID already exists

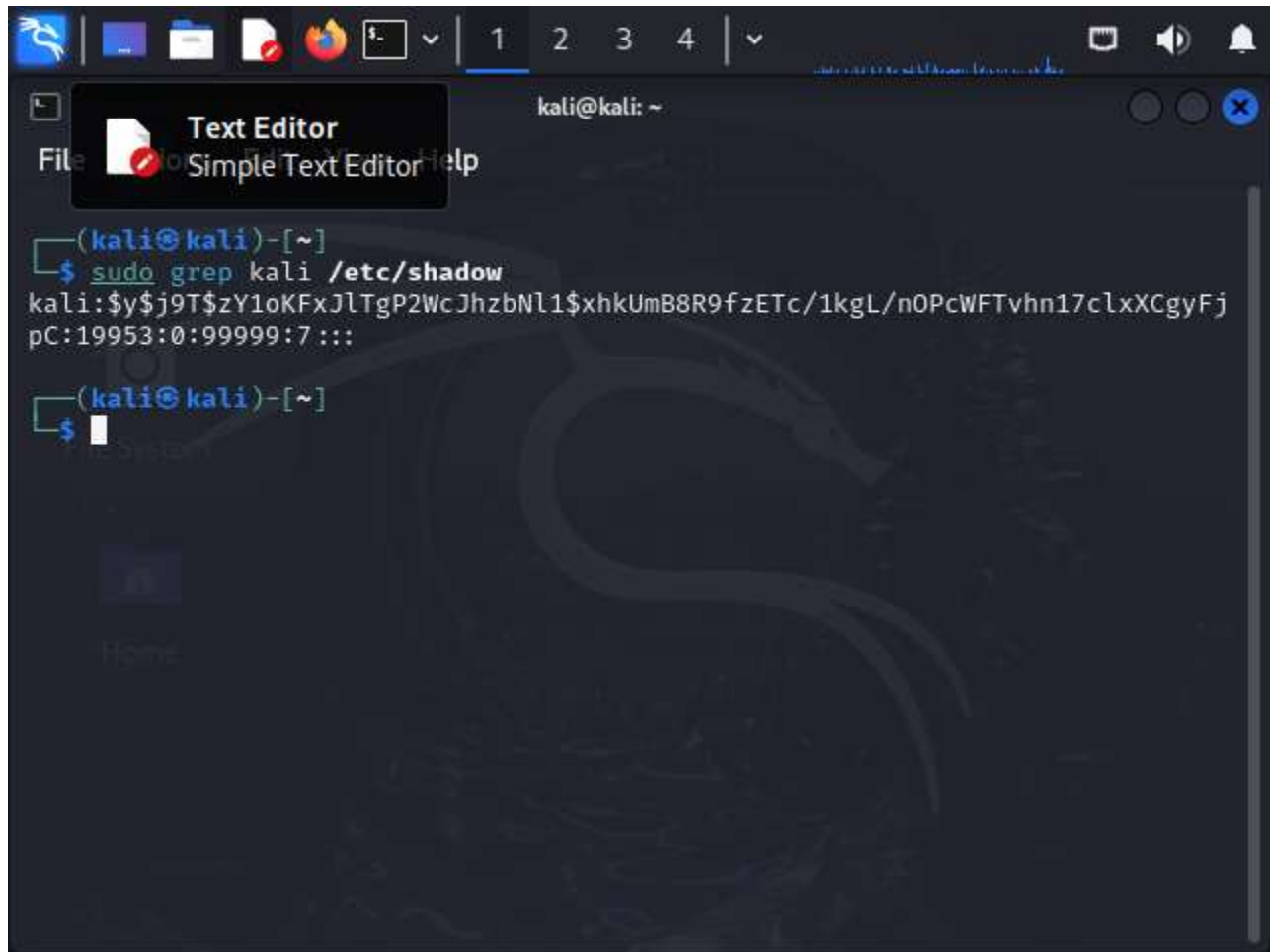
Task A - User Account management (8 * 5 = 40 points)

1. Open a terminal window in VM and execute the correct command to display user account information (including the login shell and home directory) for the current user using grep.



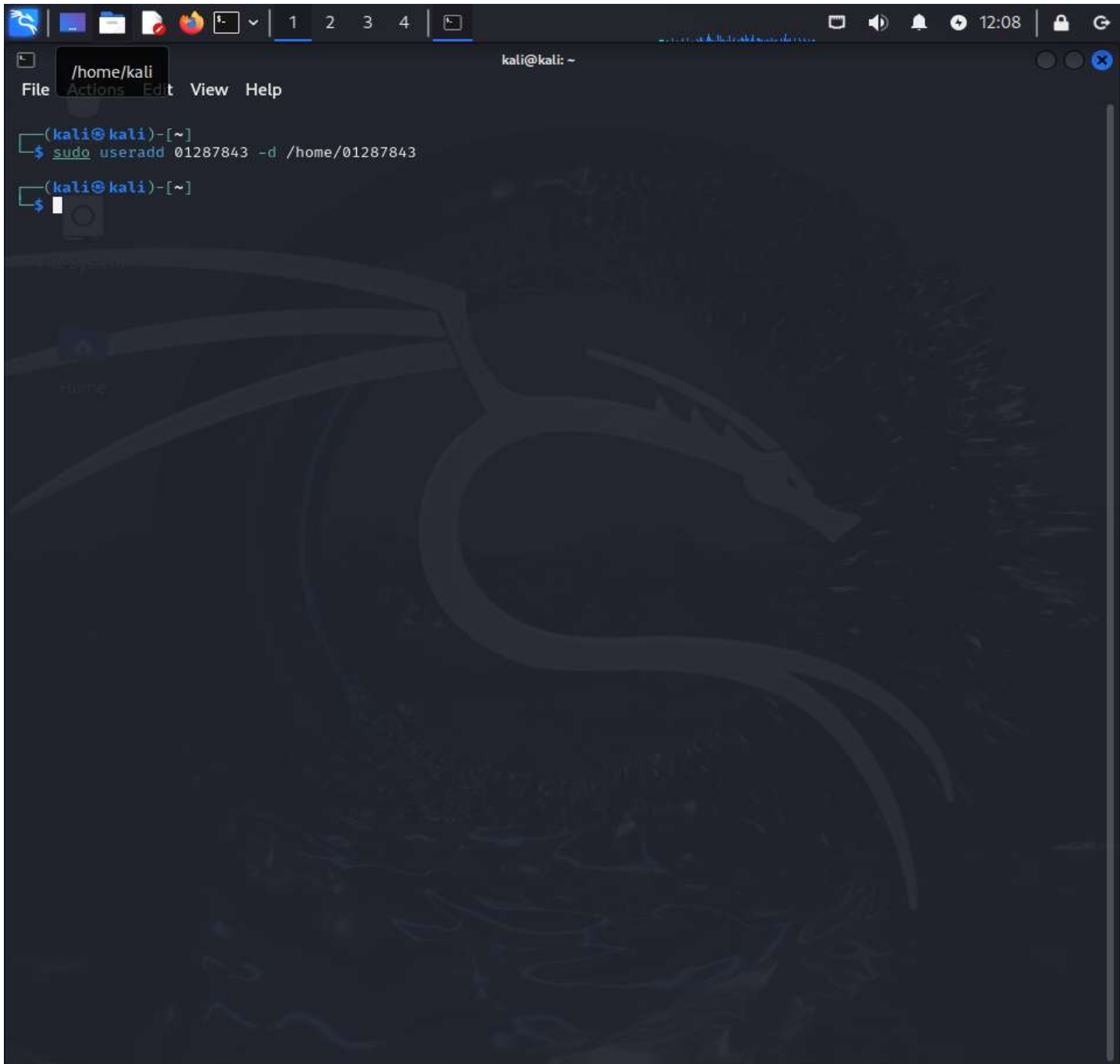
```
kali@kali: ~  
Applications  
File Actions Edit View Help  
(kali@kali)-[~]  
└─$ sudo grep kali /etc/passwd  
[sudo] password for kali:  
kali:x:1000:1000:,,,:/home/kali:/usr/bin/zsh  
  
(kali@kali)-[~]  
└─$
```

- Execute the correct command to display user password information (including the encrypted password and password aging) for the current user using grep.



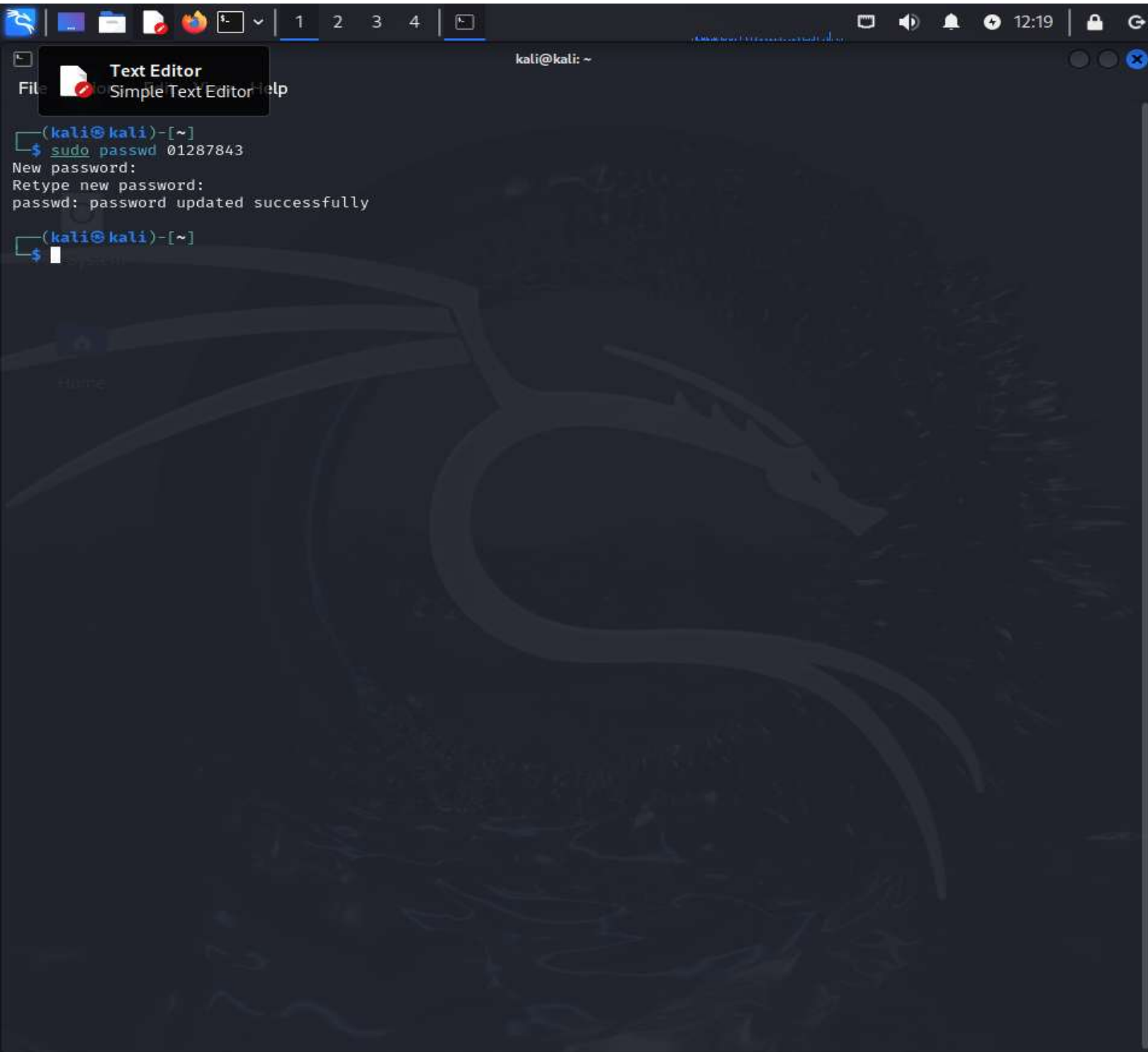
```
(kali@kali)-[~]
└─$ sudo grep kali /etc/shadow
kali:$y$j9T$zY1oKFxJlTgP2WcJhzbNl1$xhkUmB8R9fzETc/1kgL/n0PcWFTvhn17clxXCgyFj
pC:19953:0:99999:7:::
```

3. Create a new user named **xxxxx** and explicitly use options to create the home directory **/home/xxxxx** for this user.

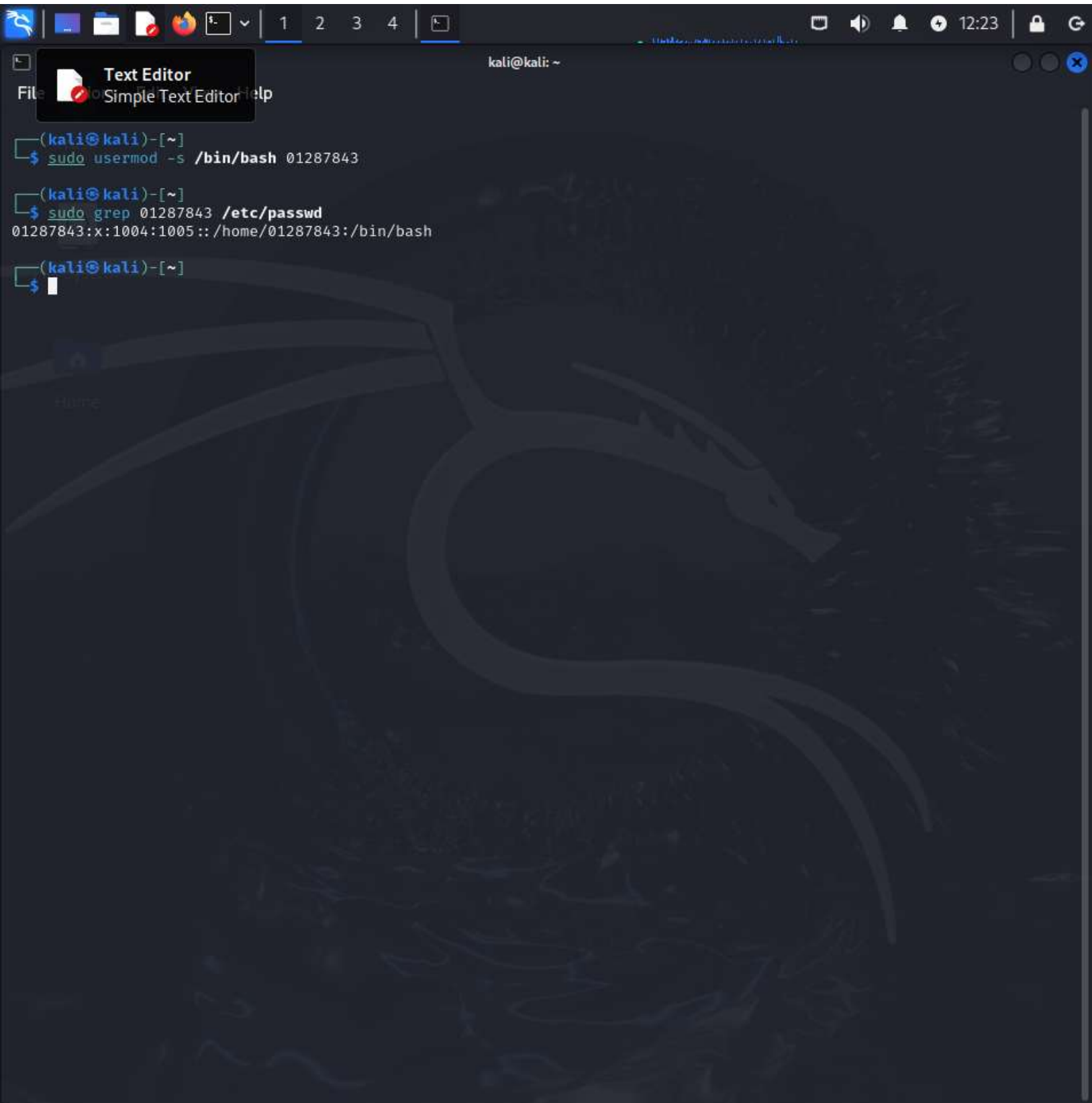


```
kali@kali: ~  
File Actions Edit View Help  
(kali@kali)-[~]  
└─$ sudo useradd 01287843 -d /home/01287843  
(kali@kali)-[~]  
└─$
```

4. Set a password for the new user.



5. Set bash shell as the default login shell for the new user **xxxxx**, then verify the change.



The image shows a Kali Linux desktop environment with a terminal window open. The terminal displays the following commands and output:

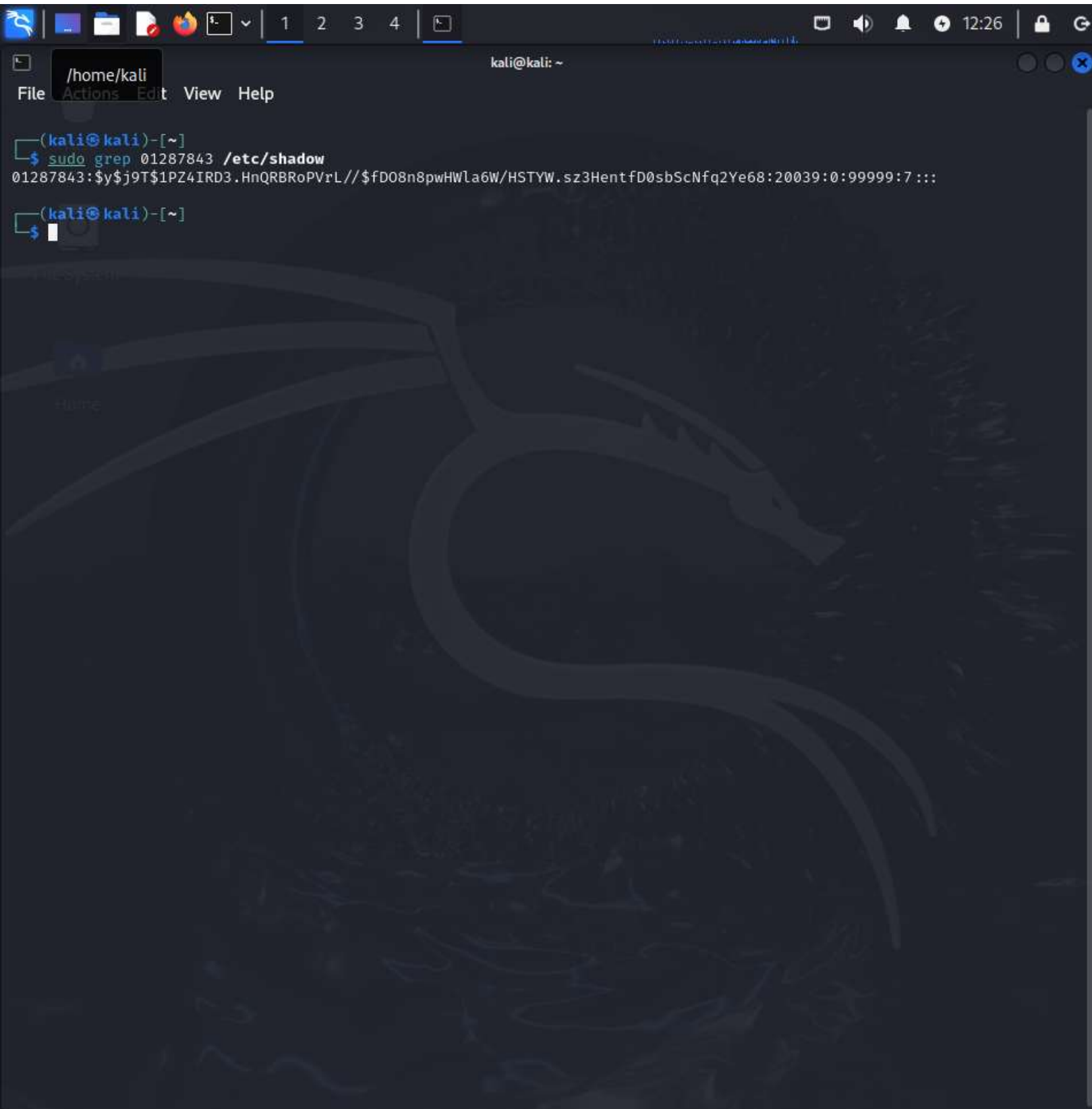
```
(kali@kali)-[~]
└─$ sudo usermod -s /bin/bash 01287843

(kali@kali)-[~]
└─$ sudo grep 01287843 /etc/passwd
01287843:x:1004:1005::/home/01287843:/bin/bash

(kali@kali)-[~]
└─$
```

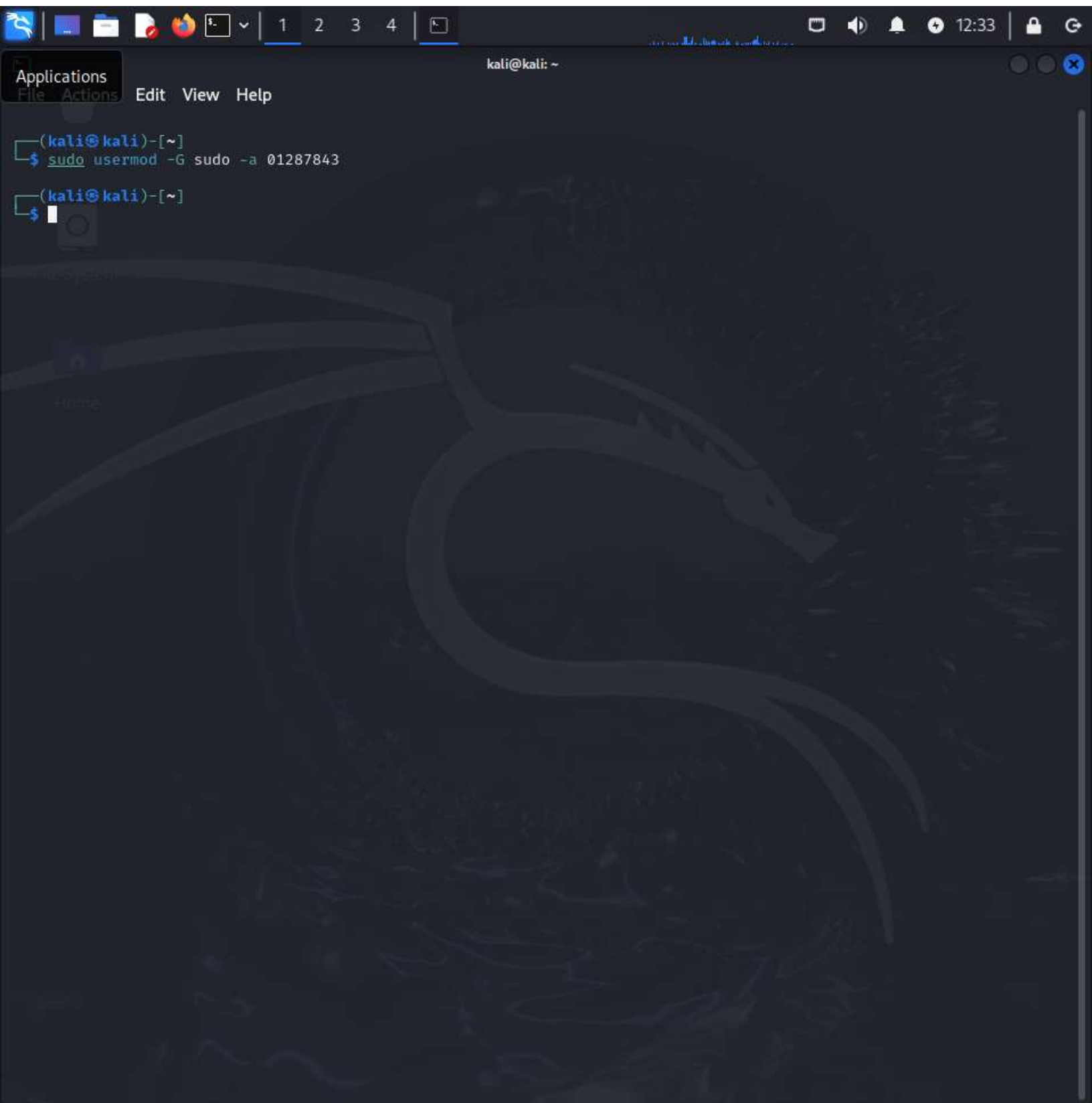
A "Text Editor" window is also visible in the top-left corner, showing a "Simple Text Editor" interface.

- Execute the correct command to display user password information (including the encrypted password and password aging) for the new user `xxxxx` using `grep`.

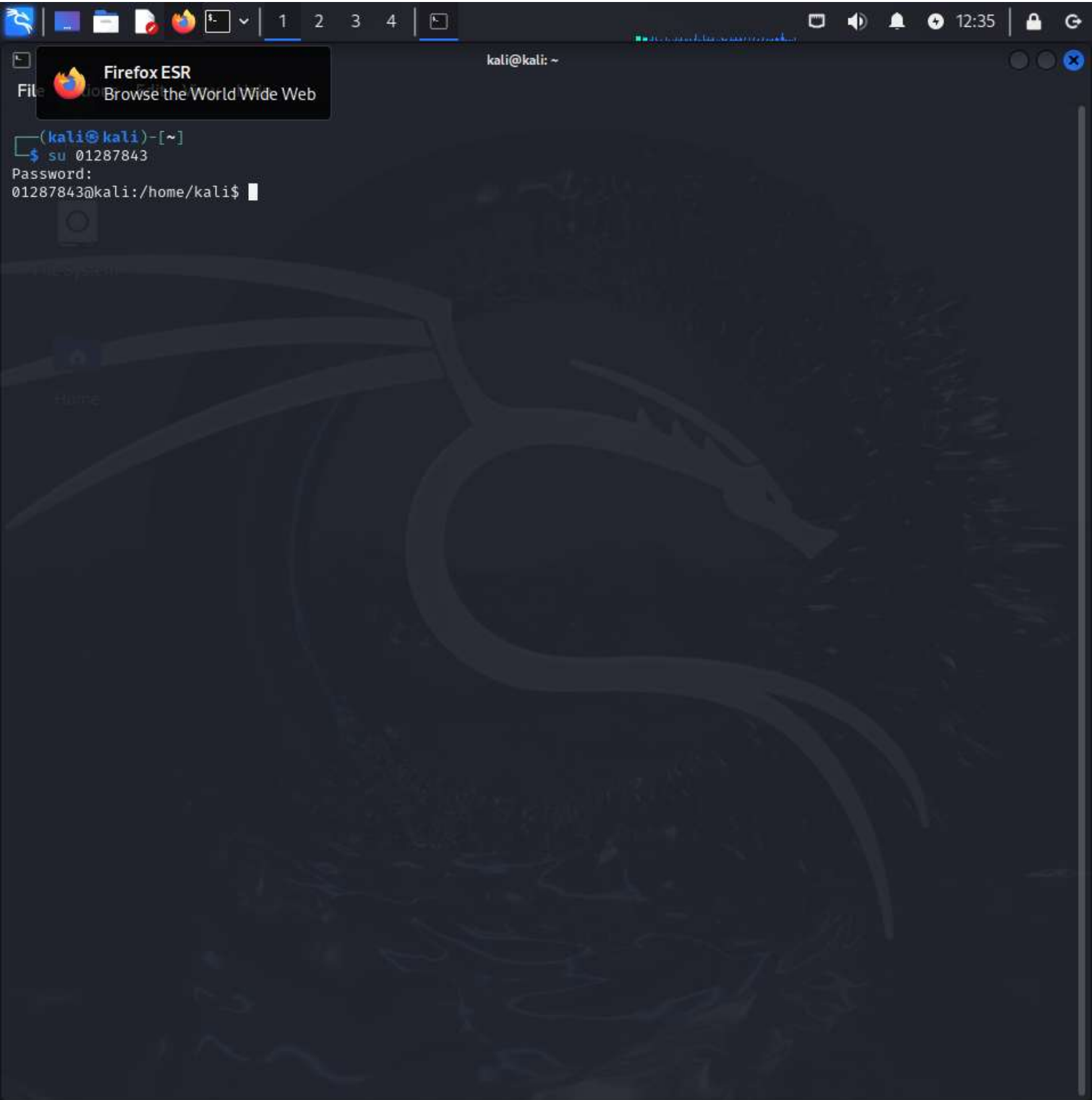


```
(kali@kali)-[~]
└─$ sudo grep 01287843 /etc/shadow
01287843:$y$j9T$1PZ4IRD3.HnQRBRoPVrL//$fD08n8pwHWla6W/HSTYW.sz3HentfD0sbScNfq2Ye68:20039:0:99999:7:::
└─$
```

7. Add the new user **xxxxx** to sudo group without overriding the existing group membership.



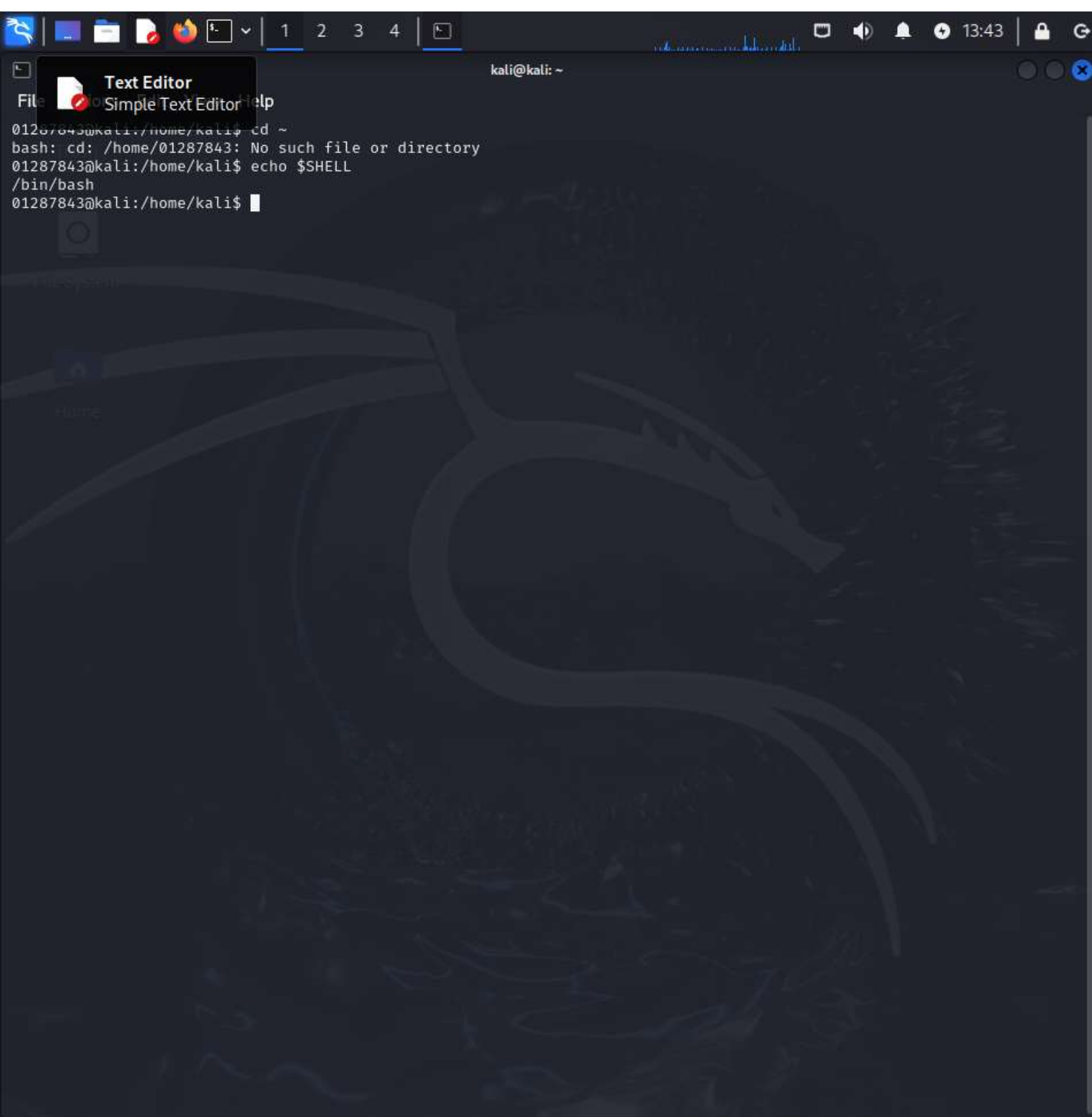
8. Switch to the new user's account.



Task B - Group account management (12 * 5 = 60 points)

Use Linux commands to execute the following tasks:

1. Return to your home directory and determine the shell you are using.

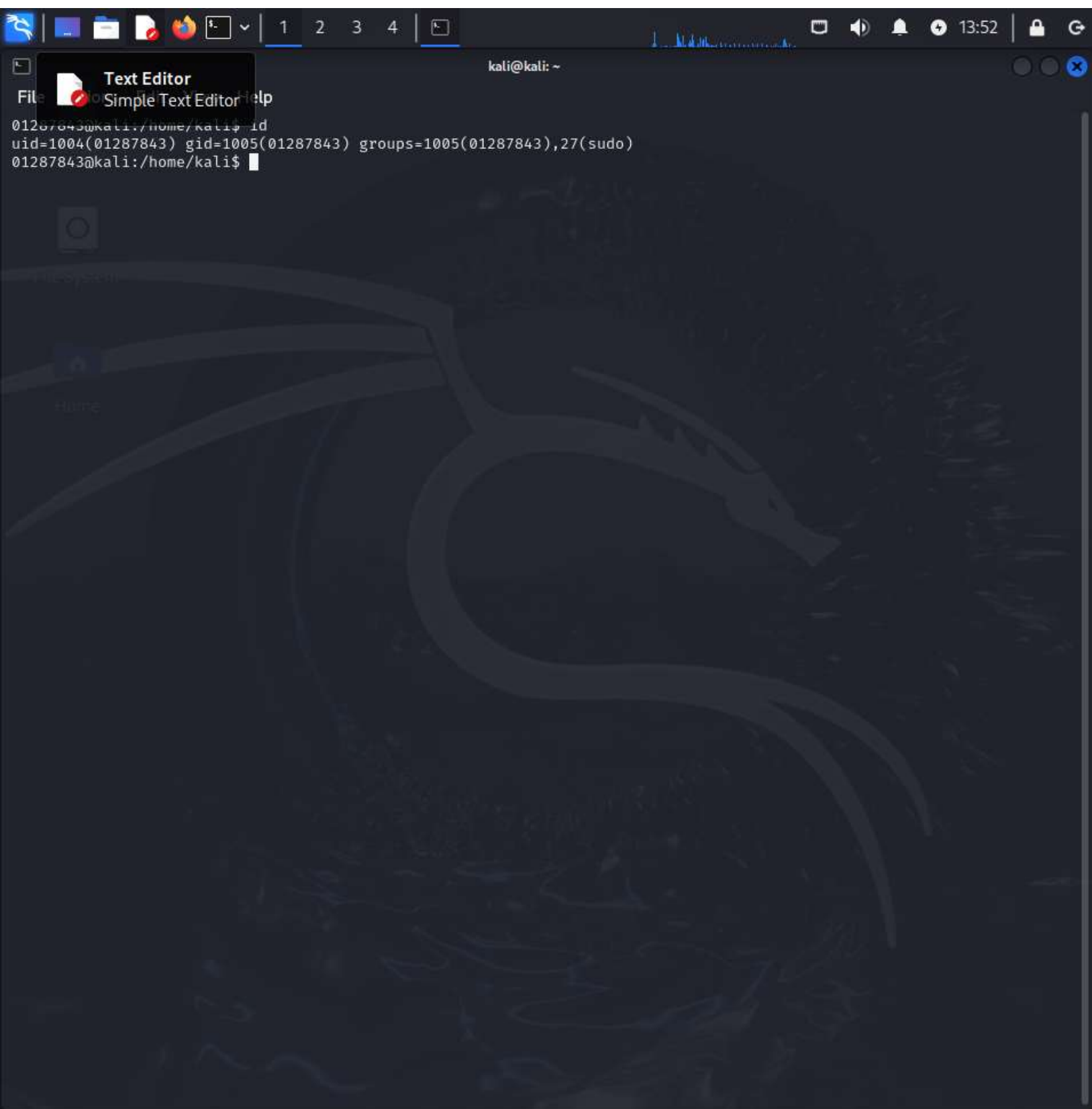


The screenshot shows a Kali Linux desktop environment. At the top, there is a task title and instructions. Below, a terminal window is open, displaying the following commands and output:

```
01287843@kali:~/home/kali$ cd ~
bash: cd: /home/01287843: No such file or directory
01287843@kali:~/home/kali$ echo $SHELL
/bin/bash
01287843@kali:~/home/kali$
```

A "Text Editor" window is also visible, showing a "Simple Text Editor" interface. The desktop background features a large, faint dragon logo. The system tray at the top right shows the time as 13:43 and various system icons.

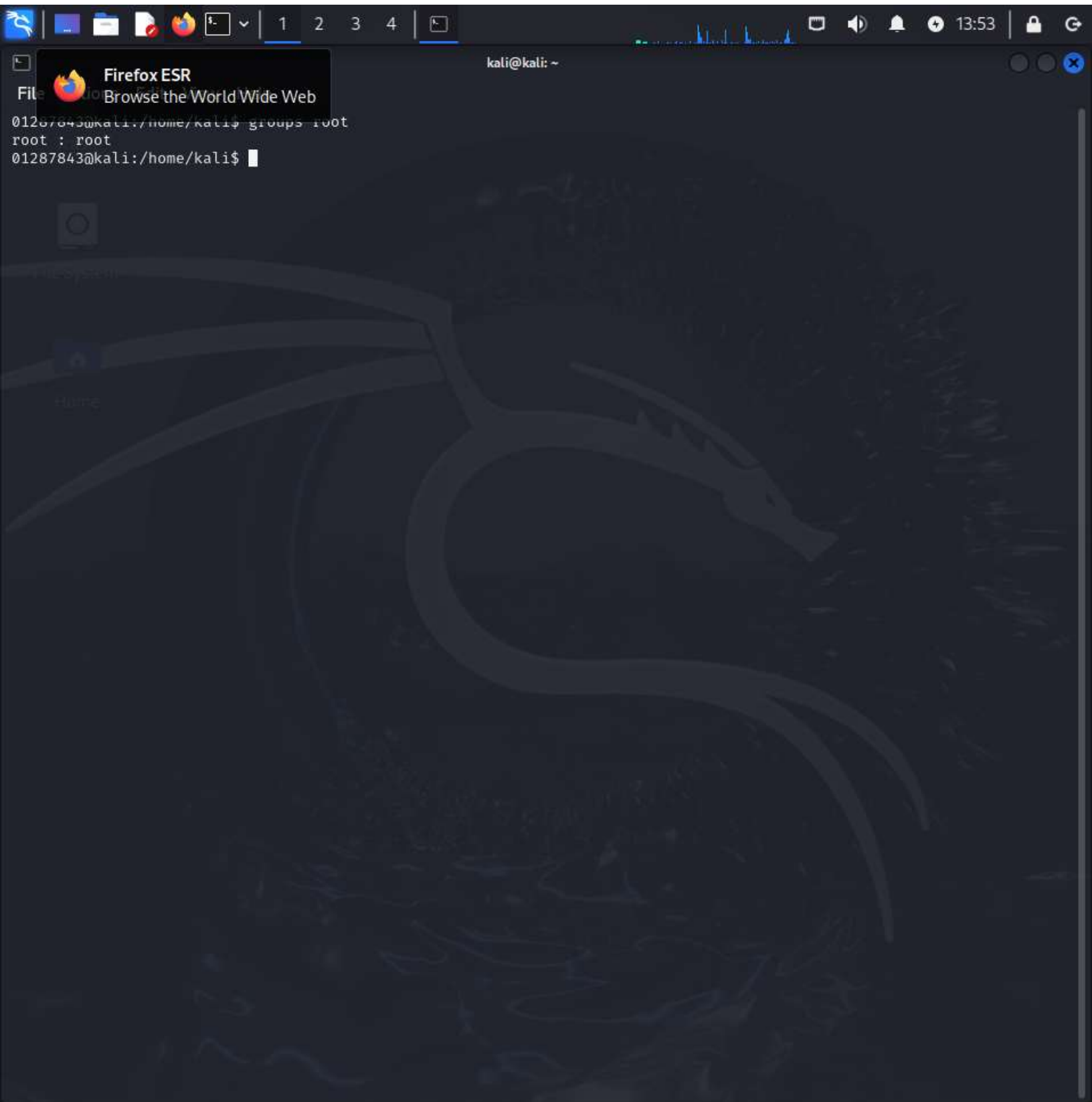
2. Display the current user's ID and group membership.



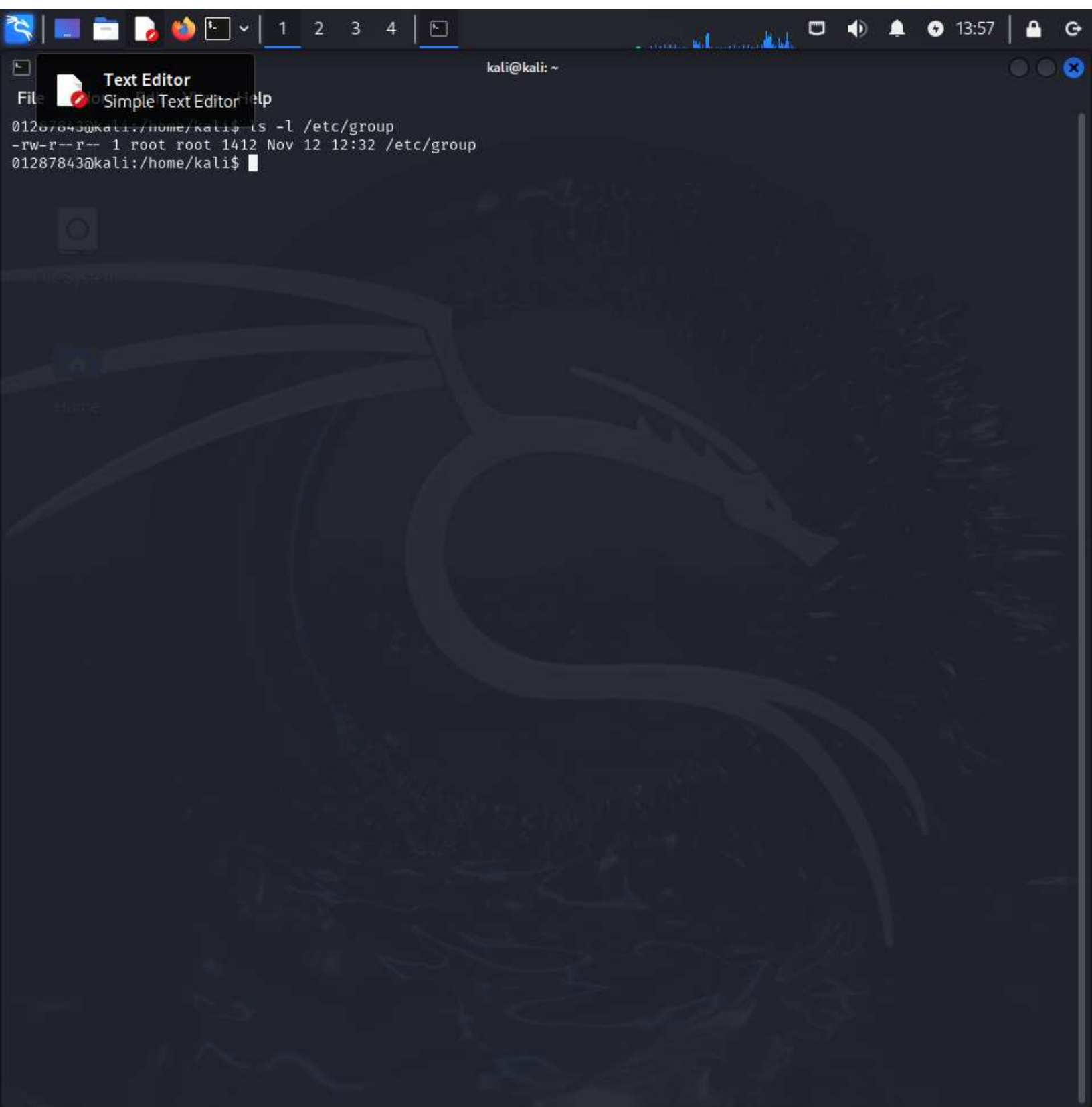
The screenshot shows a Kali Linux desktop environment. At the top, there is a taskbar with various application icons and system status indicators, including the time 13:52. A window titled "Text Editor" is open, displaying the output of the 'id' command in a terminal. The terminal output is as follows:

```
kali@kali: ~  
01287843@kali:/home/kali$ id  
uid=1004(01287843) gid=1005(01287843) groups=1005(01287843),27(sudo)  
01287843@kali:/home/kali$
```

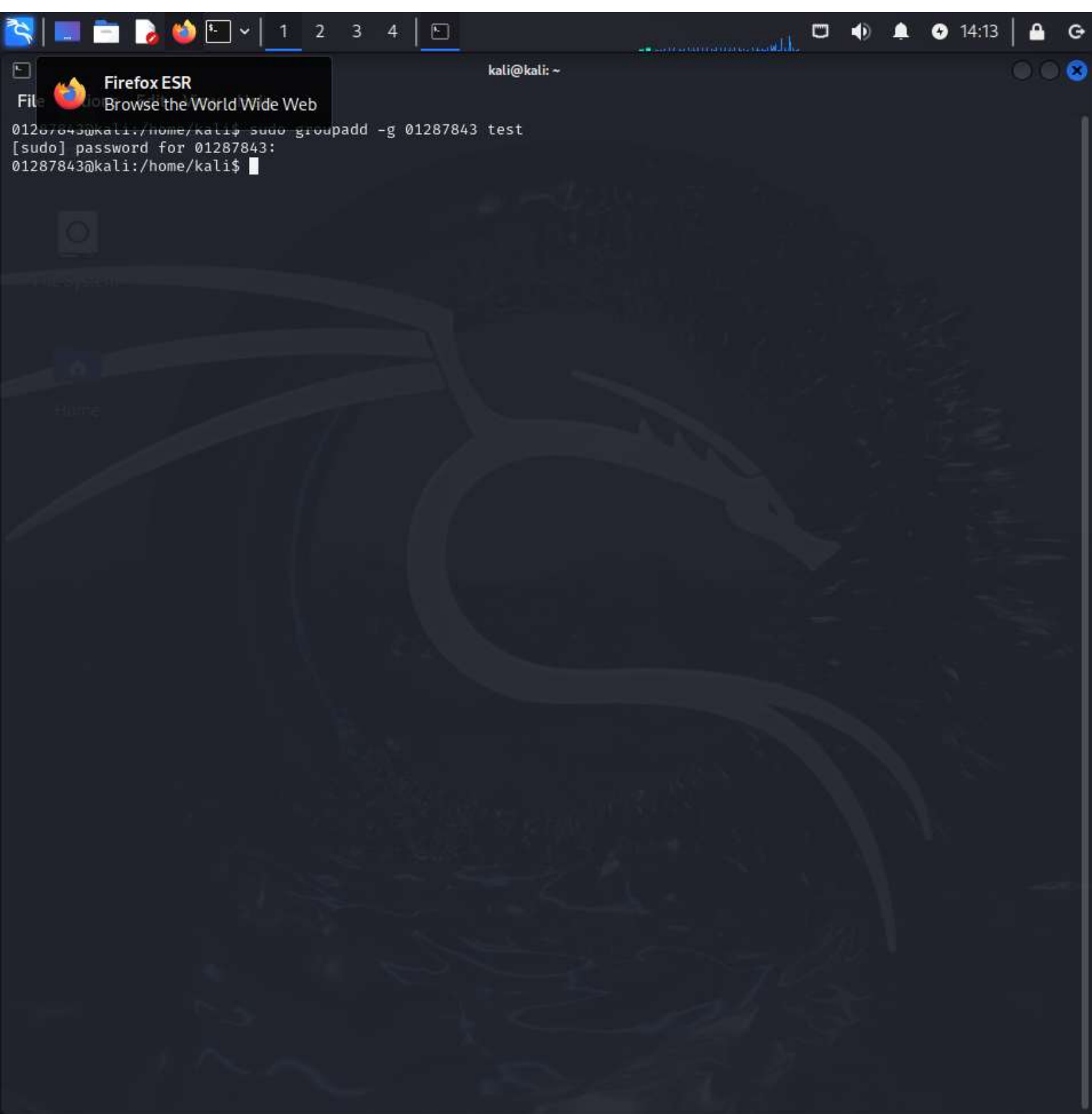
3. Display the group membership of the root account.



4. Run the correct command to determine the **user owner** and **group owner** of the `/etc/group` file.



5. Create a new group named **test** and use **your UIN** as the GID.

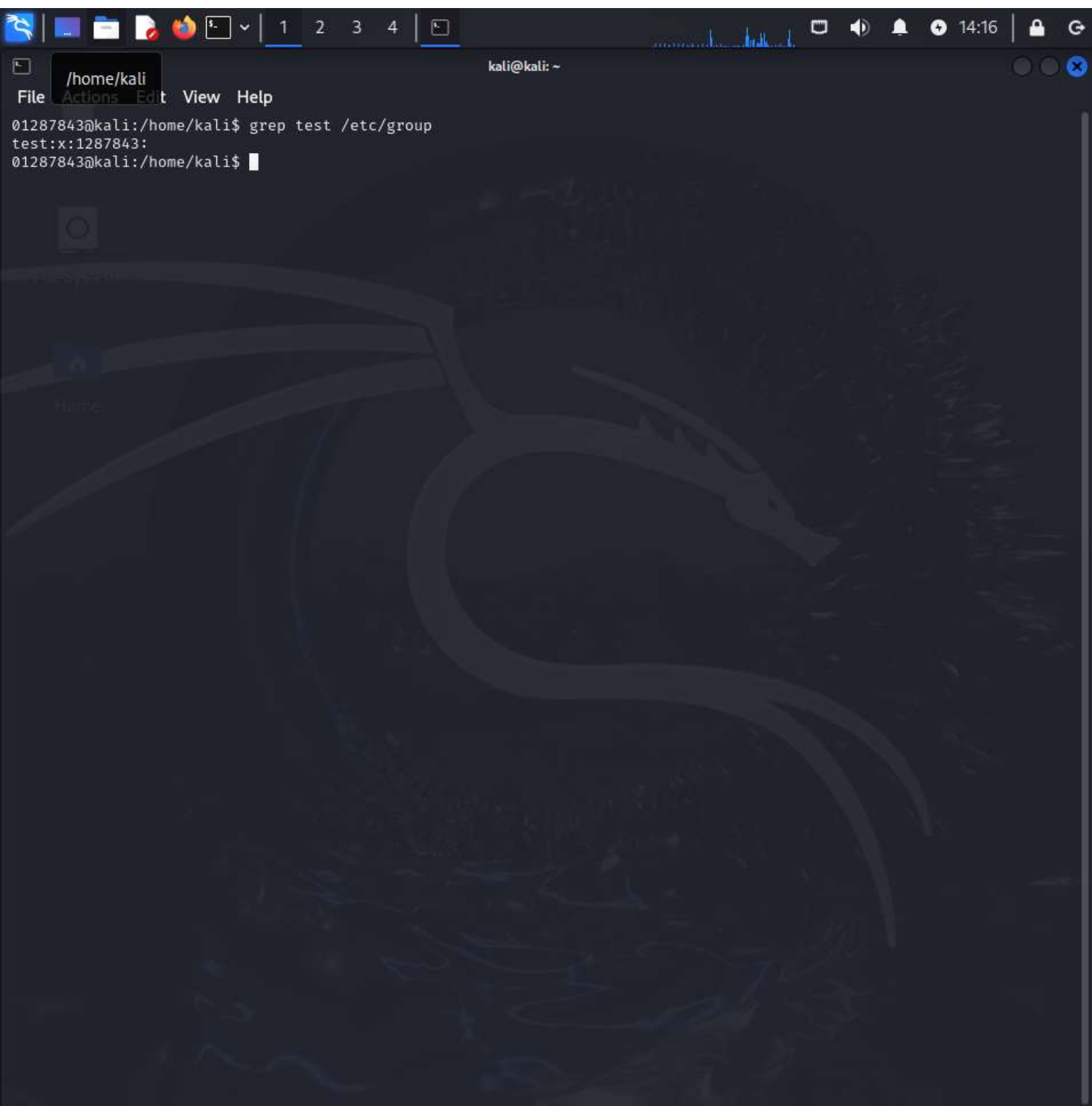


The image shows a Kali Linux desktop environment. At the top, there is a taskbar with various application icons and system status indicators, including the time 14:13. A terminal window is open, displaying the following text:

```
kali@kali: ~  
01287843@kali:~/home/kali$ sudo groupadd -g 01287843 test  
[sudo] password for 01287843:  
01287843@kali:~/home/kali$
```

The terminal window title is "kali@kali: ~". In the background, a Firefox ESR window is visible with the title "Browse the World Wide Web". The desktop background features a large, faint watermark of a dragon.

6. Display the group account information for the test group using grep.

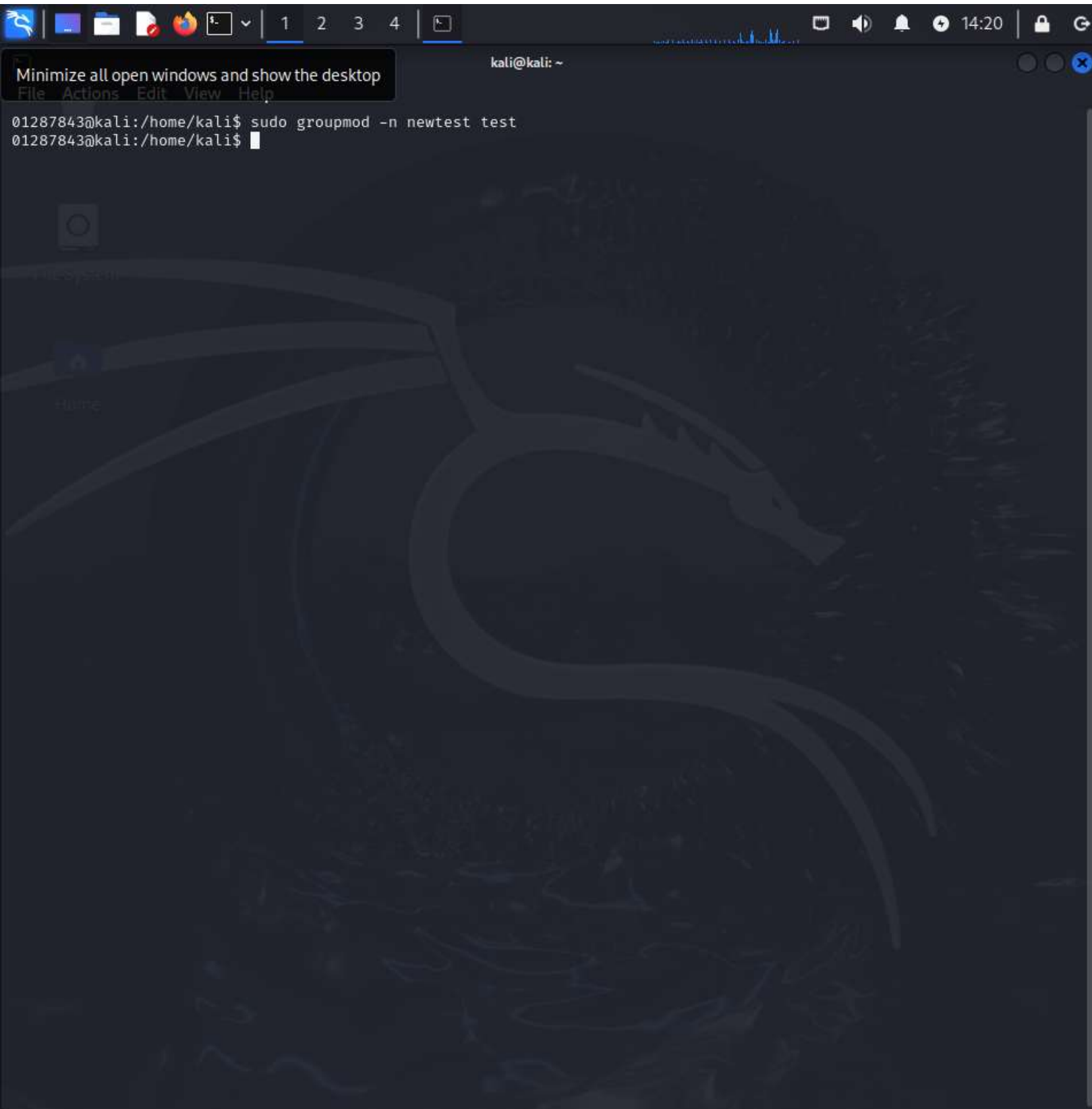


The image shows a terminal window on a Kali Linux system. The window title is "/home/kali" and the prompt is "kali@kali: ~". The terminal displays the following command and output:

```
01287843@kali:/home/kali$ grep test /etc/group
test:x:1287843:
01287843@kali:/home/kali$
```

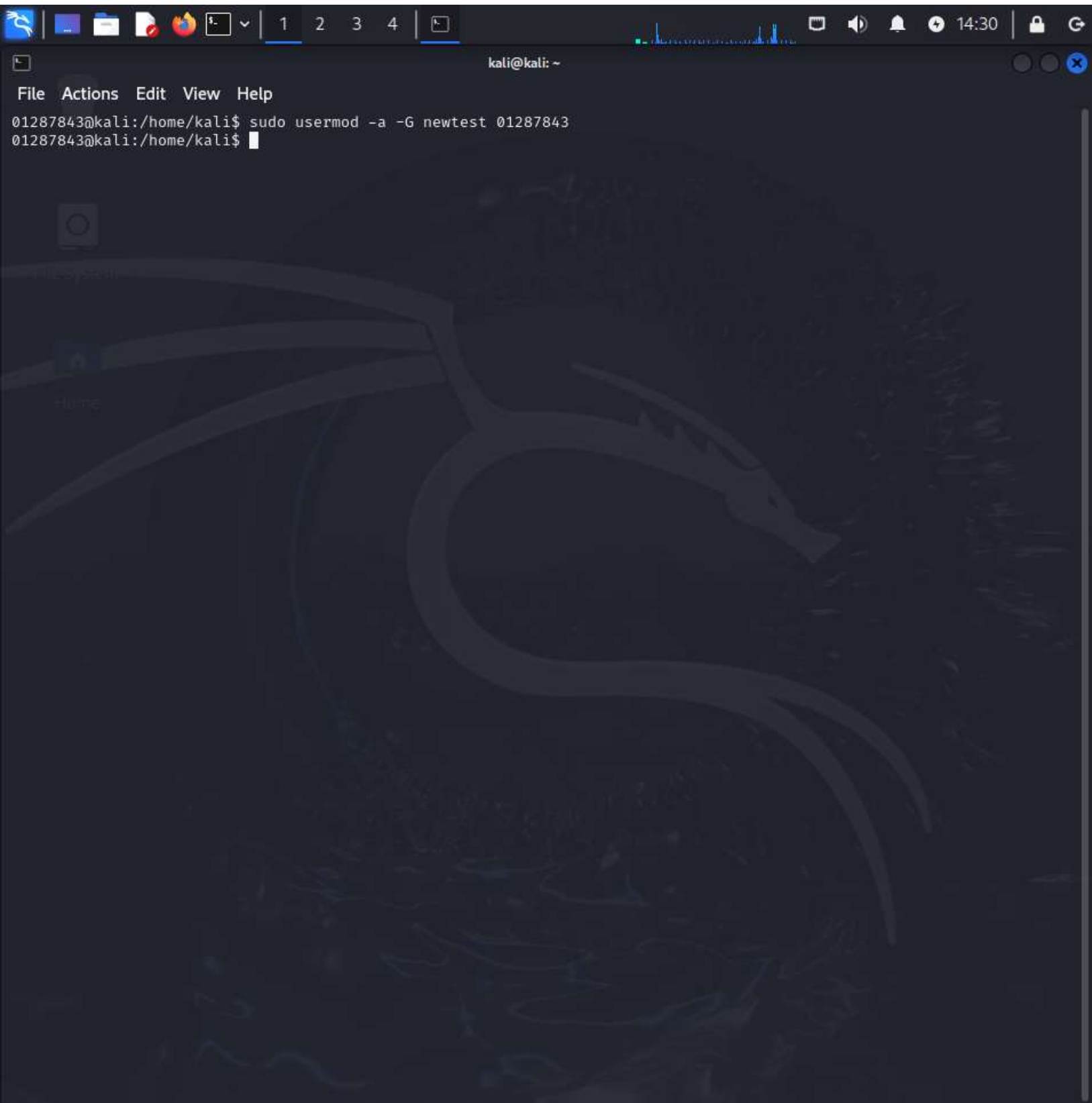
The terminal background features a large, faint watermark of a dragon's head.

7. Change the group name of the test group to **newtest**.



```
kali@kali: ~  
Minimize all open windows and show the desktop  
File Actions Edit View Help  
01287843@kali:/home/kali$ sudo groupmod -n newtest test  
01287843@kali:/home/kali$
```

8. Add the current account (xxxxx) as a secondary member of the **newtest** group without overriding this user's current group membership.

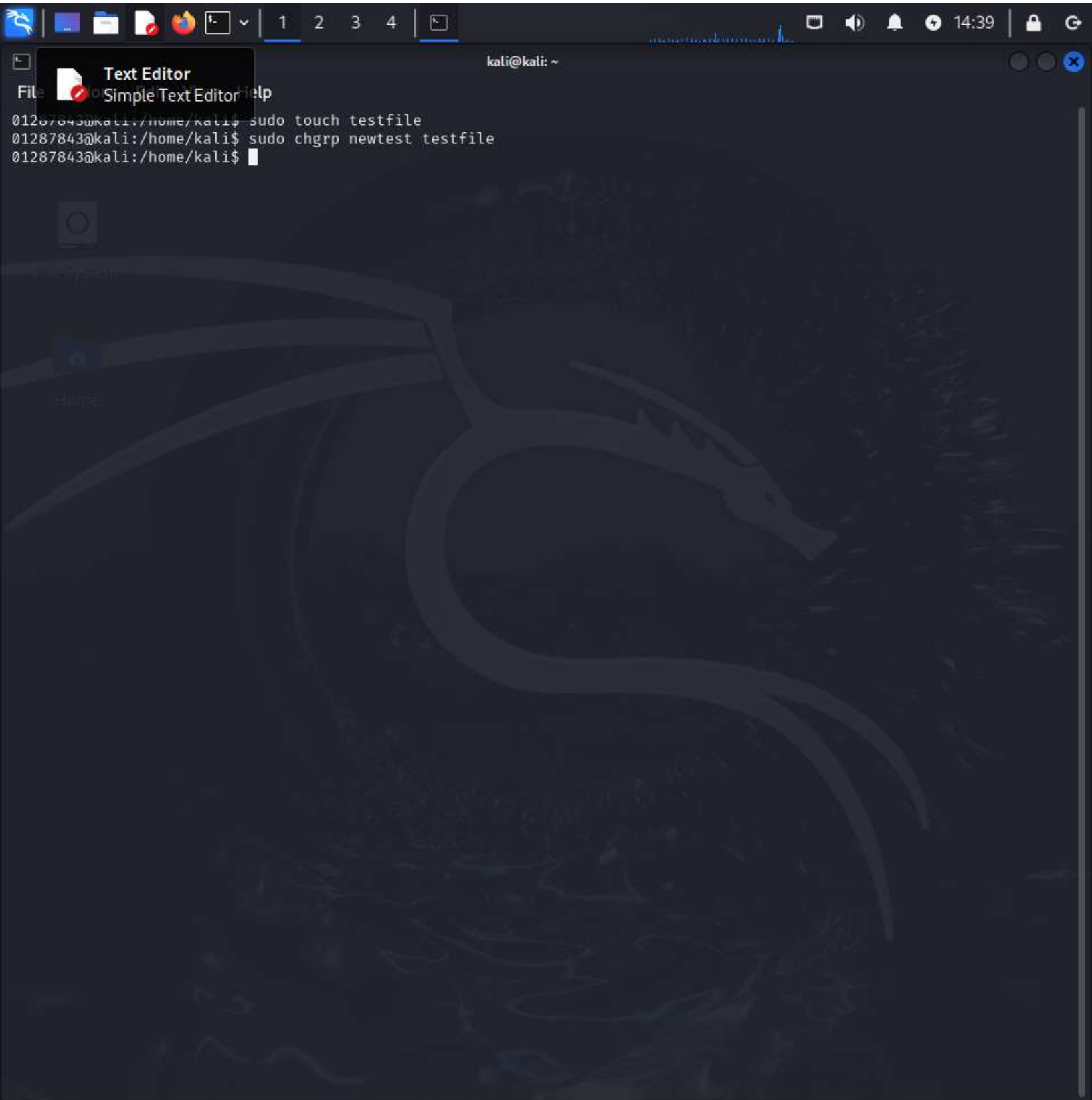


The image shows a Kali Linux desktop environment. The top panel includes a taskbar with various application icons and a system tray with a clock showing 14:30. A terminal window is open, displaying the following command and output:

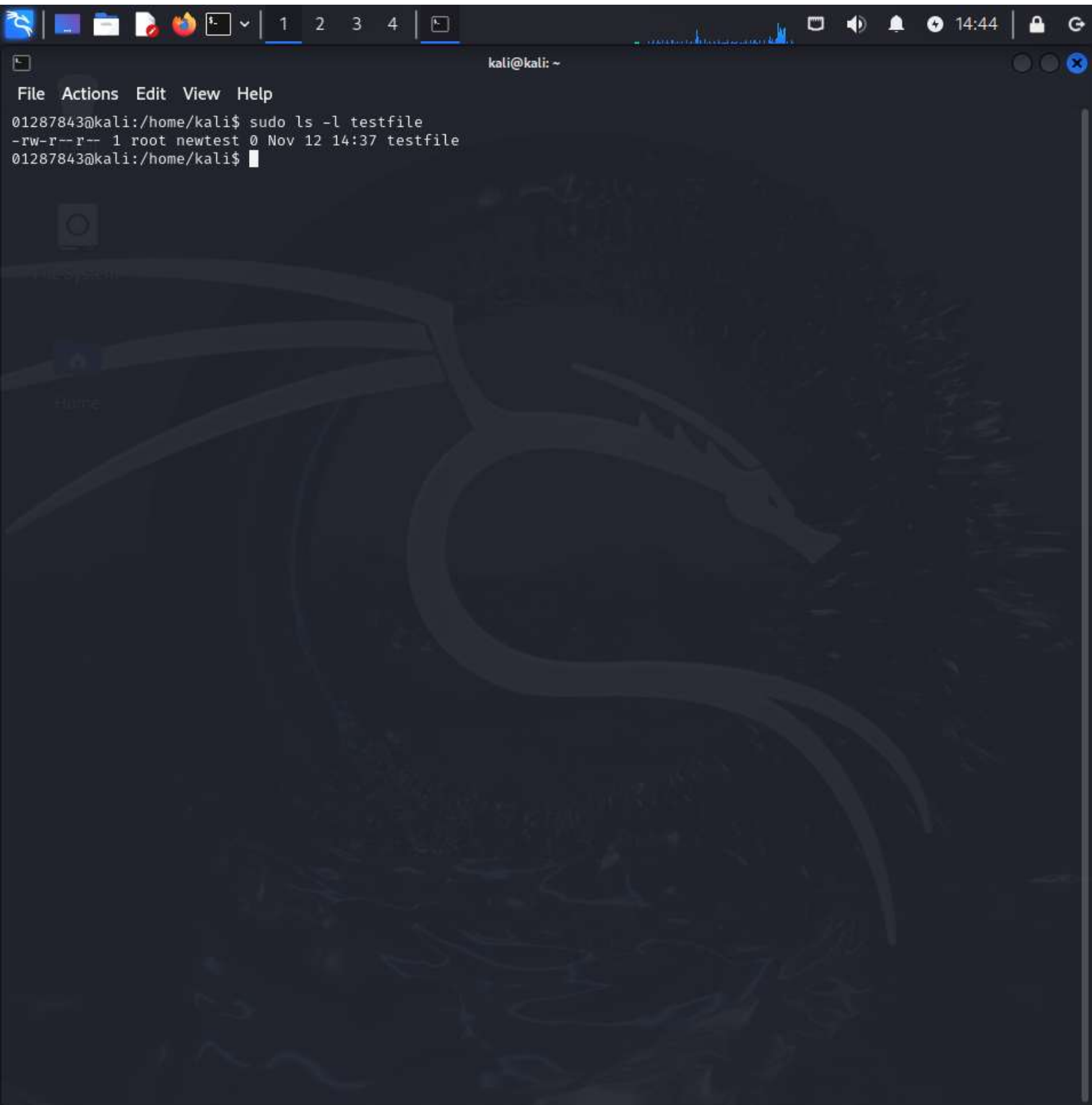
```
kali@kali: ~  
File Actions Edit View Help  
01287843@kali:/home/kali$ sudo usermod -a -G newtest 01287843  
01287843@kali:/home/kali$
```

The terminal window has a dark background with a faint dragon logo watermark. The desktop background is dark with a subtle pattern.

9. Create a new file **testfile** in the account's home directory, then change the group owner to **newtest**.



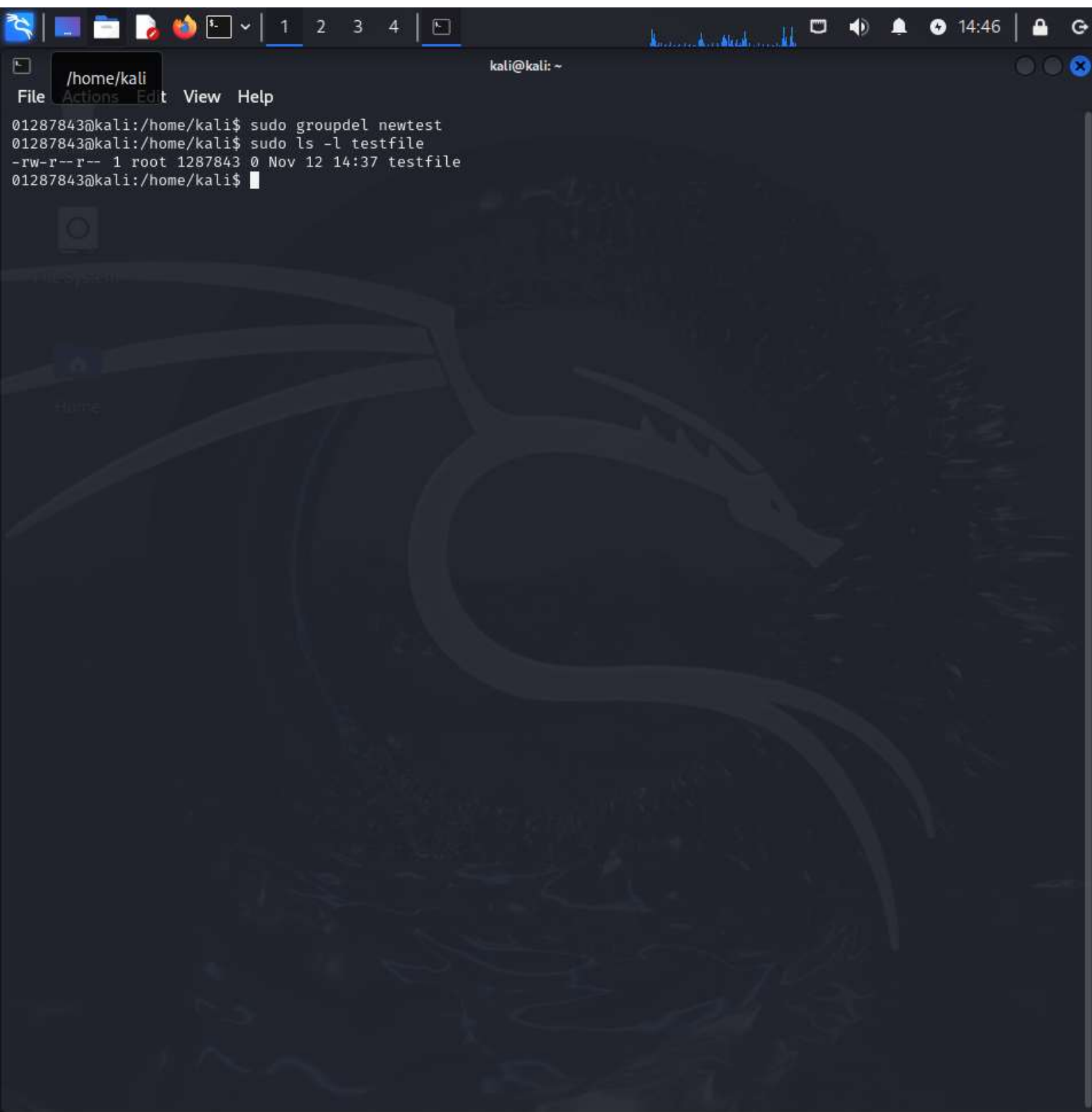
10. Display the user owner and group owner information of the file **testfile**.



The image shows a terminal window on a Kali Linux system. The window title is "kali@kali: ~". The terminal prompt is "01287843@kali:/home/kali\$". The user has entered the command "sudo ls -l testfile". The output of the command is "-rw-r--r-- 1 root newtest 0 Nov 12 14:37 testfile". The terminal window has a menu bar with "File", "Actions", "Edit", "View", and "Help". The background of the terminal window features a faint, stylized dragon logo.

```
kali@kali: ~  
File Actions Edit View Help  
01287843@kali:/home/kali$ sudo ls -l testfile  
-rw-r--r-- 1 root newtest 0 Nov 12 14:37 testfile  
01287843@kali:/home/kali$
```

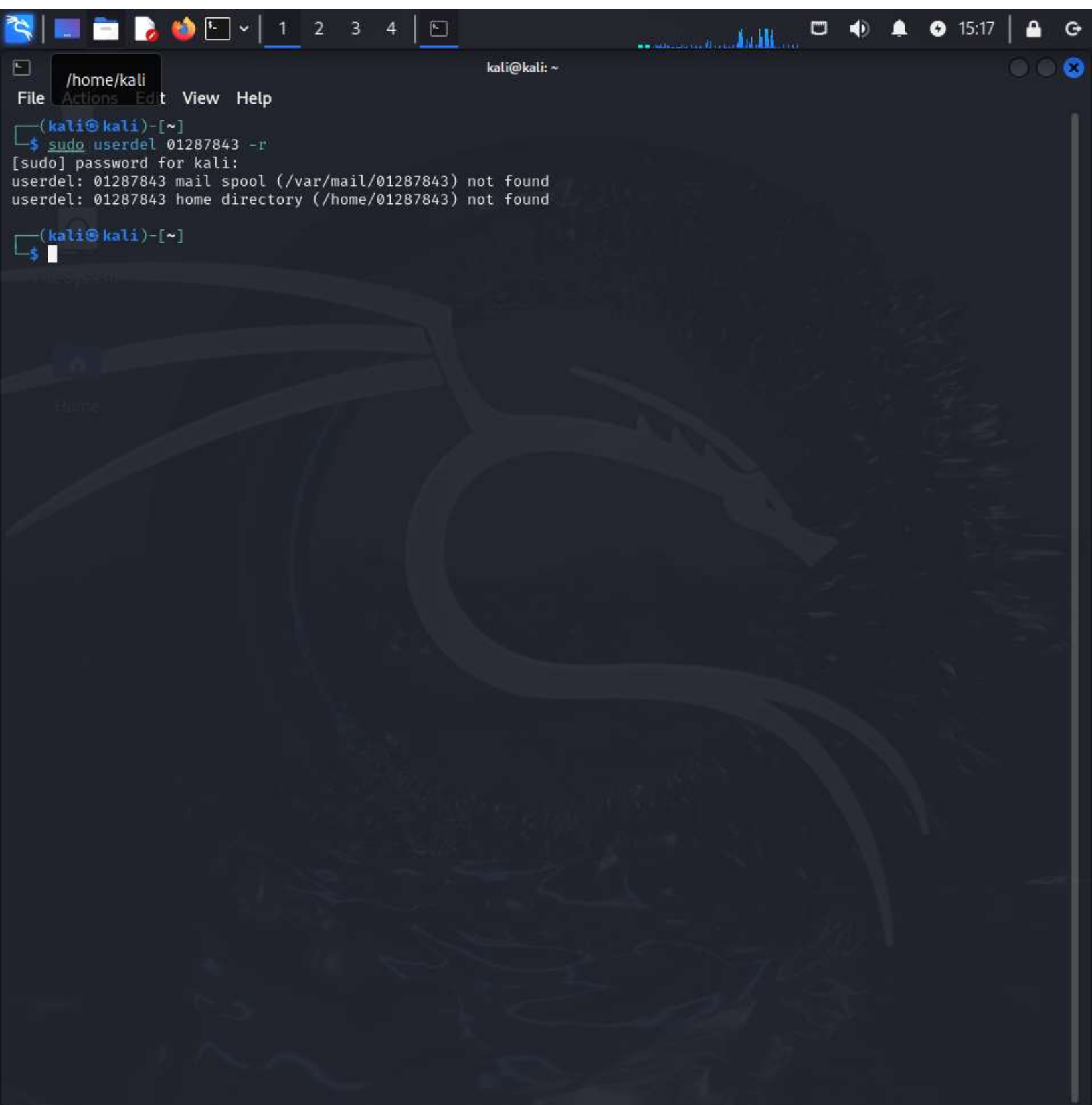
11. Delete the **newtest** group, then repeat the previous step. What do you find?



```
kali@kali: ~  
File Actions Edit View Help  
01287843@kali:/home/kali$ sudo groupdel newtest  
01287843@kali:/home/kali$ sudo ls -l testfile  
-rw-r--r-- 1 root 1287843 0 Nov 12 14:37 testfile  
01287843@kali:/home/kali$
```

Ownership has changed from newtest to 01287843 because newtest was deleted

12. Delete the user **xxxxx** along with the home directory using a single command.



```
(kali@kali)-[~]
└─$ sudo userdel 01287843 -r
[sudo] password for kali:
userdel: 01287843 mail spool (/var/mail/01287843) not found
userdel: 01287843 home directory (/home/01287843) not found

(kali@kali)-[~]
└─$
```