

**Please complete all quizzes, guided exercises, and labs for each chapter. Insert YES for each completed quiz and your screenshots in appropriate locations for each guided exercise/lab**

Did you complete **Quiz: Redirect Output to a File or Program?** **YES**

## **Guided Exercise: Edit Text Files from the Shell Prompt**

In this exercise, you use the `vimtutor` command to practice basic editing techniques in the `vim` editor.

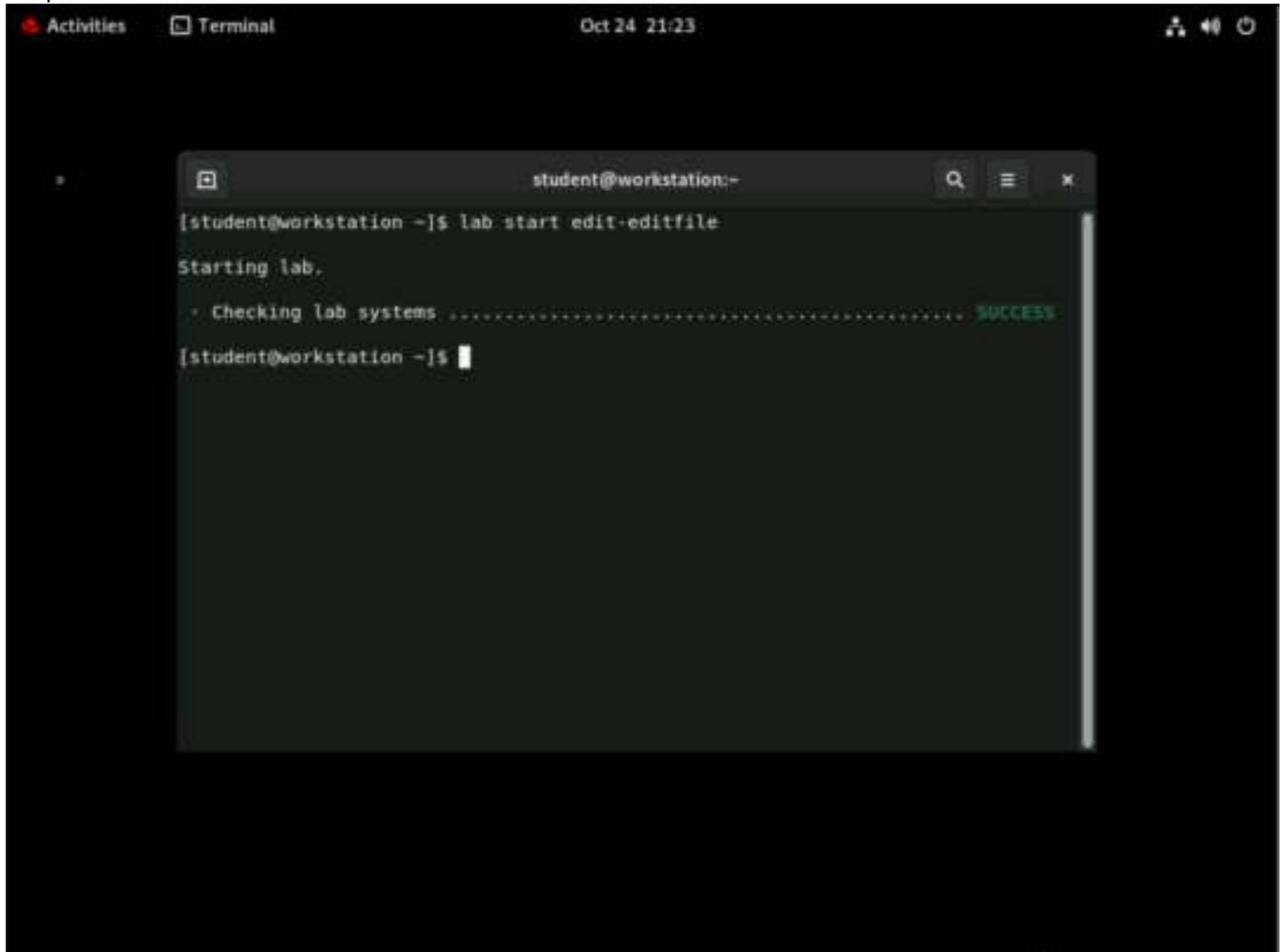
### **Outcomes**

- Edit files with Vim.
- Gain competency in Vim by using the `vimtutor` command.

As the `student` user on the `workstation` machine, use the `lab` command to prepare your system for this exercise.

This command prepares your environment and ensures that all required resources are available.

```
[student@workstation ~]$ lab start edit-editfile
```



### Procedure 5.1. Instructions

1. Use the `ssh` command to log in to the `servera` machine as the `student` user.

```
[student@workstation ~]$ ssh student@servera
...output omitted...
[student@servera ~]$
```

2. Run the `vimtutor` command. Read the Welcome screen and perform *Lesson 1.1*.

In the presentation, keyboard arrow keys help to navigate the window. Initially, when the `vi` editor was developed, users could not rely on having arrow keys or working keyboard mappings for arrow keys to move the cursor. Therefore, the `vi` editor was initially designed to move the cursor by using commands with standard character keys, such as the conveniently grouped **h**, **j**, **k**, and **l**.

Here is a way to remember them:

hang **back**, jump **down**, kick **up**, leap **forward**.

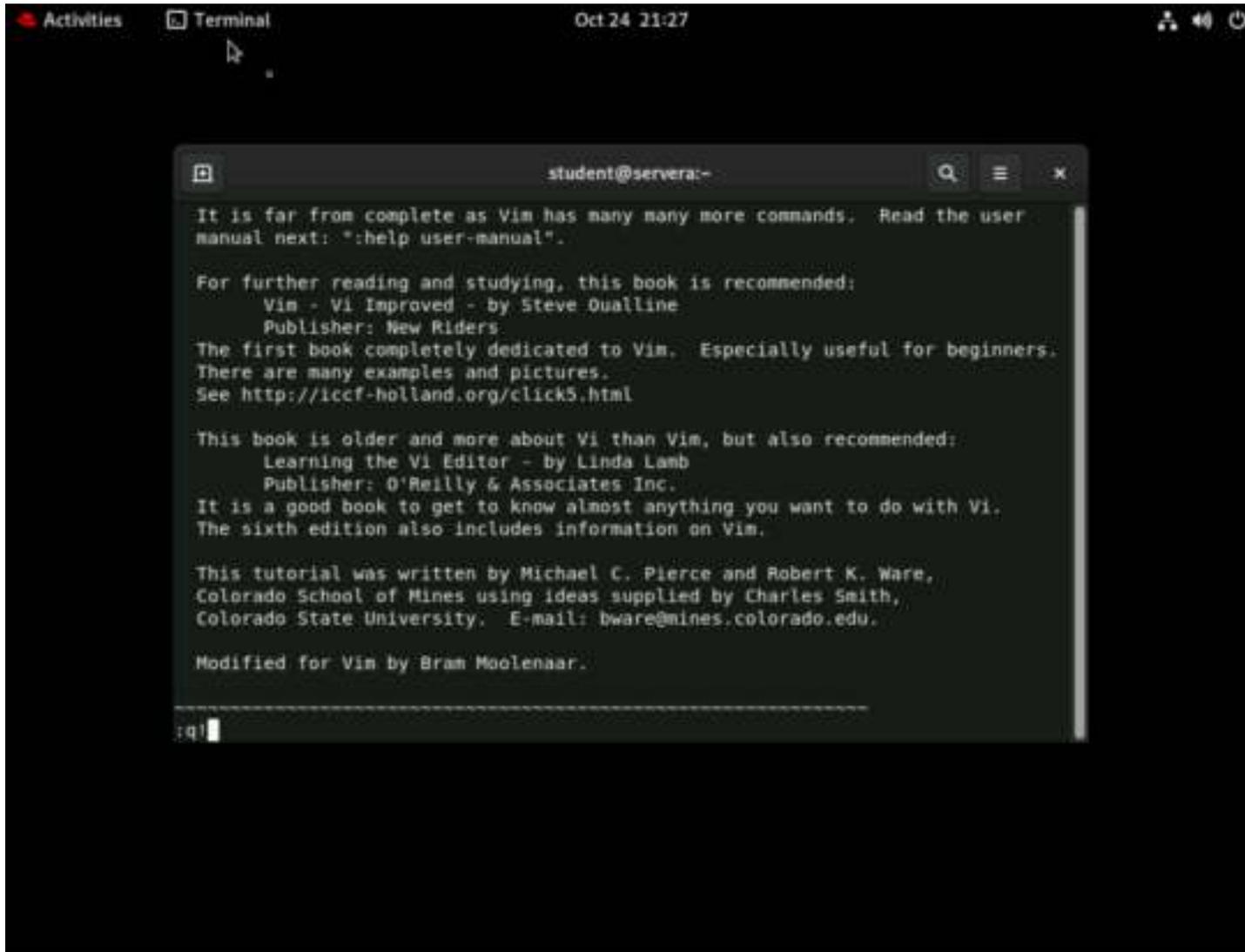
```
[student@servera ~]$ vimtutor
```



```
student@servera:~  
= Welcome to the VIM Tutor - Version 1.7 =  
-----  
Vim is a very powerful editor that has many commands, too many to  
explain in a tutor such as this. This tutor is designed to describe  
enough of the commands that you will be able to easily use Vim as  
an all-purpose editor.  
  
The approximate time required to complete the tutor is 38 minutes,  
depending upon how much time is spent with experimentation.  
  
ATTENTION:  
The commands in the lessons will modify the text. Make a copy of this  
file to practice on (if you started "vimtutor" this is already a copy).  
  
It is important to remember that this tutor is set up to teach by  
use. That means that you need to execute the commands to learn them  
properly. If you only read the text, you will forget the commands!  
  
Now, make sure that your Caps-Lock key is NOT depressed and press  
the j key enough times to move the cursor so that lesson 1.1  
completely fills the screen.  
~/tmp/tutorZXjn9l 972 lines, 33435 bytes
```

3. In the `vimtutor` window, perform *Lesson 1.2*.

This lesson teaches how to quit without keeping unwanted changes. All changes are lost. Sometimes it is preferable to lose changes than to leave a critical file in an incorrect state.

A screenshot of a Linux terminal window. The title bar shows 'Activities', 'Terminal', and the date 'Oct 24 21:27'. The terminal content is the help text for the Vim editor, displayed in a dark theme. The text includes instructions on how to read the user manual, recommendations for books like 'Vim - Vi Improved' and 'Learning the Vi Editor', and information about the tutorial's authors and the editor's creator, Bram Moolenaar. The prompt ':q!' is visible at the bottom of the terminal window.

```
student@servera:-
It is far from complete as Vim has many many more commands.  Read the user
manual next: ":help user-manual".

For further reading and studying, this book is recommended:
  Vim - Vi Improved - by Steve Oualline
  Publisher: New Riders
The first book completely dedicated to Vim.  Especially useful for beginners.
There are many examples and pictures.
See http://iccf-holland.org/click5.html

This book is older and more about Vi than Vim, but also recommended:
  Learning the Vi Editor - by Linda Lamb
  Publisher: O'Reilly & Associates Inc.
It is a good book to get to know almost anything you want to do with Vi.
The sixth edition also includes information on Vim.

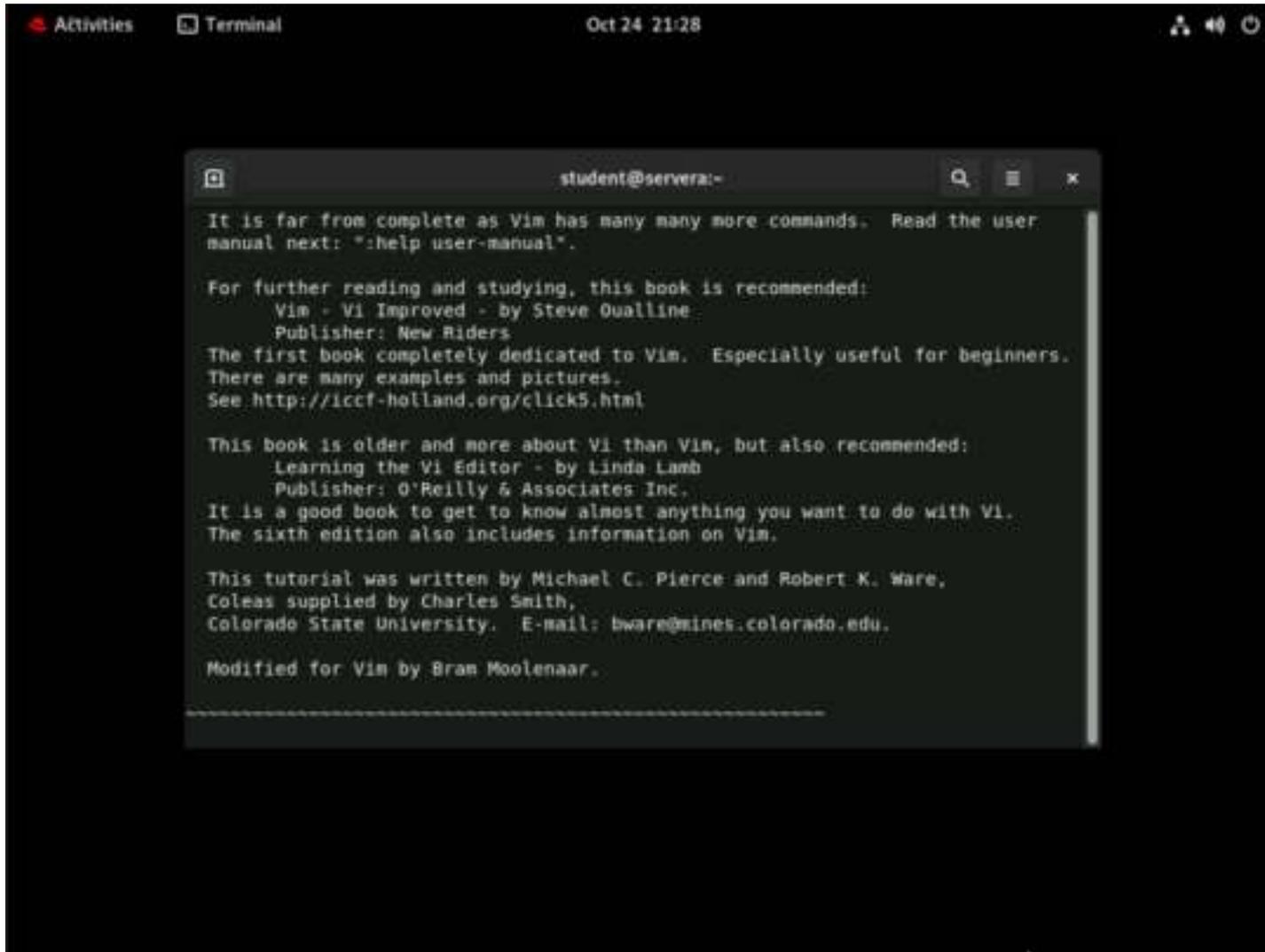
This tutorial was written by Michael C. Pierce and Robert K. Ware,
Colorado School of Mines using ideas supplied by Charles Smith,
Colorado State University.  E-mail: bware@mines.colorado.edu.

Modified for Vim by Bram Moolenaar.

:q!
```

4. In the `vimtutor` window, perform *Lesson 1.3*.

Vim has fast, efficient keystrokes to delete an exact number of words, lines, sentences, or paragraphs. Any editing is possible with the `x` key for single character deletion.

A screenshot of a Linux terminal window. The window title is "student@servera:-". The terminal displays text from the Vim user manual. The text includes instructions to read the user manual, recommendations for books like "Vim - Vi Improved" and "Learning the Vi Editor", and information about the tutorial's authors: Michael C. Pierce, Robert K. Ware, and Charles Smith. The text ends with "Modified for Vim by Bram Moolenaar." followed by a dashed line.

```
student@servera:-
It is far from complete as Vim has many many more commands. Read the user
manual next: ":help user-manual".

For further reading and studying, this book is recommended:
  Vim - Vi Improved - by Steve Oualline
  Publisher: New Riders
The first book completely dedicated to Vim. Especially useful for beginners.
There are many examples and pictures.
See http://iccf-holland.org/click5.html

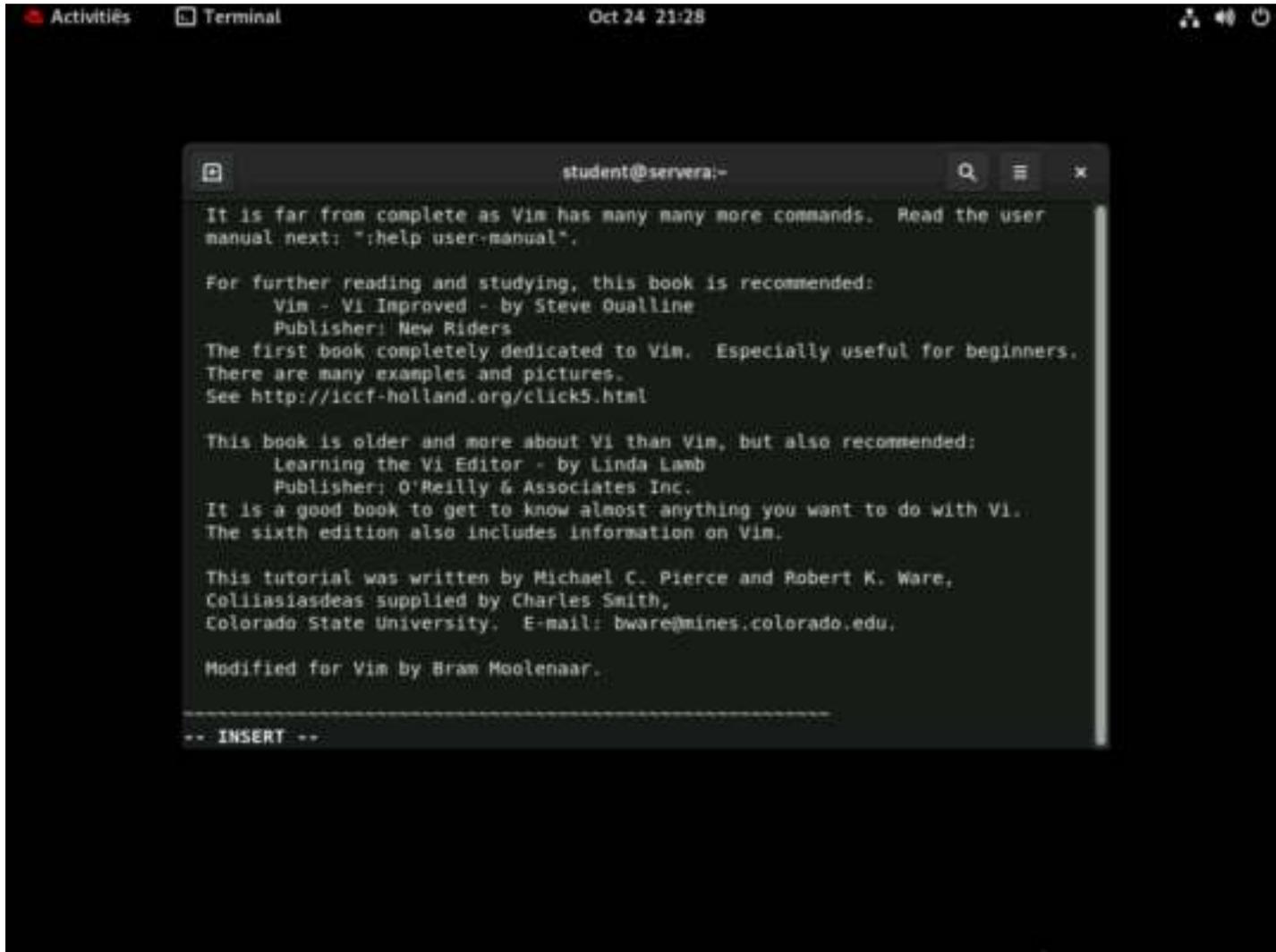
This book is older and more about Vi than Vim, but also recommended:
  Learning the Vi Editor - by Linda Lamb
  Publisher: O'Reilly & Associates Inc.
It is a good book to get to know almost anything you want to do with Vi.
The sixth edition also includes information on Vim.

This tutorial was written by Michael C. Pierce and Robert K. Ware,
Colesas supplied by Charles Smith,
Colorado State University. E-mail: bware@mines.colorado.edu.

Modified for Vim by Bram Moolenaar.
-----
```

5. In the `vimtutor` window, perform *Lesson 1.4*.

For most editing tasks, the first key that is pressed is the `i` key.

A screenshot of a Linux terminal window. The title bar shows 'Activities', 'Terminal', and the date 'Oct 24 21:28'. The terminal content is a Vim help page. It starts with a paragraph about the user manual, followed by a list of recommended books: 'Vim - Vi Improved' by Steve Oualline and 'Learning the Vi Editor' by Linda Lamb. It also mentions a tutorial by Michael C. Pierce and Robert K. Ware, and a note that it was modified for Vim by Bram Moolenaar. At the bottom, it says '-- INSERT --'.

```
student@server1:-
It is far from complete as Vim has many many more commands.  Read the user
manual next:  ":help user-manual".

For further reading and studying, this book is recommended:
    Vim - Vi Improved - by Steve Oualline
    Publisher: New Riders
The first book completely dedicated to Vim.  Especially useful for beginners.
There are many examples and pictures.
See http://iccf-holland.org/click5.html

This book is older and more about Vi than Vim, but also recommended:
    Learning the Vi Editor - by Linda Lamb
    Publisher: O'Reilly & Associates Inc.
It is a good book to get to know almost anything you want to do with Vi.
The sixth edition also includes information on Vim.

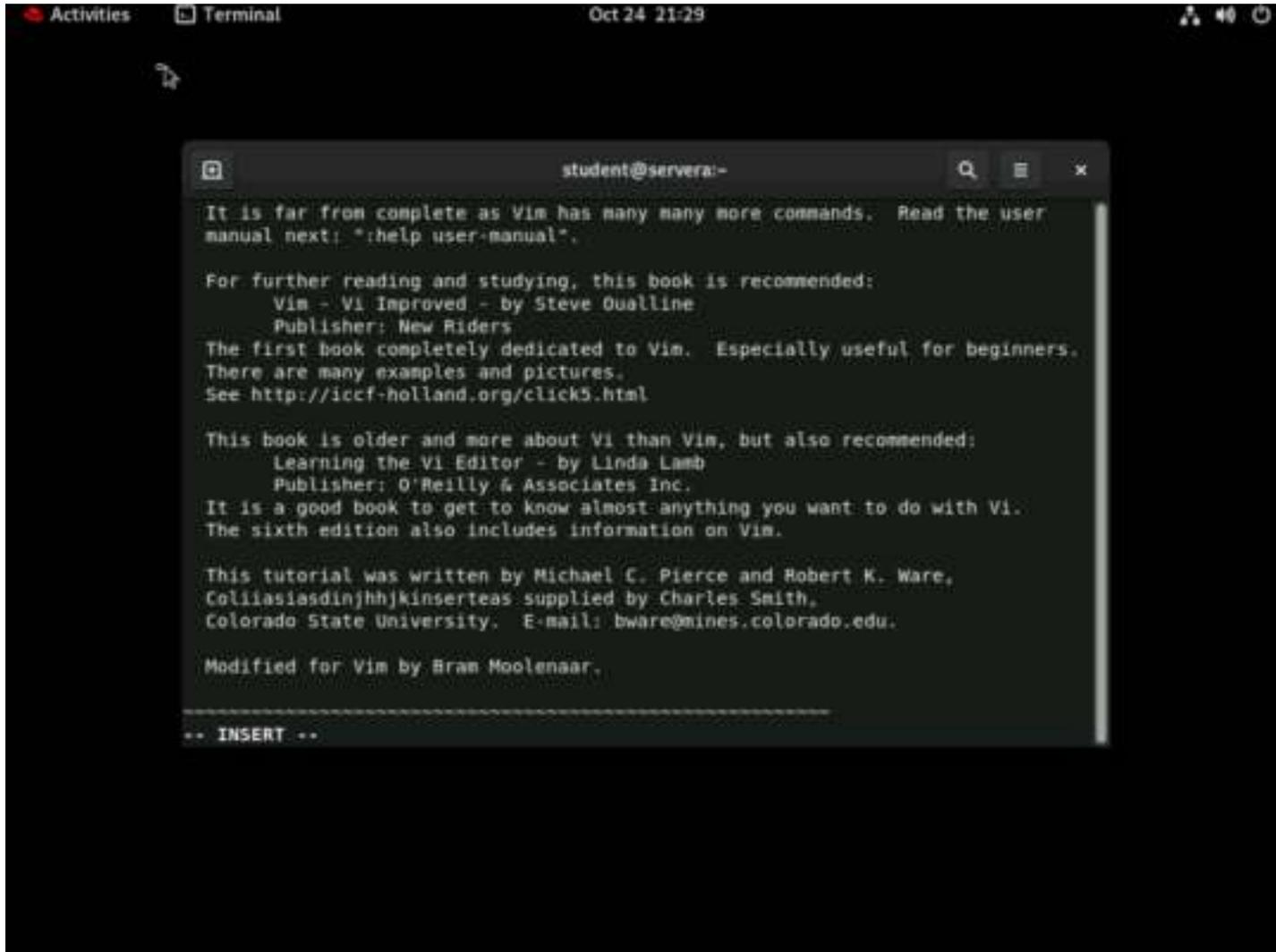
This tutorial was written by Michael C. Pierce and Robert K. Ware,
Colliasiasdeas supplied by Charles Smith,
Colorado State University.  E-mail: bware@mines.colorado.edu.

Modified for Vim by Bram Moolenaar.

-----
-- INSERT --
```

6. In the `vimtutor` window, perform *Lesson 1.5*.

The previous lecture taught only the `i` (insert) command to enter edit mode. This lesson demonstrates other available keystrokes to change the cursor placement when entered into insert mode. In insert mode, all typed text changes the file content.

A screenshot of a Linux terminal window. The window title is "student@servera:-". The terminal displays text from the Vim user manual. The text includes instructions to read the user manual, recommendations for books like "Vim - Vi Improved" and "Learning the Vi Editor", and information about the tutorial's authors and a modified version by Bram Moolenaar. At the bottom, it says "-- INSERT --".

```
student@servera:-
It is far from complete as Vim has many many more commands.  Read the user
manual next:  ":help user-manual".

For further reading and studying, this book is recommended:
    Vim - Vi Improved - by Steve Oualline
    Publisher: New Riders
The first book completely dedicated to Vim.  Especially useful for beginners.
There are many examples and pictures.
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    Learning the Vi Editor - by Linda Lamb
    Publisher: O'Reilly & Associates Inc.
It is a good book to get to know almost anything you want to do with Vi.
The sixth edition also includes information on Vim.

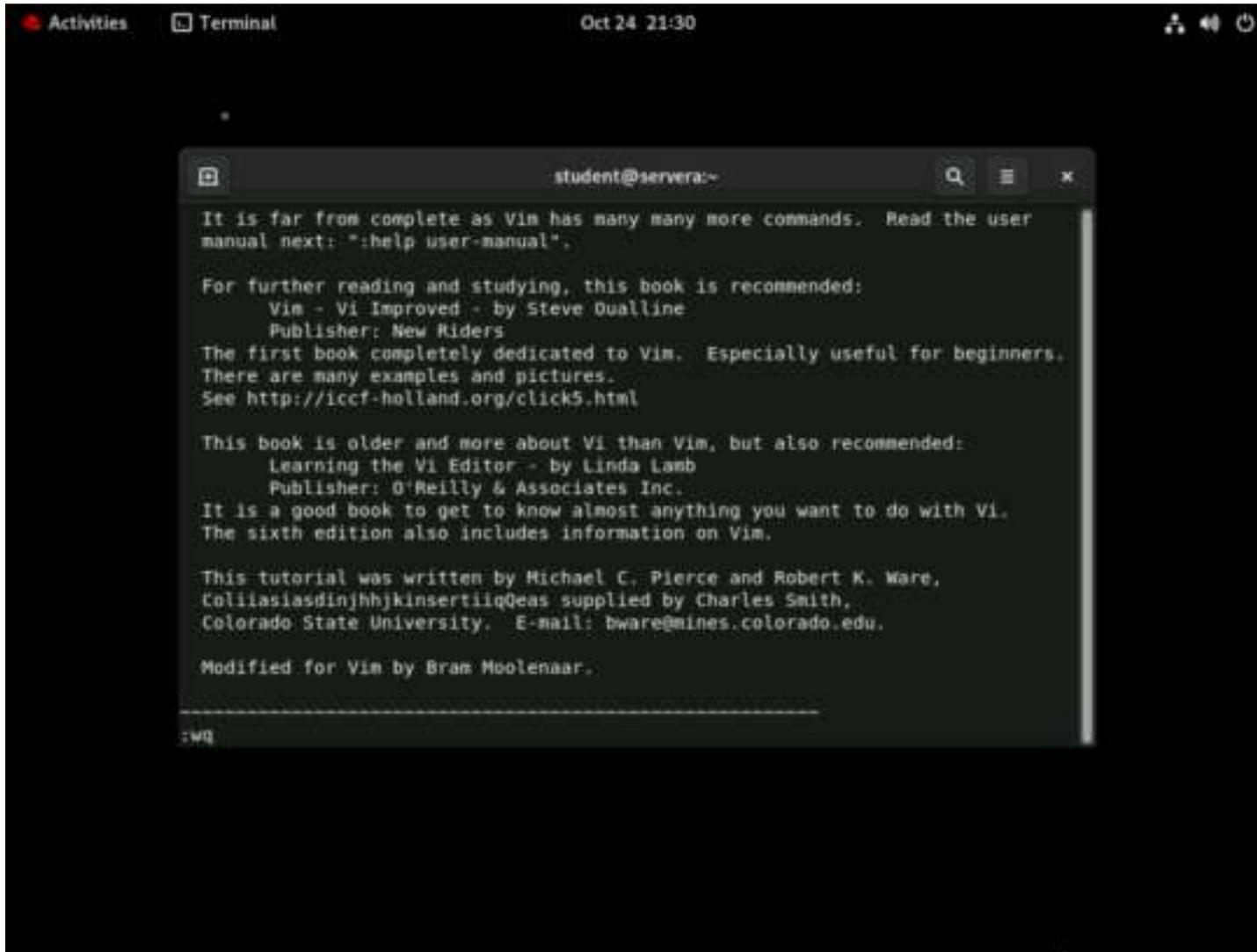
This tutorial was written by Michael C. Pierce and Robert K. Ware,
Coliasiasdinjhjkinserteas supplied by Charles Smith,
Colorado State University.  E-mail: bware@mines.colorado.edu.

Modified for Vim by Bram Moolenaar.

-----
-- INSERT --
```

7. In the `vimtutor` window, perform *Lesson 1.6*.

Type `:wq` to save the file and quit the editor.



8. In the `vimtutor` window, read the *Lesson 1 Summary*.

The `vimtutor` command includes six more multistep lessons. These lessons are not assigned as part of this course, but feel free to explore them to learn more.

9. Return to the workstation system as the `student` user.

```

[student@servera ~]$ exit
logout
Connection to servera closed.
[student@workstation ~]$

```

## Finish

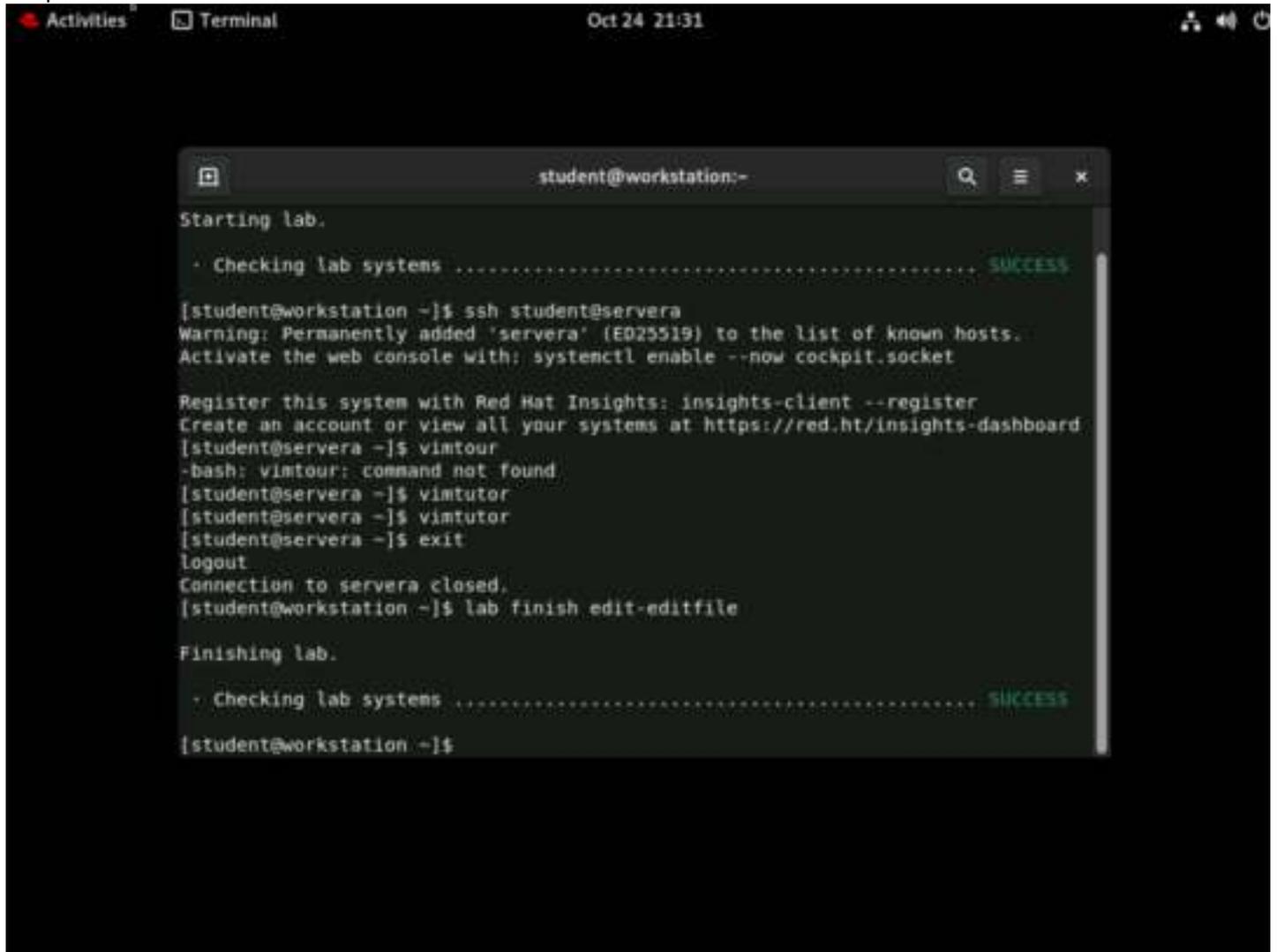
On the `workstation` machine, change to the `student` user home directory and use the `lab` command to complete this exercise. This step is important to ensure that resources from previous exercises do not impact upcoming exercises.

```

[student@workstation ~]$ lab finish edit-editfile

```

This concludes the section.

A terminal window titled "student@workstation:-" is shown. The window contains the following text:

```
Starting lab.
- Checking lab systems ..... SUCCESS

[student@workstation ~]$ ssh student@servera
Warning: Permanently added 'servera' (ED25519) to the list of known hosts.
Activate the web console with: systemctl enable --now cockpit.socket

Register this system with Red Hat Insights: insights-client --register
Create an account or view all your systems at https://red.ht/insights-dashboard
[student@servera ~]$ vintour
-bash: vintour: command not found
[student@servera ~]$ vimtutor
[student@servera ~]$ vimtutor
[student@servera ~]$ exit
logout
Connection to servera closed.
[student@workstation ~]$ lab finish edit-editfile

Finishing lab.
- Checking lab systems ..... SUCCESS

[student@workstation ~]$
```

## Guided Exercise: Change the Shell Environment

In this exercise, you use shell variables and variable expansion to run commands and set an environment variable to adjust the default editor for new shells.

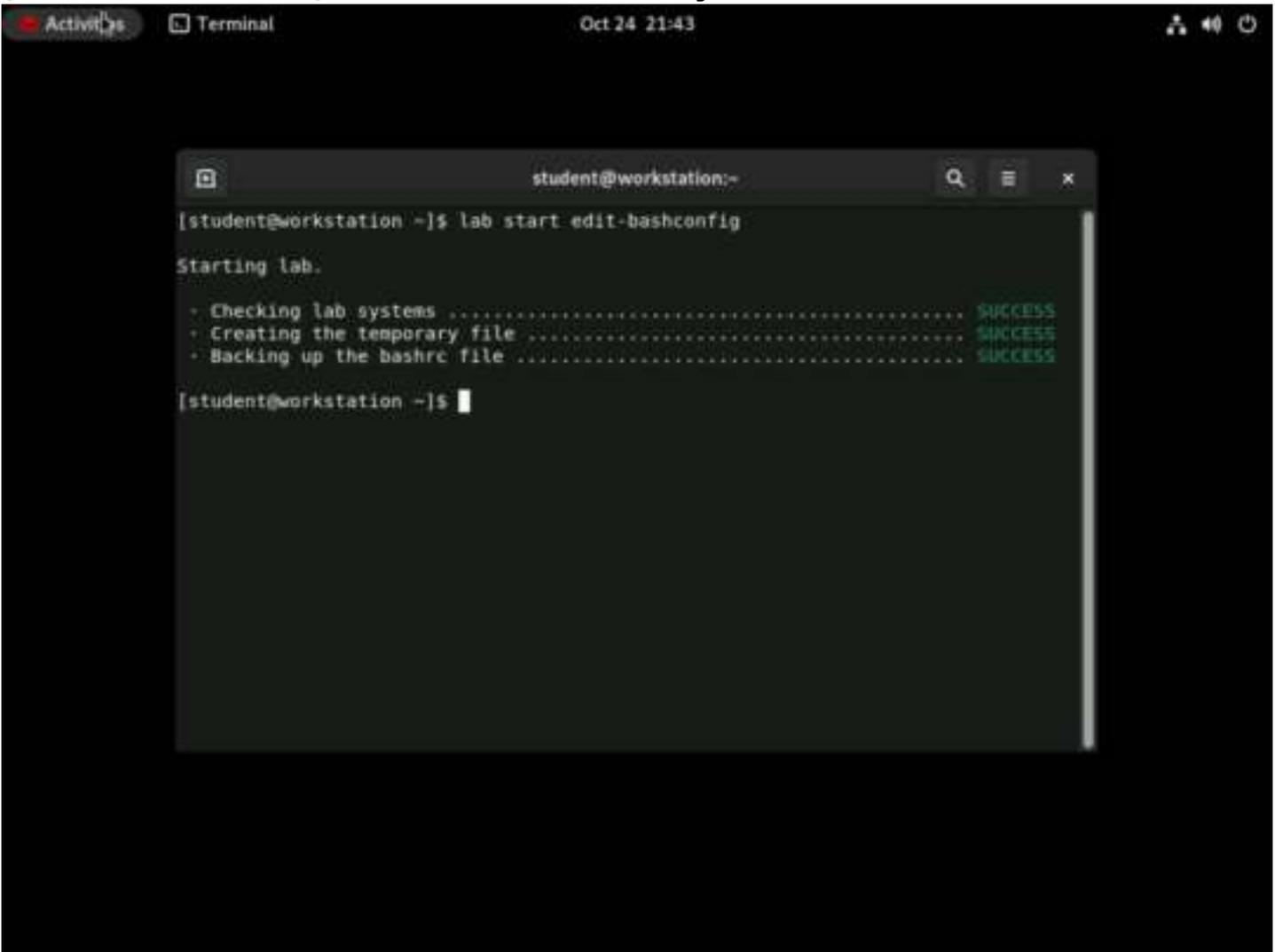
### Outcomes

- Edit a user profile.
- Create a shell variable.
- Create an environment variable.

As the `student` user on the `workstation` machine, use the `lab` command to prepare your system for this exercise.

This command ensures that all required resources are available.

```
[student@workstation ~]$ lab start edit-bashconfig
```

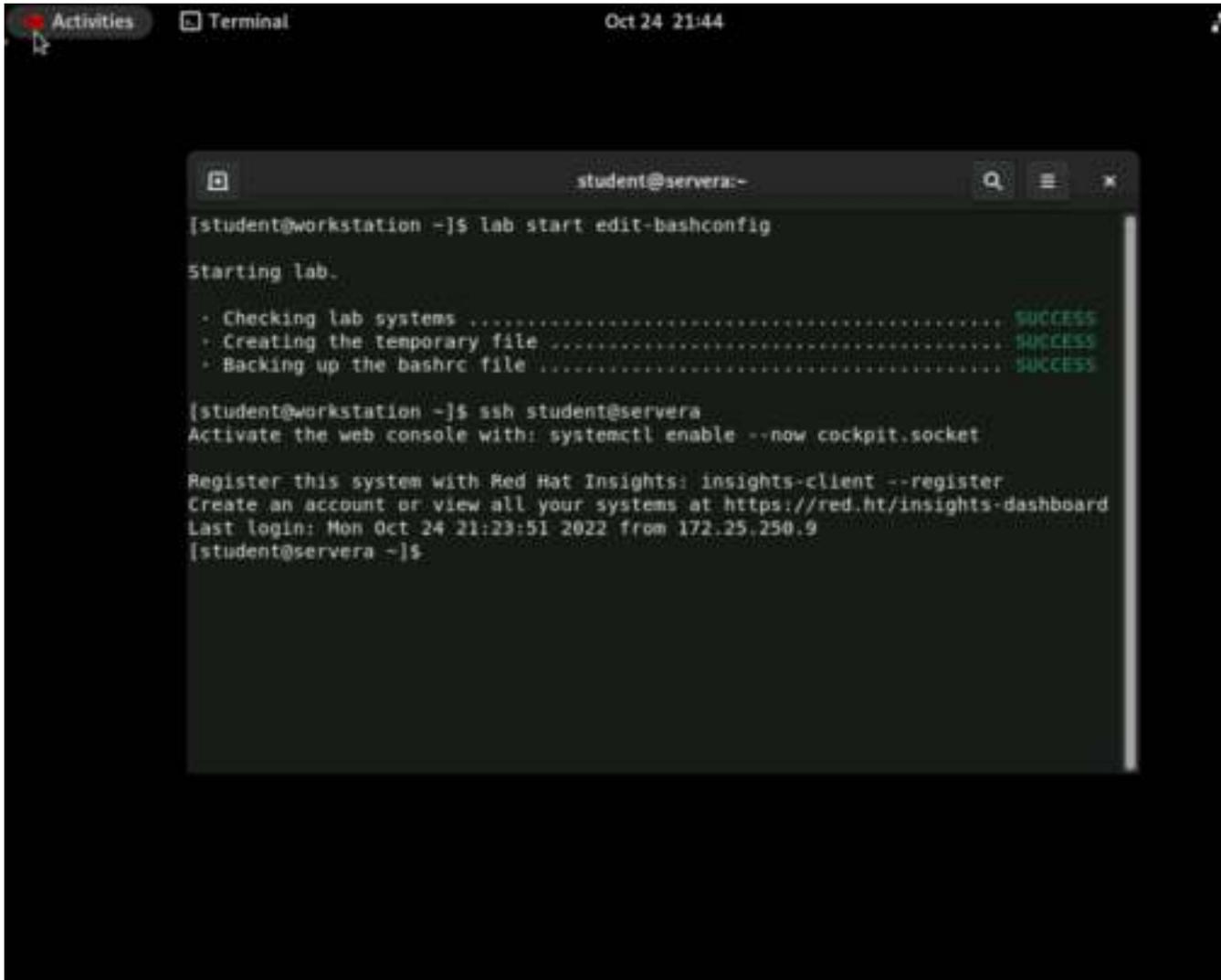


### Procedure 5.2. Instructions

## Chapter 5

1. Change the `student` user's `PS1` shell variable to `[\u@\h \t \w]$` (remember to put the value of `PS1` in quotation marks and include a trailing space after the dollar sign). This change adds the time to the prompt.
  1. Use the `ssh` command to log in to `servera` as the `student` user.

```
[student@workstation ~]$ ssh student@servera
...output omitted...
[student@servera ~]$
```



2. Use Vim to edit the `~/.bashrc` configuration file.

```
[student@servera ~]$ vim ~/.bashrc
```

```

student@servera:~
└─$ cat ~/.bashrc
# Source global definitions
if [ -f /etc/bashrc ]; then
    . /etc/bashrc
fi

# User specific environment
if ! [[ "$PATH" == "$HOME/.local/bin:$HOME/bin:" ]]
then
    PATH="$HOME/.local/bin:$HOME/bin:$PATH"
fi
export PATH

# Uncomment the following line if you don't like systemctl's auto-paging feature
# export SYSTEMD_PAGER=

# User specific aliases and functions
if [ -d ~/.bashrc.d ]; then
    for rc in ~/.bashrc.d/*; do
        if [ -f "$rc" ]; then
            . "$rc"
        fi
    done
fi

*~/.bashrc* 27L, 492B          1,1          Top

```

3. Add the `PS1` shell variable and its value to the `~/.bashrc` file. Set the value of the shell variable, including a trailing space at the end, inside quotation marks.

```

...output omitted...
export PATH
PS1='[\u@\h \t \w]$ '

```

The image shows a terminal window titled "student@servera:~" with a search icon, a menu icon, and a close icon in the top right corner. The terminal displays the following code:

```

fi

# User specific environment
if ! [[ "$PATH" =~ "$HOME/.local/bin:$HOME/bin:" ]]
then
    PATH="$HOME/.local/bin:$HOME/bin:$PATH"
fi
export PATH
PS1='${w}@${h} \t \w$ '
# Uncomment the following line if you don't like systemctl's auto-paging feature
# export SYSTEMD_PAGER=

# User specific aliases and functions
if [ -d ~/.bashrc.d ]; then
    for rc in ~/.bashrc.d/*; do
        if [ -f "$rc" ]; then
            . "$rc"
        fi
    done
fi

kunset rc
-- INSERT --
14,22 Bot

```

- Exit from `servera` and log in again by using the `ssh` command to update the command prompt, or execute the `~/ .bashrc` file by using the `source ~/ .bashrc` command.

```

[student@servera ~]$ exit
logout
Connection to servera closed.
[student@workstation ~]$ ssh student@servera
...output omitted...

```

```
[student@servera 14:45:05 ~]$
```

```

Starting lab.
- Checking lab systems ..... SUCCESS
- Creating the temporary file ..... SUCCESS
- Backing up the bashrc file ..... SUCCESS

[student@workstation ~]$ ssh student@servera
Activate the web console with: systemctl enable --now cockpit.socket

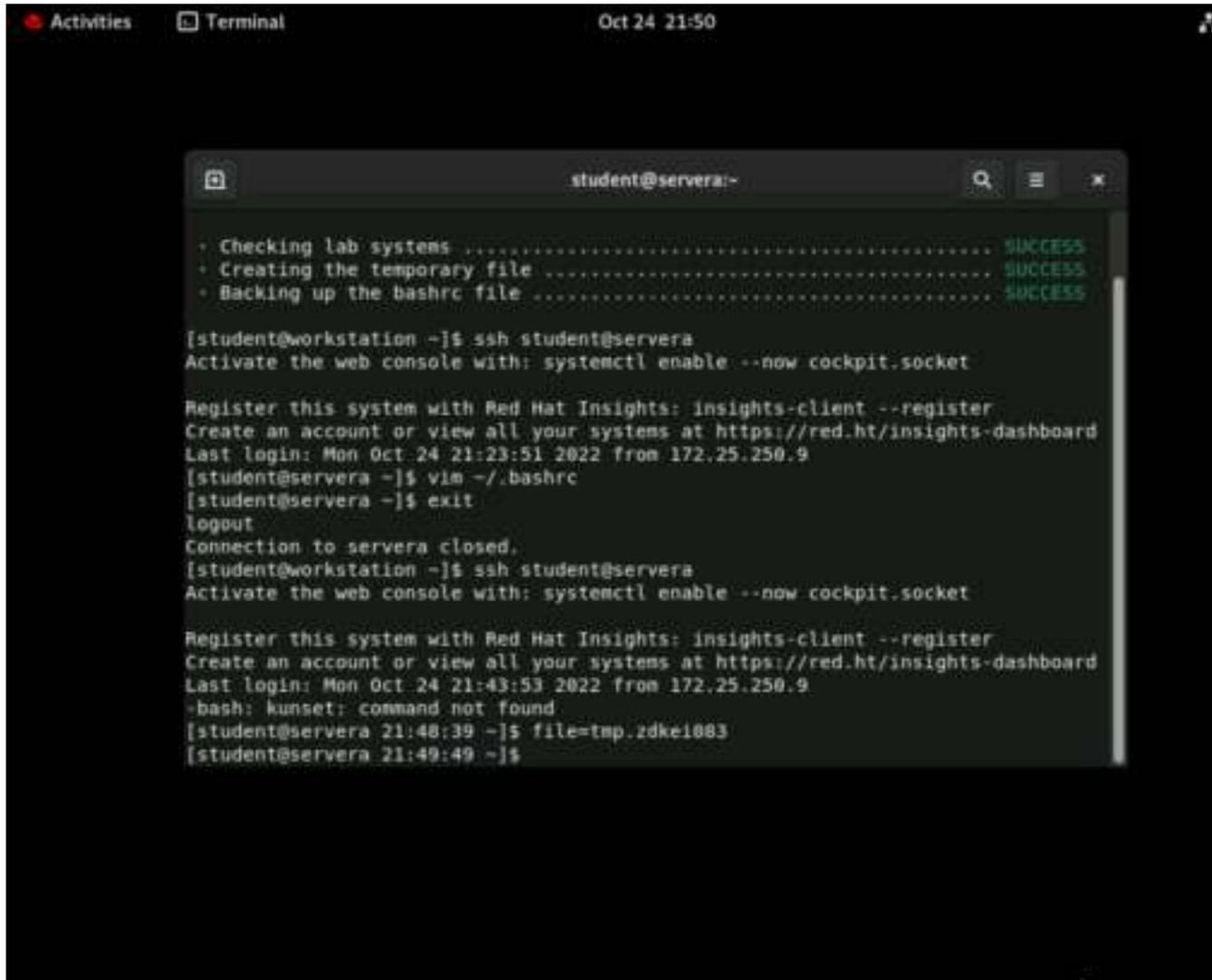
Register this system with Red Hat Insights: insights-client --register
Create an account or view all your systems at https://red.ht/insights-dashboard
Last login: Mon Oct 24 21:23:51 2022 from 172.25.250.9
[student@servera ~]$ vim ~/.bashrc
[student@servera ~]$ exit
Logout
Connection to servera closed.
[student@workstation ~]$ ssh student@servera
Activate the web console with: systemctl enable --now cockpit.socket

Register this system with Red Hat Insights: insights-client --register
Create an account or view all your systems at https://red.ht/insights-dashboard
Last login: Mon Oct 24 21:43:53 2022 from 172.25.250.9
-bash: kunset: command not found
[student@servera 21:48:39 ~]$

```

2. Assign a value to a local shell variable. Variable names can contain uppercase or lowercase letters, digits, and the underscore character. Retrieve the variable value.
  1. Create a new variable called `file` with a value of `tmp.zdkei083`. The `tmp.zdkei083` file exists in the `student` home directory.

```
[student@servera 14:47:05 ~]$ file=tmp.zdkei083
```



The screenshot shows a terminal window titled 'student@servera:-' with the following output:

```
• Checking lab systems ..... SUCCESS
• Creating the temporary file ..... SUCCESS
• Backing up the bashrc file ..... SUCCESS

[student@workstation ~]$ ssh student@servera
Activate the web console with: systemctl enable --now cockpit.socket

Register this system with Red Hat Insights: insights-client --register
Create an account or view all your systems at https://red.ht/insights-dashboard
Last login: Mon Oct 24 21:23:51 2022 from 172.25.250.9
[student@servera ~]$ vim ~/.bashrc
[student@servera ~]$ exit
logout
Connection to servera closed.
[student@workstation ~]$ ssh student@servera
Activate the web console with: systemctl enable --now cockpit.socket

Register this system with Red Hat Insights: insights-client --register
Create an account or view all your systems at https://red.ht/insights-dashboard
Last login: Mon Oct 24 21:43:53 2022 from 172.25.250.9
-bash: kunset: command not found
[student@servera 21:48:39 ~]$ file=tmp.zdkei083
[student@servera 21:49:49 ~]$
```

2. Retrieve the value of the `file` variable.

```
[student@servera 14:48:35 ~]$ echo $file
tmp.zdkei083
```

```

Oct 24 21:50

+ Creating the temporary file ..... SUCCESS
+ Backing up the bashrc file ..... SUCCESS

[student@workstation ~]$ ssh student@servera
Activate the web console with: systemctl enable --now cockpit.socket

Register this system with Red Hat Insights: insights-client --register
Create an account or view all your systems at https://red.ht/insights-dashboard
Last login: Mon Oct 24 21:23:51 2022 from 172.25.250.9
[student@servera ~]$ vim ~/.bashrc
[student@servera ~]$ exit
logout
Connection to servera closed.
[student@workstation ~]$ ssh student@servera
Activate the web console with: systemctl enable --now cockpit.socket

Register this system with Red Hat Insights: insights-client --register
Create an account or view all your systems at https://red.ht/insights-dashboard
Last login: Mon Oct 24 21:43:53 2022 from 172.25.250.9
-bash: kunset: command not found
[student@servera 21:48:39 ~]$ file=tmp.zdkei083
[student@servera 21:49:49 ~]$ echo $file
tmp.zdkei083
[student@servera 21:50:19 ~]$

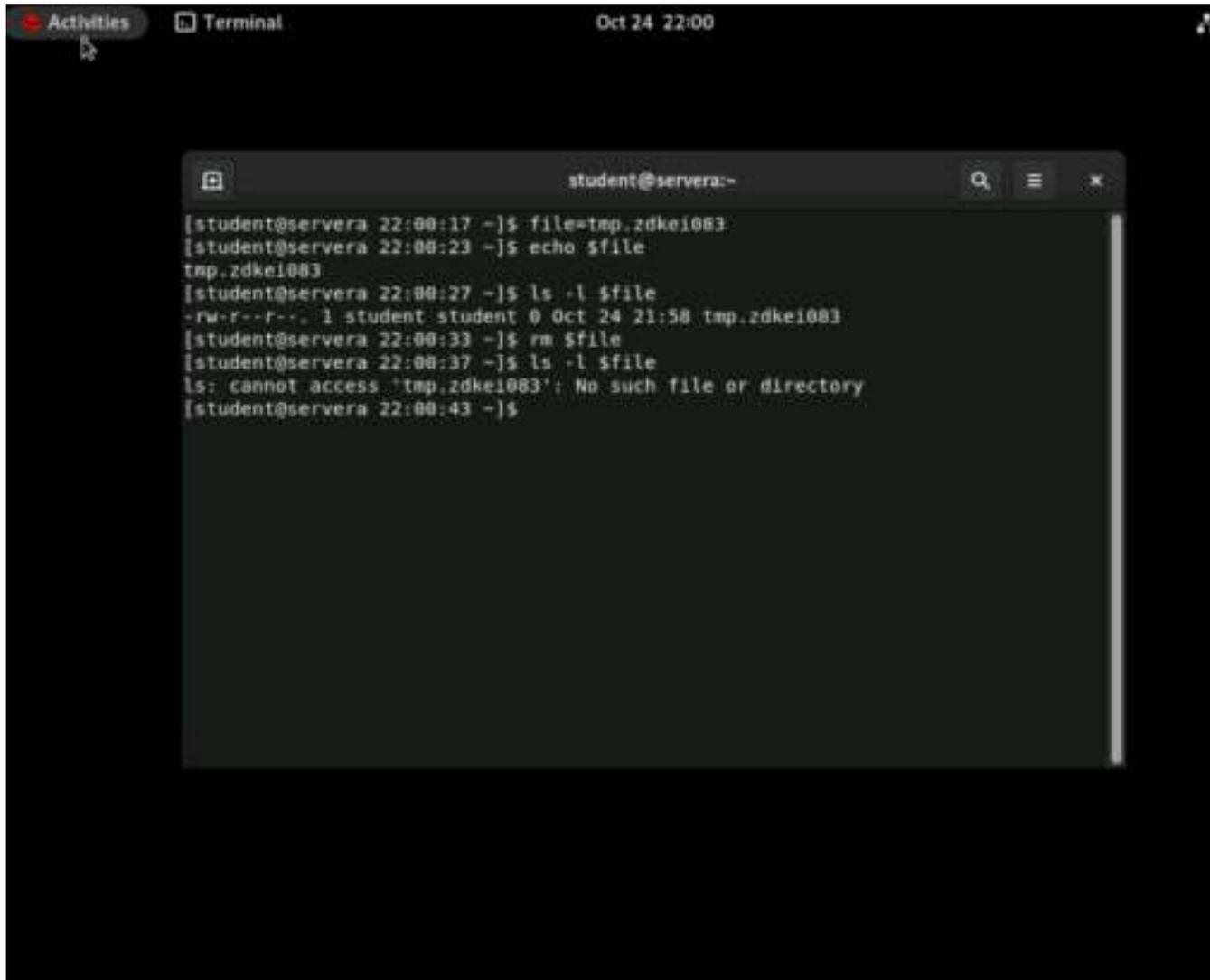
```

- Use the `file` variable name and the `ls -l` command to list the `tmp.zdkei083` file. Use the `rm` command and the `file` variable name to delete the `tmp.zdkei083` file. Verify that the file is deleted.

```

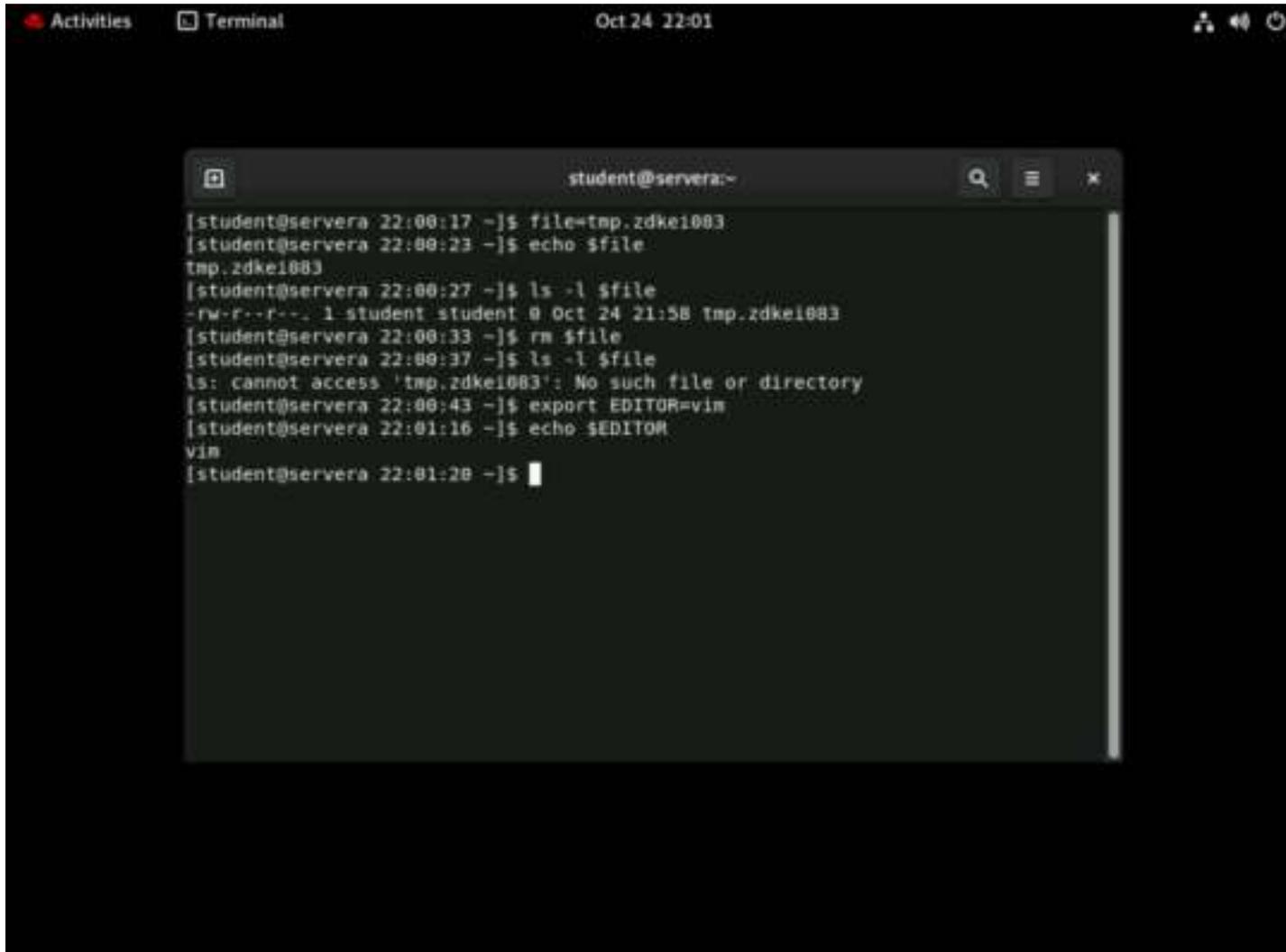
[student@servera 14:59:07 ~]$ ls -l $file
-rw-rw-r--. 1 student student 0 Jan 23 14:59 tmp.zdkei083
[student@servera 14:59:10 ~]$ rm $file
[student@servera 14:59:15 ~]$ ls -l $file
ls: cannot access 'tmp.zdkei083': No such file or directory

```

A terminal window titled 'student@servera:-' is shown within a desktop environment. The terminal displays a series of commands and their outputs: 1. 'file=tmp.zdke1083' is assigned to the variable 'file'. 2. 'echo \$file' outputs 'tmp.zdke1083'. 3. 'ls -l \$file' shows file details: '-rw-r--r--. 1 student student 0 Oct 24 21:58 tmp.zdke1083'. 4. 'rm \$file' removes the file. 5. 'ls -l \$file' outputs an error: 'ls: cannot access 'tmp.zdke1083': No such file or directory'. The terminal prompt is '[student@servera 22:00:43 ~]\$'.

3. Assign a value to the `editor` variable. Use one command to assign the variable as an environment variable.

```
[student@servera 14:46:40 ~]$ export EDITOR=vim  
[student@servera 14:46:55 ~]$ echo $EDITOR  
Vim
```



```
Activities Terminal Oct 24 22:01
student@servera:~
[student@servera 22:00:17 ~]$ file=tmp.zdkei083
[student@servera 22:00:23 ~]$ echo $file
tmp.zdkei083
[student@servera 22:00:27 ~]$ ls -l $file
-rw-r--r--. 1 student student 0 Oct 24 21:58 tmp.zdkei083
[student@servera 22:00:33 ~]$ rm $file
[student@servera 22:00:37 ~]$ ls -l $file
ls: cannot access 'tmp.zdkei083': No such file or directory
[student@servera 22:00:43 ~]$ export EDITOR=vim
[student@servera 22:01:16 ~]$ echo $EDITOR
vim
[student@servera 22:01:28 ~]$
```

- Return to the workstation system as the `student` user.

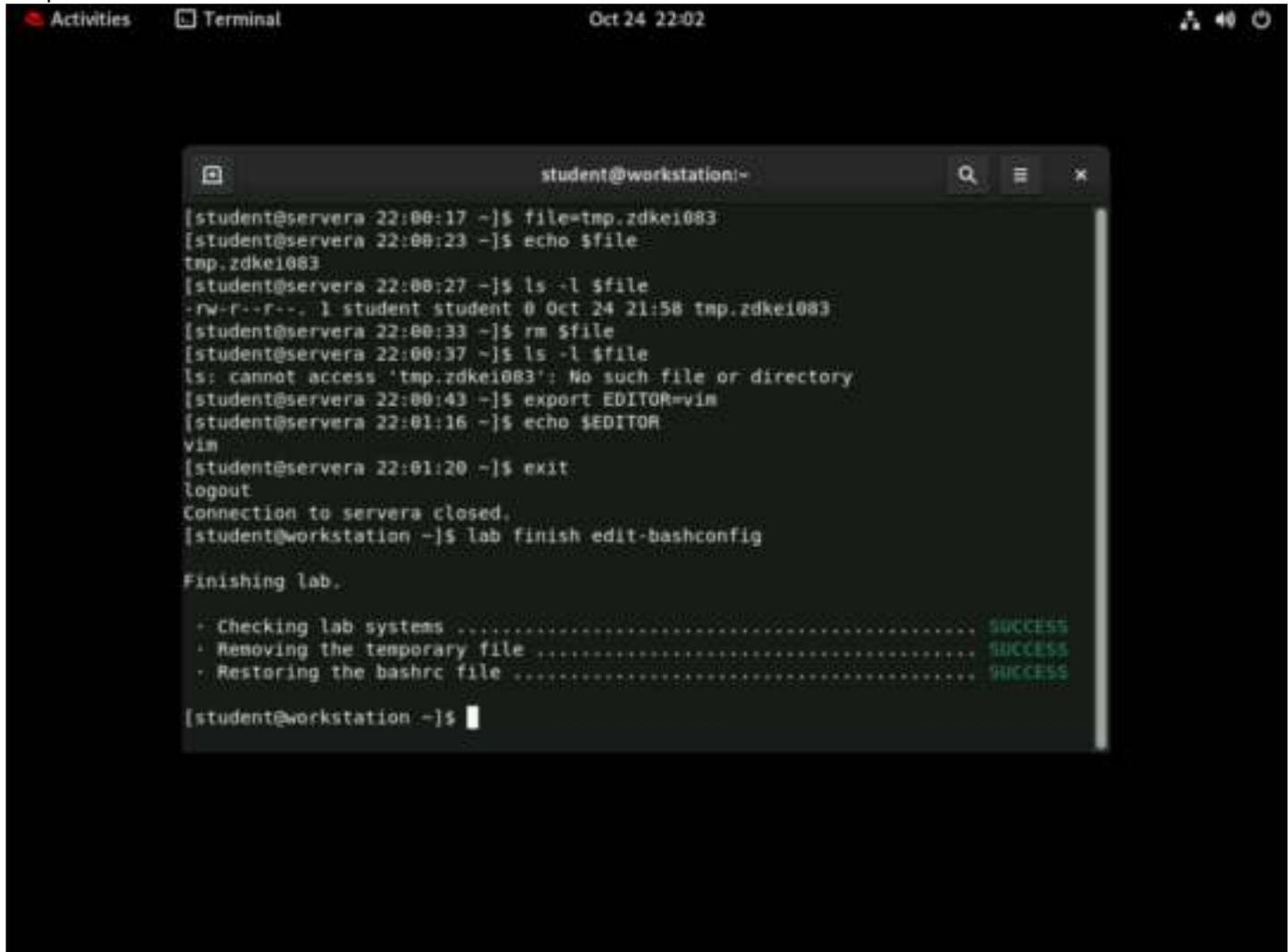
```
[student@servera 14:47:11 ~]$ exit
logout
Connection to servera closed.
[student@workstation ~]$
```

## Finish

On the workstation machine, change to the `student` user home directory and use the `lab` command to complete this exercise. This step is important to ensure that resources from previous exercises do not impact upcoming exercises.

```
[student@workstation ~]$ lab finish edit-bashconfig
```

This concludes the section.

A terminal window titled 'student@workstation:~' is shown. The terminal output is as follows:

```
[student@servera 22:00:17 ~]$ file=tmp.zdkei083
[student@servera 22:00:23 ~]$ echo $file
tmp.zdkei083
[student@servera 22:00:27 ~]$ ls -l $file
-rw-r--r--. 1 student student 0 Oct 24 21:58 tmp.zdkei083
[student@servera 22:00:33 ~]$ rm $file
[student@servera 22:00:37 ~]$ ls -l $file
ls: cannot access 'tmp.zdkei083': No such file or directory
[student@servera 22:00:43 ~]$ export EDITOR=vim
[student@servera 22:01:16 ~]$ echo $EDITOR
vim
[student@servera 22:01:20 ~]$ exit
logout
Connection to servera closed.
[student@workstation ~]$ lab finish edit-bashconfig

Finishing lab.

- Checking lab systems ..... SUCCESS
- Removing the temporary file ..... SUCCESS
- Restoring the bashrc file ..... SUCCESS

[student@workstation ~]$
```

## Lab: Create, View, and Edit Text Files

In this lab you edit a text file with the `vim` editor.

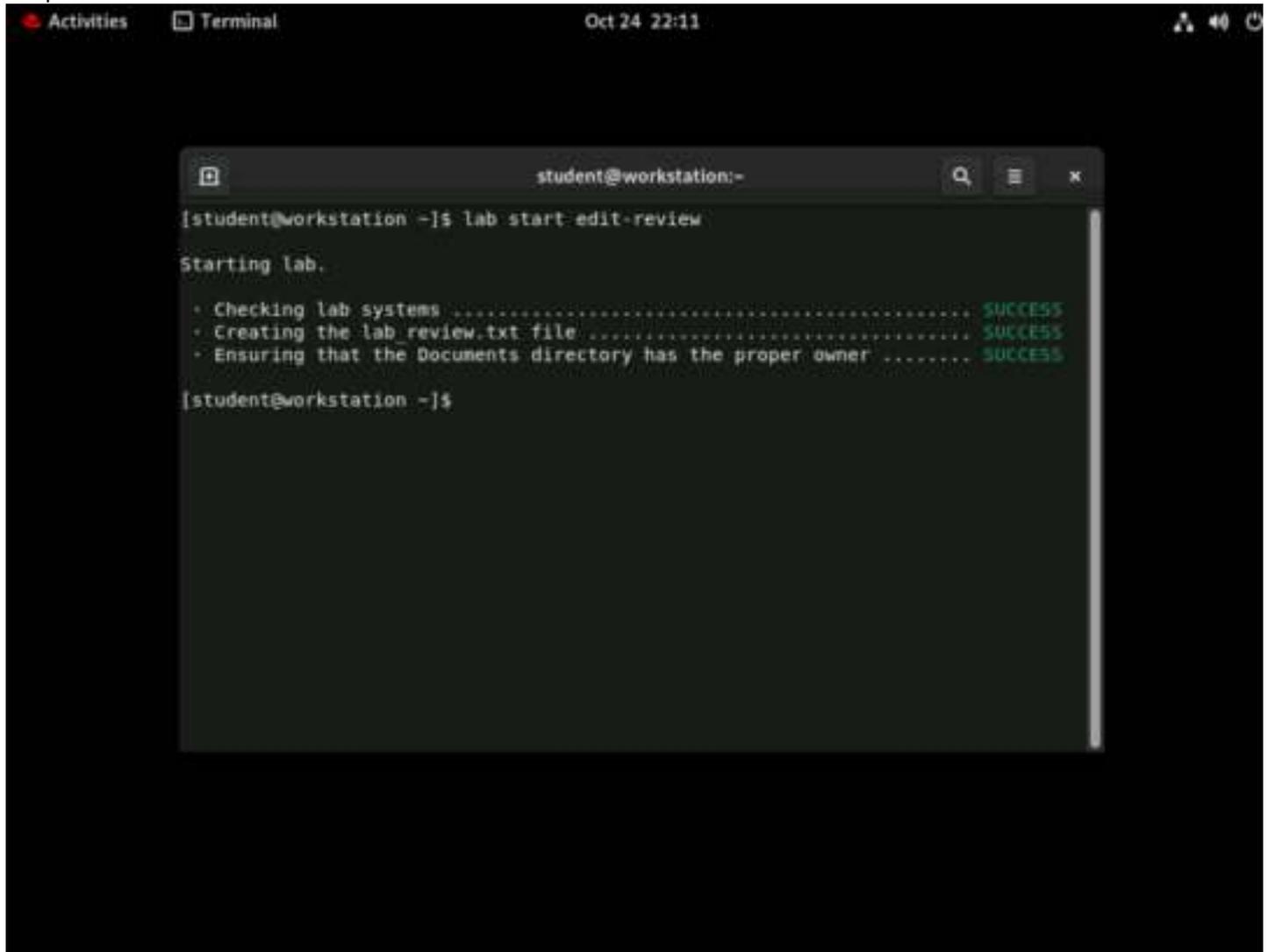
### Outcomes

- Use Vim to edit files.
- Use Vim visual mode to simplify editing large files.

As the `student` user on the `workstation` machine, use the `lab` command to prepare your system for this exercise.

This command prepares your environment and ensures that all required resources are available.

```
[student@workstation ~]$ lab start edit-review
```

A terminal window titled 'student@workstation:-' is shown. The prompt is '[student@workstation ~]\$'. The user enters the command 'lab start edit-review'. The output is 'Starting lab.' followed by three bullet points, each ending with 'SUCCESS' in green text: 'Checking lab systems', 'Creating the lab\_review.txt file', and 'Ensuring that the Documents directory has the proper owner'. The prompt returns to '[student@workstation ~]\$'.

### Procedure 5.3. Instructions

1. On workstation, create the `lab_file` shell variable and assign `editing_final_lab.txt` as the value. List the `student` home directory, including hidden directories and files, and redirect the output to the `editing_final_lab.txt` file by using the shell variable.



```

total 36
drwx-----, 2B student student 4096 Oct 24 22:12 .
drwxr-xr-x, 5 root root 53 May 18 09:55 ..
drwxr-xr-x, 4 student student 27 Jun 9 07:03 .ansible
-rw-----, 1 student student 625 Oct 24 21:51 .bash_history
-rw-r--r--, 1 student student 18 Nov 5 2021 .bash_logout
-rw-r--r--, 1 student student 141 Nov 5 2021 .bash_profile
-rw-r--r--, 1 student student 492 Nov 5 2021 .bashrc
drwxr-xr-x, 13 student student 4096 Oct 24 20:19 .cache
drwxr-xr-x, 13 student student 4096 Oct 24 21:54 .config
drwxr-xr-x, 2 student student 6 Oct 24 19:40 Desktop
drwxr-xr-x, 2 student student 28 Oct 24 22:10 Documents
drwxr-xr-x, 2 student student 6 Oct 24 19:40 Downloads
-rw-rw-r--, 1 student student 0 Oct 24 22:12 editing_final_lab.txt
drwxr-xr-x, 2 student student 25 May 18 08:00 .grading
drwxr-xr-x, 2 student student 6 Oct 24 19:39 .ipython
drwxr-xr-x, 2 student student 22 Oct 24 20:47 .jupyter
-rw-----, 1 student student 20 Oct 24 20:19 .lessht
drwxr-xr-x, 4 student student 32 Oct 24 19:40 .local
drwxrwxr-x, 5 student student 66 Oct 24 20:19 .mozilla
drwxr-xr-x, 2 student student 6 Oct 24 19:40 Music
drwxr-xr-x, 2 student student 6 Oct 24 19:40 Pictures
drwxr-xr-x, 2 student student 6 Oct 24 19:40 Public
-rw-r--r--, 1 student student 3073 Oct 24 19:39 .rht-labs-dle.log
drwx-----, 2 student student 119 Oct 24 21:43 .ssh
drwxr-xr-x, 2 student student 6 Oct 24 19:40 Templates
drwxr-xr-x, 3 student student 18 May 18 08:00 .venv
drwxr-xr-x, 2 student student 6 Oct 24 19:40 Videos

```

3. Enter the line-based visual mode of Vim. Your screen output may be different than these examples. Remove the first three lines of the `editing_final_lab.txt` file.

```

total 36
drwx-----, 2B student student 4096 Oct 24 22:12 .
drwxr-xr-x, 5 root root 53 May 18 09:55 ..
drwxr-xr-x, 4 student student 27 Jun 9 07:03 .ansible
-rw-----, 1 student student 625 Oct 24 21:51 .bash_history
-rw-r--r--, 1 student student 18 Nov 5 2021 .bash_logout
-rw-r--r--, 1 student student 141 Nov 5 2021 .bash_profile
-rw-r--r--, 1 student student 492 Nov 5 2021 .bashrc
drwxr-xr-x, 13 student student 4096 Oct 24 20:19 .cache
drwxr-xr-x, 13 student student 4096 Oct 24 21:54 .config
drwxr-xr-x, 2 student student 6 Oct 24 19:40 Desktop
drwxr-xr-x, 2 student student 28 Oct 24 22:10 Documents
drwxr-xr-x, 2 student student 6 Oct 24 19:40 Downloads
-rw-rw-r--, 1 student student 0 Oct 24 22:12 editing_final_lab.txt
drwxr-xr-x, 2 student student 25 May 18 08:00 .grading
drwxr-xr-x, 2 student student 6 Oct 24 19:39 .ipython
drwxr-xr-x, 2 student student 22 Oct 24 20:47 .jupyter
-rw-----, 1 student student 20 Oct 24 20:19 .lessht
drwxr-xr-x, 4 student student 32 Oct 24 19:40 .local
drwxrwxr-x, 5 student student 66 Oct 24 20:19 .mozilla
drwxr-xr-x, 2 student student 6 Oct 24 19:40 Music
drwxr-xr-x, 2 student student 6 Oct 24 19:40 Pictures
drwxr-xr-x, 2 student student 6 Oct 24 19:40 Public
-rw-r--r--, 1 student student 3073 Oct 24 19:39 .rht-labs-dle.log
drwx-----, 2 student student 119 Oct 24 21:43 .ssh
drwxr-xr-x, 2 student student 6 Oct 24 19:40 Templates
drwxr-xr-x, 3 student student 18 May 18 08:00 .venv
drwxr-xr-x, 2 student student 6 Oct 24 19:40 Videos
-rw-----, 1 student student 3073 Oct 24 19:39 .rht-labs-dle.log
drwx-----, 2 student student 119 Oct 24 21:43 .ssh
drwxr-xr-x, 2 student student 6 Oct 24 19:40 Templates
drwxr-xr-x, 3 student student 18 May 18 08:00 .venv
drwxr-xr-x, 2 student student 6 Oct 24 19:40 Videos

```

VISUAL LINE --

```

Activities Terminal Oct 24 22:14
student@workstation:~ -- vim editing_final_lab.txt
total 36
-rw-r--r-- 1 student student 625 Oct 24 21:51 .bash_history
-rw-r--r-- 1 student student 18 Nov 5 2021 .bash_logout
-rw-r--r-- 1 student student 141 Nov 5 2021 .bash_profile
-rw-r--r-- 1 student student 492 Nov 5 2021 .bashrc
drwxr-xr-x 13 student student 4096 Oct 24 20:19 .cache
drwxr-xr-x 13 student student 4096 Oct 24 21:54 .config
drwxr-xr-x 2 student student 6 Oct 24 19:40 Desktop
drwxr-xr-x 2 student student 28 Oct 24 22:10 Documents
drwxr-xr-x 2 student student 6 Oct 24 19:40 Downloads
-rw-rw-r-- 1 student student 0 Oct 24 22:12 editing_final_lab.txt
drwxr-xr-x 2 student student 25 May 18 08:00 .grading
drwxr-xr-x 2 student student 6 Oct 24 19:39 .ipython
drwxr-xr-x 2 student student 22 Oct 24 20:47 .jupyter
-rw-r--r-- 1 student student 20 Oct 24 20:19 .lessht
drwxr-xr-x 4 student student 32 Oct 24 19:40 .local
drwxrwxr-x 5 student student 66 Oct 24 26:19 .mozilla
drwxr-xr-x 2 student student 6 Oct 24 19:40 Music
drwxr-xr-x 2 student student 6 Oct 24 19:40 Pictures
drwxr-xr-x 2 student student 6 Oct 24 19:40 Public
-rw-r--r-- 1 student student 3873 Oct 24 19:39 .rht-labs-dle.log
drwx----- 2 student student 119 Oct 24 21:43 .ssh
drwxr-xr-x 2 student student 6 Oct 24 19:40 Templates
drwxr-xr-x 3 student student 18 May 18 08:00 .venv
drwxr-xr-x 2 student student 6 Oct 24 19:40 Videos
-
-
-
-
-
-
-
-
-
-
3 fewer lines

```

4. Enter the visual mode of Vim. Remove the last seven characters from the first column on the first line. Preserve only the first four characters of the first column.

```

total 36
-rw-r--r-- 1 student student 625 Oct 24 21:51 .bash_history
-rw-r--r-- 1 student student 18 Nov 5 2021 .bash_logout
-rw-r--r-- 1 student student 141 Nov 5 2021 .bash_profile
-rw-r--r-- 1 student student 492 Nov 5 2021 .bashrc
drwxr-xr-x 13 student student 4096 Oct 24 20:19 .cache
drwxr-xr-x 13 student student 4096 Oct 24 21:54 .config
drwxr-xr-x 2 student student 6 Oct 24 19:40 Desktop
drwxr-xr-x 2 student student 28 Oct 24 22:18 Documents
drwxr-xr-x 2 student student 6 Oct 24 19:40 Downloads
-rw-rw-r-- 1 student student 0 Oct 24 22:12 editing_final_lab.txt
drwxr-xr-x 2 student student 25 May 18 08:00 .grading
drwxr-xr-x 2 student student 6 Oct 24 19:39 .ipython
drwxr-xr-x 2 student student 22 Oct 24 20:47 .jupyter
-rw-r----- 1 student student 28 Oct 24 20:19 .lesshist
drwxr-xr-x 4 student student 32 Oct 24 19:40 .local
drwxrwxr-x 5 student student 60 Oct 24 20:19 .mozilla
drwxr-xr-x 2 student student 6 Oct 24 19:40 Music
drwxr-xr-x 2 student student 6 Oct 24 19:40 Pictures
drwxr-xr-x 2 student student 6 Oct 24 19:40 Public
-rw-r--r-- 1 student student 3873 Oct 24 19:39 .rht-labs-dle.log
drwx----- 2 student student 119 Oct 24 21:43 .ssh
drwxr-xr-x 2 student student 6 Oct 24 19:40 Templates
drwxr-xr-x 3 student student 18 May 18 08:00 .venv
drwxr-xr-x 2 student student 6 Oct 24 19:40 Videos

```

Use the arrow keys to position the cursor at the last character of the first column on the first line. Delete the selection by typing **x**.

```

total
-rw-r--r-- 1 student student 625 Oct 24 21:51 .bash_history
-rw-r--r-- 1 student student 18 Nov 5 2021 .bash_logout
-rw-r--r-- 1 student student 141 Nov 5 2021 .bash_profile
-rw-r--r-- 1 student student 492 Nov 5 2021 .bashrc
drwxr-xr-x 13 student student 4096 Oct 24 20:19 .cache
drwxr-xr-x 13 student student 4096 Oct 24 21:54 .config
drwxr-xr-x 2 student student 6 Oct 24 19:40 Desktop
drwxr-xr-x 2 student student 28 Oct 24 22:18 Documents
drwxr-xr-x 2 student student 6 Oct 24 19:40 Downloads
-rw-rw-r-- 1 student student 0 Oct 24 22:12 editing_final_lab.txt
drwxr-xr-x 2 student student 25 May 18 08:00 .grading
drwxr-xr-x 2 student student 6 Oct 24 19:39 .ipython
drwxr-xr-x 2 student student 22 Oct 24 20:47 .jupyter
-rw-r----- 1 student student 28 Oct 24 20:19 .lesshist
drwxr-xr-x 4 student student 32 Oct 24 19:40 .local
drwxrwxr-x 5 student student 60 Oct 24 20:19 .mozilla
drwxr-xr-x 2 student student 6 Oct 24 19:40 Music
drwxr-xr-x 2 student student 6 Oct 24 19:40 Pictures
drwxr-xr-x 2 student student 6 Oct 24 19:40 Public
-rw-r--r-- 1 student student 3873 Oct 24 19:39 .rht-labs-dle.log
drwx----- 2 student student 119 Oct 24 21:43 .ssh
drwxr-xr-x 2 student student 6 Oct 24 19:40 Templates
drwxr-xr-x 3 student student 18 May 18 08:00 .venv
drwxr-xr-x 2 student student 6 Oct 24 19:40 Videos

```

```

total 36
-rw- 1 student student 625 Oct 24 21:51 .bash_history
-rw- 1 student student 18 Nov 5 2021 .bash_logout
-rw- 1 student student 141 Nov 5 2021 .bash_profile
-rw- 1 student student 492 Nov 5 2021 .bashrc
drwx 13 student student 4096 Oct 24 20:19 .cache
drwx 13 student student 4096 Oct 24 21:54 .config
drwx 2 student student 6 Oct 24 19:48 Desktop
drwx 2 student student 28 Oct 24 22:10 Documents
drwx 2 student student 6 Oct 24 19:48 Downloads
-rw- 1 student student 0 Oct 24 22:12 editing_final_lab.txt
drwx 2 student student 25 May 18 08:00 .grading
drwx 2 student student 6 Oct 24 19:39 .ipython
drwx 2 student student 22 Oct 24 20:47 .jupyter
-rw- 1 student student 20 Oct 24 20:19 .lessht
drwx 4 student student 32 Oct 24 19:40 .local
drwx 5 student student 66 Oct 24 20:19 .mozilla
drwx 2 student student 6 Oct 24 19:48 Music
drwx 2 student student 6 Oct 24 19:40 Pictures
drwx 2 student student 6 Oct 24 19:40 Public
-rw- 1 student student 3873 Oct 24 19:39 .rht-labs-die.log
drwx 2 student student 119 Oct 24 21:43 .ssh
drwx 2 student student 6 Oct 24 19:48 Templates
drwx 3 student student 18 May 18 08:00 .venv
drwx 2 student student 6 Oct 24 19:48 Videos

```

5. Enter the visual block mode of Vim. Repeat the operation of the previous step, but this time select from the second to the last line. Preserve only the first four characters of the first column.

```

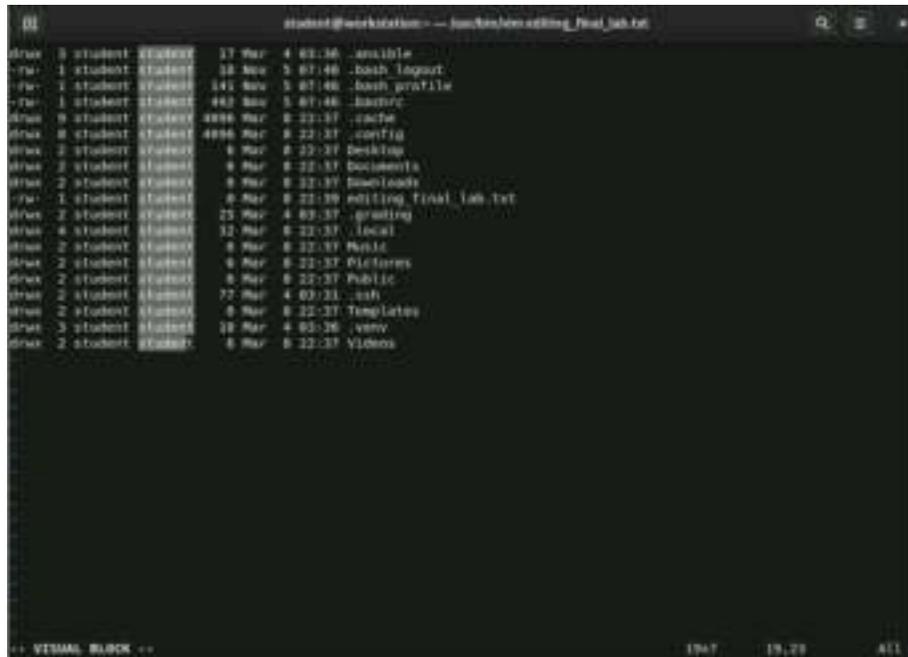
drwx 5 student student 17 Mar 4 03:36 .mozilla
-rw- 1 student student 18 Nov 5 07:46 .bash_logout
-rw- 1 student student 141 Nov 5 07:46 .bash_profile
-rw- 1 student student 492 Nov 5 07:46 .bashrc
drwx 13 student student 4096 Mar 8 22:37 .cache
drwx 13 student student 4096 Mar 8 22:37 .config
drwx 2 student student 6 Mar 8 22:37 Desktop
drwx 2 student student 28 Mar 8 22:37 Documents
drwx 2 student student 6 Mar 8 22:37 Downloads
-rw- 1 student student 0 Mar 8 22:39 editing_final_lab.txt
drwx 2 student student 25 Mar 4 03:37 .grading
drwx 4 student student 32 Mar 8 22:37 .local
drwx 5 student student 66 Mar 8 22:37 .mozilla
drwx 2 student student 6 Mar 8 22:37 Music
drwx 2 student student 6 Mar 8 22:37 Pictures
drwx 2 student student 6 Mar 8 22:37 Public
drwx 2 student student 77 Mar 4 03:32 .ssh
drwx 2 student student 6 Mar 8 22:37 Templates
drwx 3 student student 18 Mar 4 03:36 .venv
drwx 2 student student 6 Mar 8 22:37 Videos

```

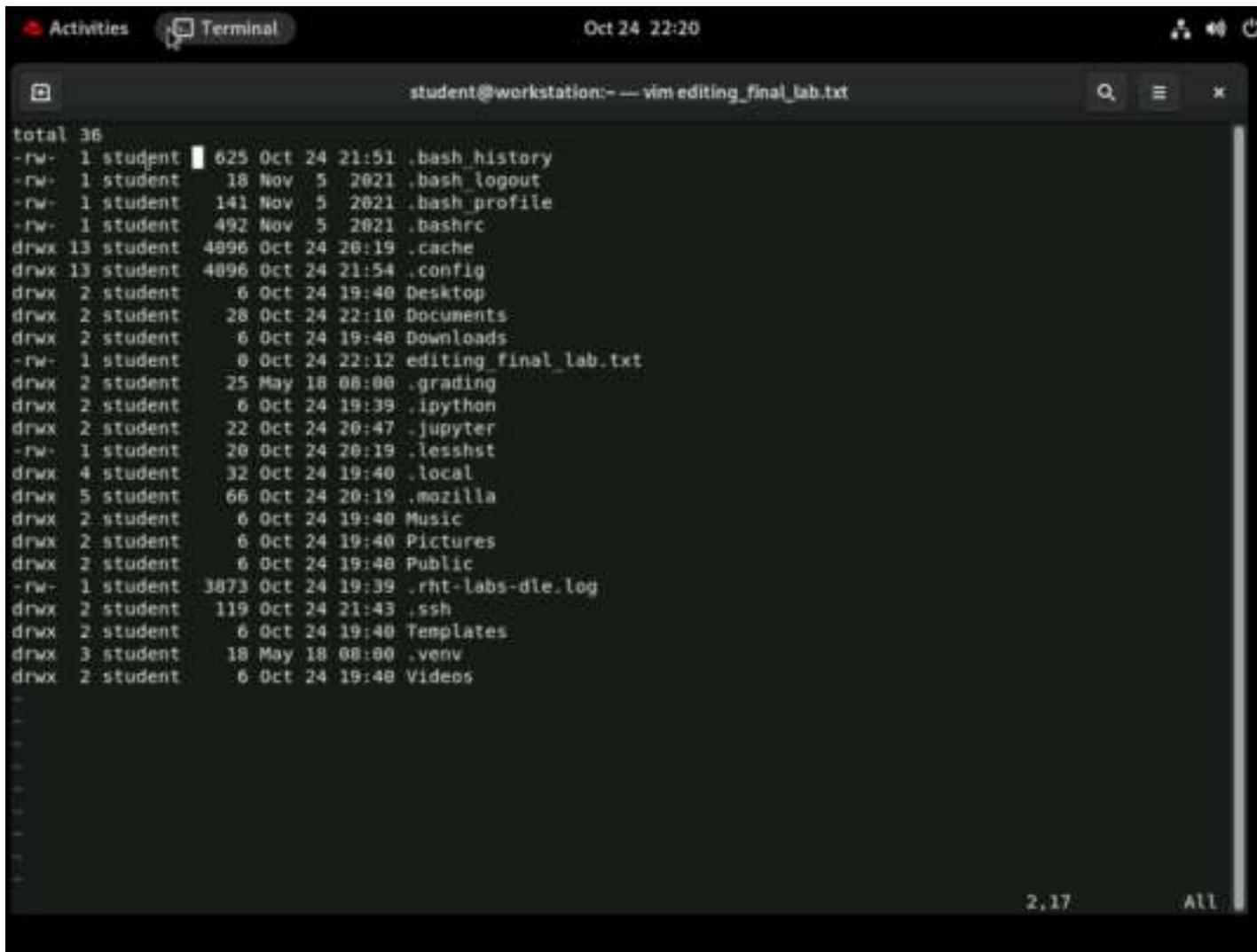
-- VISUAL BLOCK --

## Chapter 5

6. Enter the visual block mode of Vim and remove the fourth column of the file.



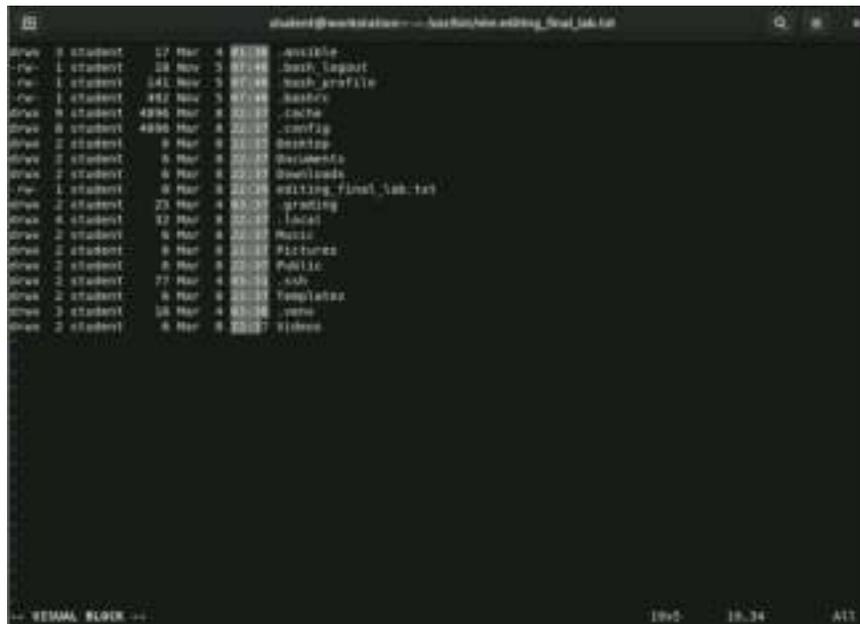
```
student@workstation:~$ ls
drwx 3 student student 17 Mar 4 02:36 .ansible
-rw- 1 student student 18 Nov 5 07:40 .bash_logout
-rw- 1 student student 142 Nov 5 07:40 .bash_profile
-rw- 1 student student 492 Nov 5 07:40 .bashrc
drwx 8 student student 4096 Mar 8 22:37 .cache
drwx 8 student student 4096 Mar 8 22:37 .config
drwx 2 student student 6 Mar 8 22:37 Desktop
drwx 2 student student 6 Mar 8 22:37 Documents
drwx 2 student student 6 Mar 8 22:37 Downloads
-rw- 1 student student 6 Mar 8 22:39 editing_final_lab.txt
drwx 2 student student 25 Mar 4 09:37 .grading
drwx 4 student student 32 Mar 8 22:37 .local
drwx 2 student student 6 Mar 8 22:37 Music
drwx 2 student student 6 Mar 8 22:37 Pictures
drwx 2 student student 6 Mar 8 22:37 Public
drwx 2 student student 77 Mar 4 09:21 .ssh
drwx 2 student student 6 Mar 8 22:37 Templates
drwx 3 student student 18 Mar 4 03:26 .venv
drwx 2 student student 6 Mar 8 22:37 Videos
```



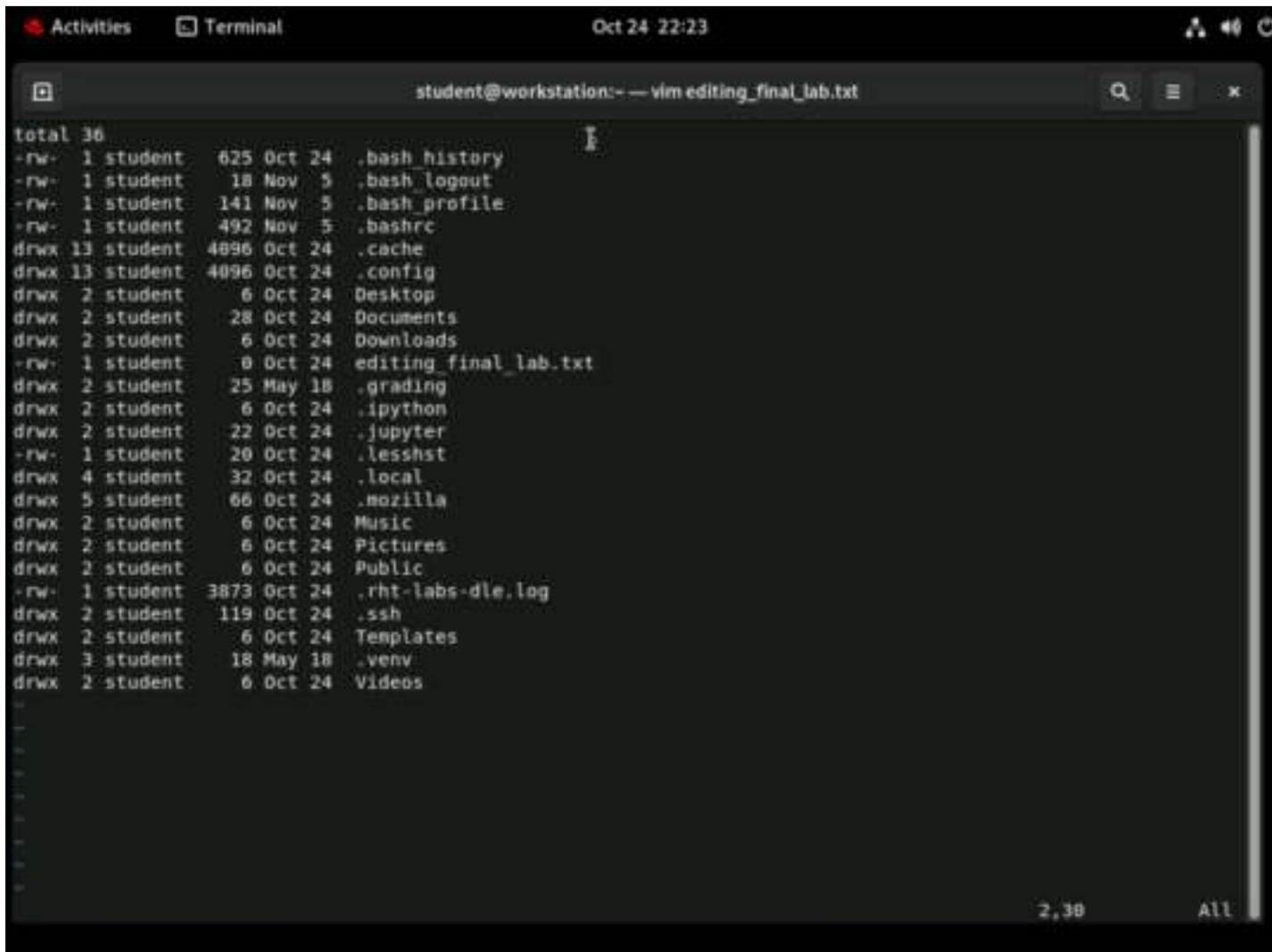
```
Activities Terminal Oct 24 22:20
student@workstation:~$ ls
total 36
-rw- 1 student 625 Oct 24 21:51 .bash_history
-rw- 1 student 18 Nov 5 2021 .bash_logout
-rw- 1 student 141 Nov 5 2021 .bash_profile
-rw- 1 student 492 Nov 5 2021 .bashrc
drwx 13 student 4096 Oct 24 20:19 .cache
drwx 13 student 4096 Oct 24 21:54 .config
drwx 2 student 6 Oct 24 19:40 Desktop
drwx 2 student 28 Oct 24 22:10 Documents
drwx 2 student 6 Oct 24 19:40 Downloads
-rw- 1 student 6 Oct 24 22:12 editing_final_lab.txt
drwx 2 student 25 May 18 08:00 .grading
drwx 2 student 6 Oct 24 19:39 .ipython
drwx 2 student 22 Oct 24 20:47 .jupyter
-rw- 1 student 20 Oct 24 20:19 .lessht
drwx 4 student 32 Oct 24 19:40 .local
drwx 5 student 66 Oct 24 20:19 .mozilla
drwx 2 student 6 Oct 24 19:40 Music
drwx 2 student 6 Oct 24 19:40 Pictures
drwx 2 student 6 Oct 24 19:40 Public
-rw- 1 student 3873 Oct 24 19:39 .rht-labs-dle.log
drwx 2 student 119 Oct 24 21:43 .ssh
drwx 2 student 6 Oct 24 19:40 Templates
drwx 3 student 18 May 18 08:00 .venv
drwx 2 student 6 Oct 24 19:40 Videos
```

## Chapter 5

7. Enter the visual block mode of Vim to remove the time column, leaving the month and day columns on all lines.



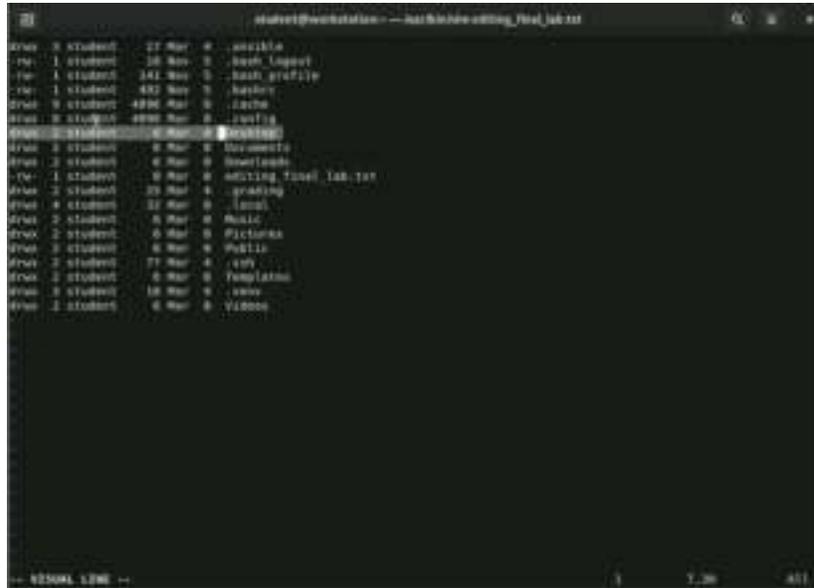
```
student@workstation:~$ ls
-rwxr-xr-x 1 student 17 Mar 4 00:00 .ansible
-rw-r--r-- 1 student 28 Nov 5 07:46 .bash_logout
-rw-r--r-- 1 student 141 Nov 5 07:08 .bash_profile
-rw-r--r-- 1 student 482 Nov 5 07:08 .bashrc
drwxr-xr-x 8 student 4896 Mar 4 20:07 .cache
drwxr-xr-x 2 student 6 Mar 4 20:07 .config
drwxr-xr-x 2 student 6 Mar 4 20:07 Desktop
drwxr-xr-x 2 student 6 Mar 4 20:07 Documents
drwxr-xr-x 2 student 6 Mar 4 20:07 Downloads
-rw-r--r-- 1 student 0 Mar 4 20:08 editing_final_lab.txt
drwxr-xr-x 2 student 25 Mar 4 00:07 .grading
drwxr-xr-x 4 student 12 Mar 4 20:07 .local
drwxr-xr-x 2 student 6 Mar 4 20:07 Music
drwxr-xr-x 2 student 6 Mar 4 20:07 Pictures
drwxr-xr-x 2 student 6 Mar 4 20:07 Public
drwxr-xr-x 2 student 77 Mar 4 09:34 .ssh
drwxr-xr-x 2 student 6 Mar 4 20:07 Templates
drwxr-xr-x 3 student 18 Mar 4 00:06 .venv
drwxr-xr-x 2 student 6 Mar 4 00:07 Videos
```



```
student@workstation:~ -- vim editing_final_lab.txt
total 36
-rw-r--r-- 1 student 625 Oct 24 .bash_history
-rw-r--r-- 1 student 18 Nov 5 .bash_logout
-rw-r--r-- 1 student 141 Nov 5 .bash_profile
-rw-r--r-- 1 student 492 Nov 5 .bashrc
drwxr-xr-x 13 student 4896 Oct 24 .cache
drwxr-xr-x 13 student 4096 Oct 24 .config
drwxr-xr-x 2 student 6 Oct 24 Desktop
drwxr-xr-x 2 student 28 Oct 24 Documents
drwxr-xr-x 2 student 6 Oct 24 Downloads
-rw-r--r-- 1 student 0 Oct 24 editing_final_lab.txt
drwxr-xr-x 2 student 25 May 18 .grading
drwxr-xr-x 2 student 6 Oct 24 .ipython
drwxr-xr-x 2 student 22 Oct 24 .jupyter
-rw-r--r-- 1 student 20 Oct 24 .lessshst
drwxr-xr-x 4 student 32 Oct 24 .local
drwxr-xr-x 5 student 66 Oct 24 .mozilla
drwxr-xr-x 2 student 6 Oct 24 Music
drwxr-xr-x 2 student 6 Oct 24 Pictures
drwxr-xr-x 2 student 6 Oct 24 Public
-rw-r--r-- 1 student 3873 Oct 24 .rht-labs-dle.log
drwxr-xr-x 2 student 119 Oct 24 .ssh
drwxr-xr-x 2 student 6 Oct 24 Templates
drwxr-xr-x 3 student 18 May 18 .venv
drwxr-xr-x 2 student 6 Oct 24 Videos
```

## Chapter 5

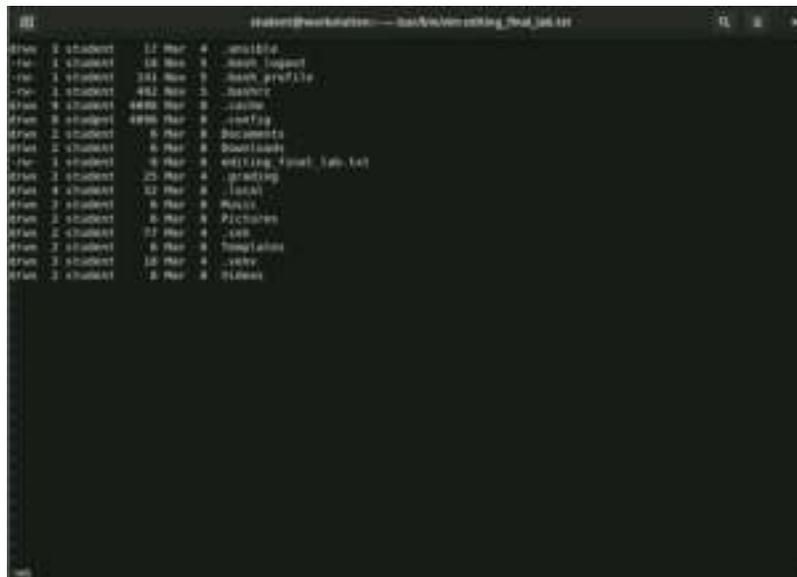
8. Enter the visual line mode of Vim and remove the rows that contain the Desktop and Public strings.



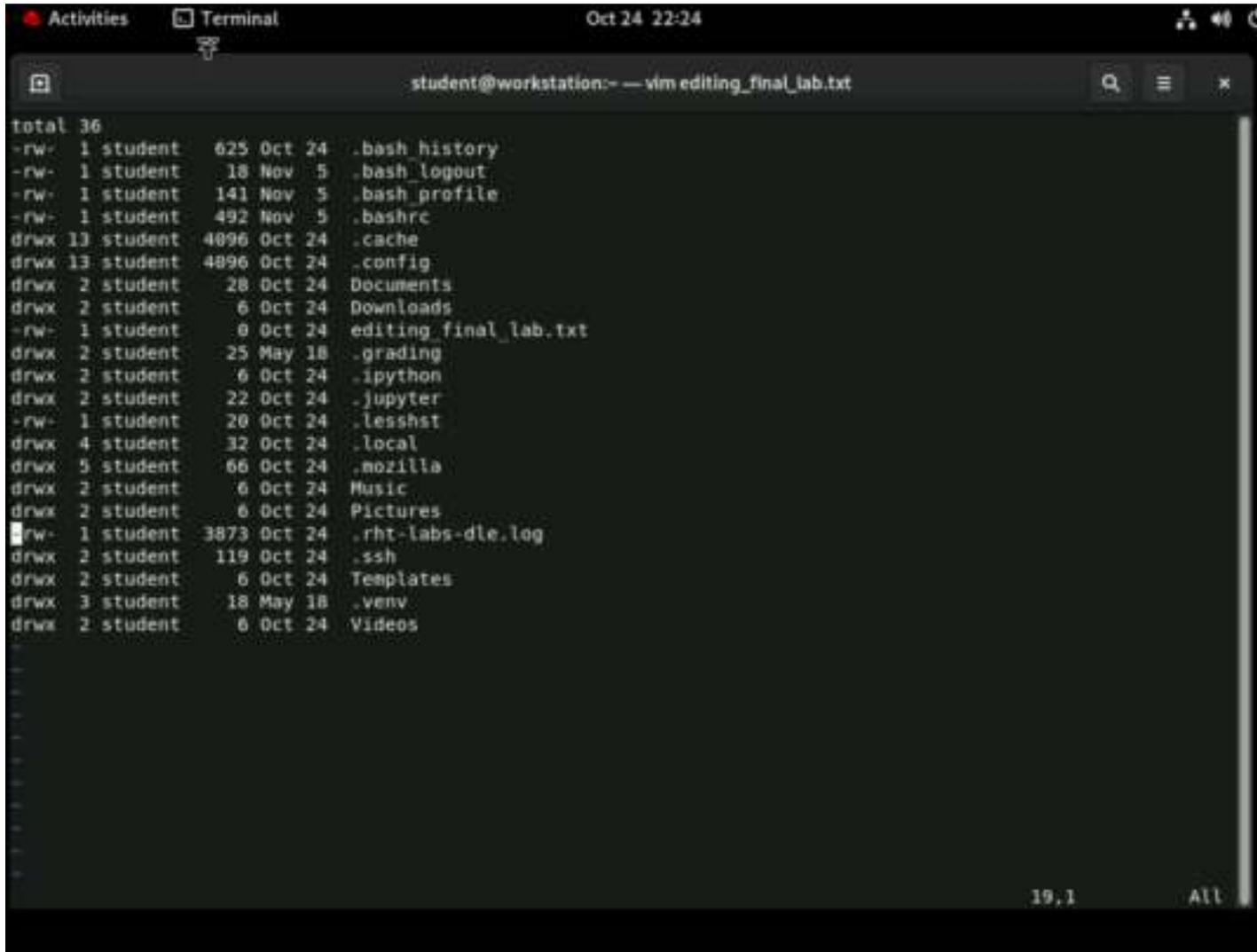
```
student@workstation:~/Desktop/editing_file.txt
row 3 student 22 Mar 4 Desktop
row 1 student 26 Mar 2 Desktop
row 1 student 241 Mar 2 Desktop
row 1 student 482 Mar 7 Desktop
row 9 student 4996 Mar 2 Desktop
row 8 student 4996 Mar 2 Desktop
row 3 student 8 Mar 2 Documents
row 2 student 8 Mar 2 Downloads
row 1 student 8 Mar 2 Desktop
row 7 student 20 Mar 4 Desktop
row 4 student 22 Mar 2 Desktop
row 2 student 8 Mar 8 Music
row 2 student 8 Mar 8 Pictures
row 3 student 8 Mar 8 Public
row 2 student 77 Mar 4 Desktop
row 2 student 8 Mar 8 Templates
row 3 student 18 Mar 8 Desktop
row 1 student 8 Mar 8 Videos

-- VISUAL LINE --
```

9. Save your changes and exit the file.

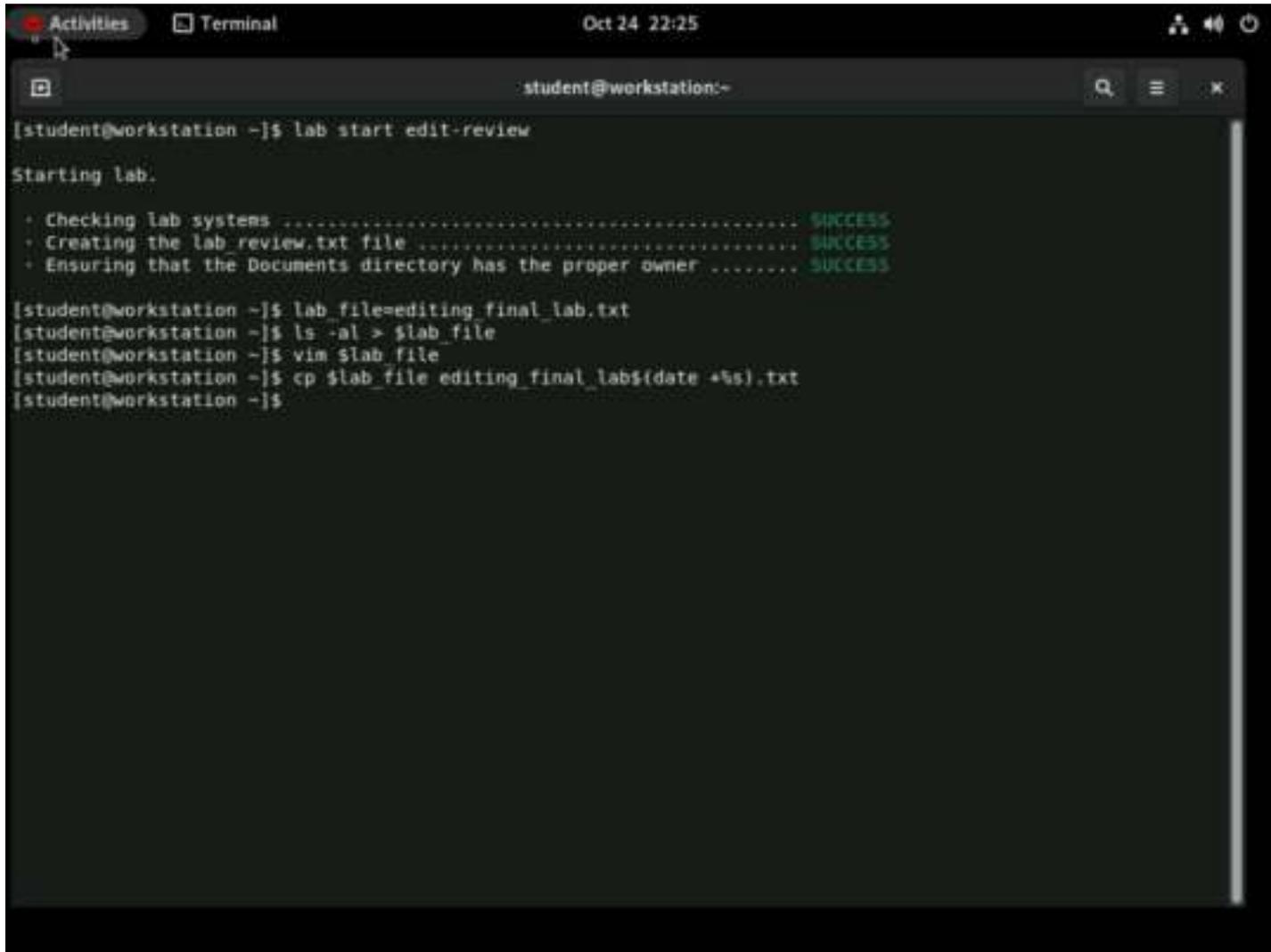


```
student@workstation:~/Desktop/editing_file.txt
row 2 student 22 Mar 4 Desktop
row 1 student 26 Mar 2 Desktop
row 1 student 241 Mar 2 Desktop
row 1 student 482 Mar 7 Desktop
row 9 student 4996 Mar 2 Desktop
row 8 student 4996 Mar 2 Desktop
row 2 student 8 Mar 2 Documents
row 2 student 8 Mar 2 Downloads
row 1 student 8 Mar 2 Desktop
row 7 student 20 Mar 4 Desktop
row 4 student 22 Mar 2 Desktop
row 2 student 8 Mar 8 Music
row 2 student 8 Mar 8 Pictures
row 2 student 77 Mar 4 Desktop
row 2 student 8 Mar 8 Templates
row 3 student 18 Mar 8 Desktop
row 1 student 8 Mar 8 Videos
```



```
student@workstation:~ -- vim editing_final_lab.txt
total 36
-rw- 1 student 625 Oct 24 .bash_history
-rw- 1 student 18 Nov 5 .bash_logout
-rw- 1 student 141 Nov 5 .bash_profile
-rw- 1 student 492 Nov 5 .bashrc
drwx 13 student 4096 Oct 24 .cache
drwx 13 student 4096 Oct 24 .config
drwx 2 student 28 Oct 24 Documents
drwx 2 student 6 Oct 24 Downloads
-rw- 1 student 0 Oct 24 editing_final_lab.txt
drwx 2 student 25 May 18 .grading
drwx 2 student 6 Oct 24 .ipython
drwx 2 student 22 Oct 24 .jupyter
-rw- 1 student 20 Oct 24 .lesshist
drwx 4 student 32 Oct 24 .local
drwx 5 student 66 Oct 24 .mozilla
drwx 2 student 6 Oct 24 Music
drwx 2 student 6 Oct 24 Pictures
-rw- 1 student 3873 Oct 24 .rht-labs-dle.log
drwx 2 student 119 Oct 24 .ssh
drwx 2 student 6 Oct 24 Templates
drwx 3 student 18 May 18 .venv
drwx 2 student 6 Oct 24 Videos
```

10. Back up the `editing_final_lab.txt` file and append the date (in seconds) at the end of the file name preceded with an underscore (`_`) character. Use the `lab_file` shell variable.

A terminal window titled 'Terminal' with the date and time 'Oct 24 22:25' in the top right corner. The terminal shows a user named 'student' at a workstation. The user runs the command 'lab start edit-review', which outputs 'Starting lab.' followed by three status messages: 'Checking lab systems ... SUCCESS', 'Creating the lab\_review.txt file ... SUCCESS', and 'Ensuring that the Documents directory has the proper owner ... SUCCESS'. The user then sets the shell variable 'lab\_file=editing\_final\_lab.txt', lists the file with 'ls -al > \$lab\_file', opens it with 'vim \$lab\_file', and copies it to 'editing\_final\_lab\$(date +%s).txt' with 'cp \$lab\_file editing\_final\_lab\$(date +%s).txt'.

```
[student@workstation ~]$ lab start edit-review
Starting lab.
- Checking lab systems ..... SUCCESS
- Creating the lab_review.txt file ..... SUCCESS
- Ensuring that the Documents directory has the proper owner ..... SUCCESS

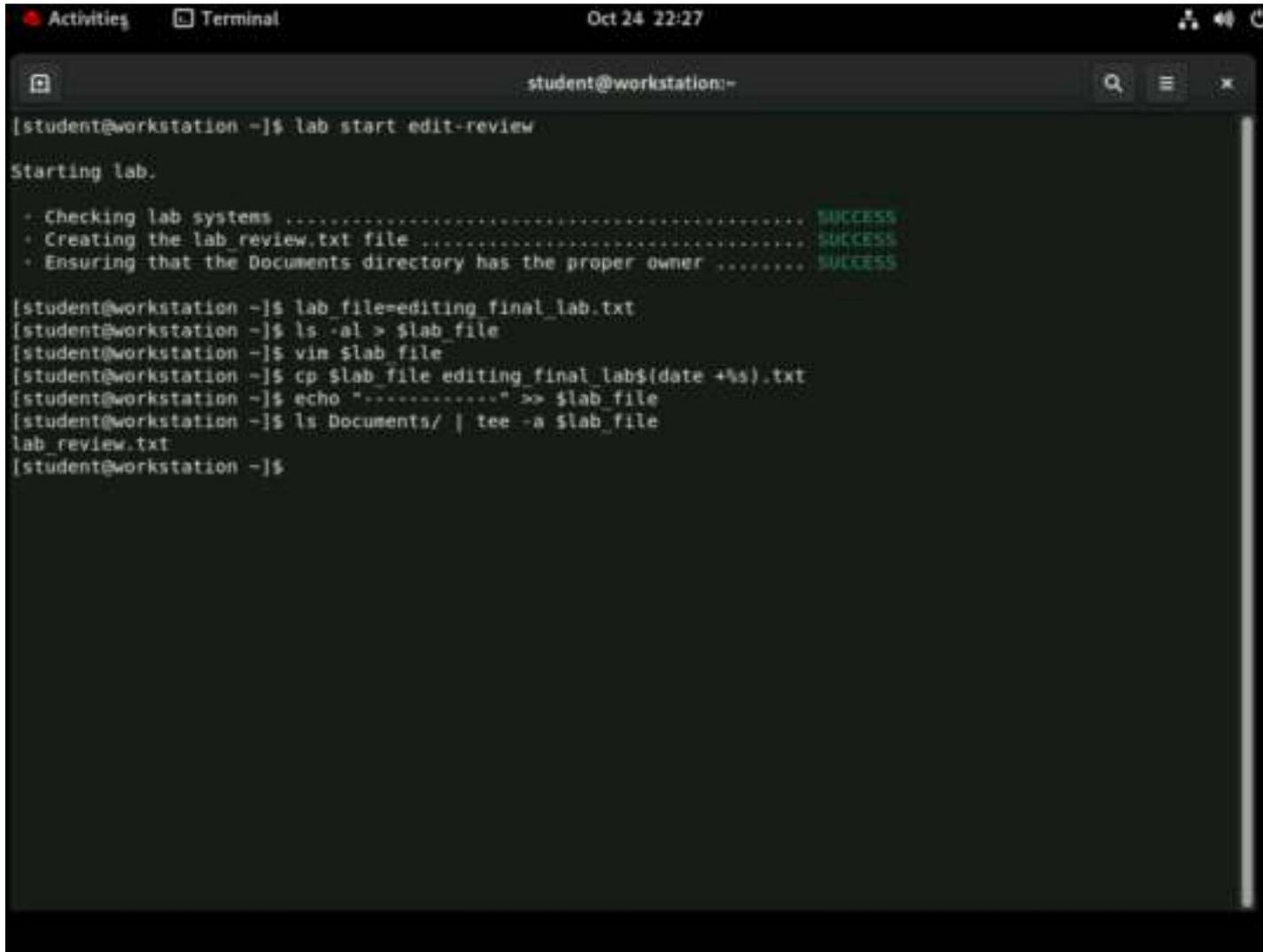
[student@workstation ~]$ lab_file=editing_final_lab.txt
[student@workstation ~]$ ls -al > $lab_file
[student@workstation ~]$ vim $lab_file
[student@workstation ~]$ cp $lab_file editing_final_lab$(date +%s).txt
[student@workstation ~]$
```

11. Append a dashed line to the `editing_final_lab.txt` file. The dashed line should contain 12 dash (-) characters for this lab to be graded correctly. Use the `lab_file` shell variable.

```
Activities Terminal Oct 24 22:26
student@workstation:~
[student@workstation ~]$ lab start edit-review
Starting lab.
- Checking lab systems ..... SUCCESS
- Creating the lab_review.txt file ..... SUCCESS
- Ensuring that the Documents directory has the proper owner ..... SUCCESS

[student@workstation ~]$ lab_file=editing_final_lab.txt
[student@workstation ~]$ ls -al > $lab_file
[student@workstation ~]$ vim $lab_file
[student@workstation ~]$ cp $lab_file editing_final_lab$(date +%s).txt
[student@workstation ~]$ echo "-----" >> $lab_file
[student@workstation ~]$
```

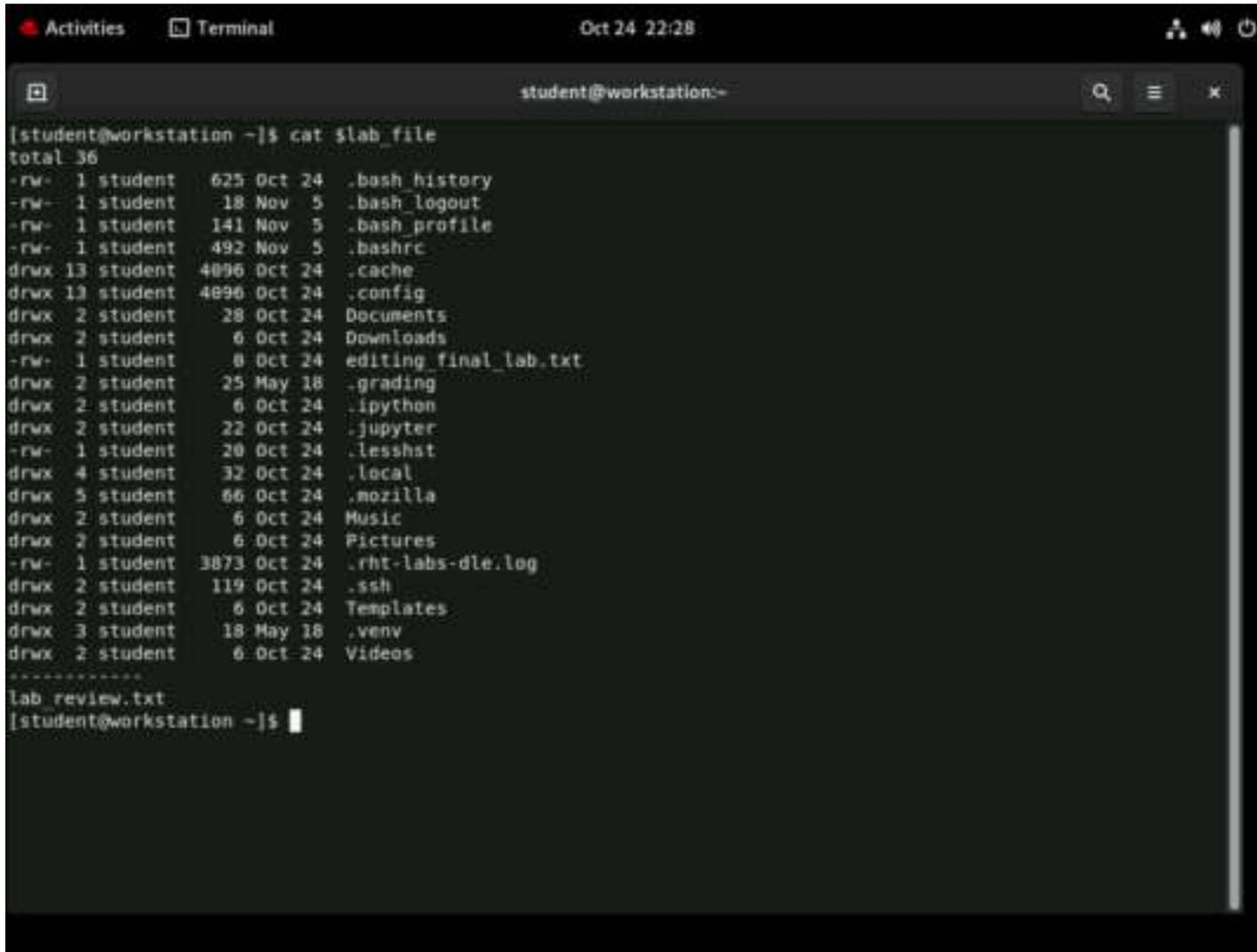
12. List the content of the `Document` directory and redirect the output to the `editing_final_lab.txt` file. Use the `lab_file` shell variable.

A terminal window titled "Terminal" with the date and time "Oct 24 22:27" in the top right corner. The window shows a series of commands and their outputs. The user starts by running "lab start edit-review", which outputs "Starting lab." followed by three status messages: "Checking lab systems ... SUCCESS", "Creating the lab\_review.txt file ... SUCCESS", and "Ensuring that the Documents directory has the proper owner ... SUCCESS". The user then sets "lab\_file=editing\_final\_lab.txt", lists the file with "ls -al > \$lab\_file", opens it with "vim \$lab\_file", copies it to a date-specific file with "cp \$lab\_file editing\_final\_lab\$(date +%s).txt", appends a separator line with "echo '-----' >> \$lab\_file", and finally lists the contents of the Documents directory with "ls Documents/ | tee -a \$lab\_file", which outputs "lab\_review.txt".

```
[student@workstation ~]$ lab start edit-review
Starting lab.
- Checking lab systems ..... SUCCESS
- Creating the lab_review.txt file ..... SUCCESS
- Ensuring that the Documents directory has the proper owner ..... SUCCESS

[student@workstation ~]$ lab_file=editing_final_lab.txt
[student@workstation ~]$ ls -al > $lab_file
[student@workstation ~]$ vim $lab_file
[student@workstation ~]$ cp $lab_file editing_final_lab$(date +%s).txt
[student@workstation ~]$ echo "-----" >> $lab_file
[student@workstation ~]$ ls Documents/ | tee -a $lab_file
lab_review.txt
[student@workstation ~]$
```

13. Confirm that the directory listing is at the bottom of the lab file. Use the `lab_file` shell variable.



```
[student@workstation ~]$ cat $lab_file
total 36
-rw- 1 student 625 Oct 24 .bash_history
-rw- 1 student 18 Nov 5 .bash_logout
-rw- 1 student 141 Nov 5 .bash_profile
-rw- 1 student 492 Nov 5 .bashrc
drwx 13 student 4896 Oct 24 .cache
drwx 13 student 4896 Oct 24 .config
drwx 2 student 28 Oct 24 Documents
drwx 2 student 6 Oct 24 Downloads
-rw- 1 student 8 Oct 24 editing_final_lab.txt
drwx 2 student 25 May 18 .grading
drwx 2 student 6 Oct 24 .ipython
drwx 2 student 22 Oct 24 .jupyter
-rw- 1 student 20 Oct 24 .lesshst
drwx 4 student 32 Oct 24 .local
drwx 5 student 66 Oct 24 .mozilla
drwx 2 student 6 Oct 24 Music
drwx 2 student 6 Oct 24 Pictures
-rw- 1 student 3873 Oct 24 .rht-labs-dle.log
drwx 2 student 119 Oct 24 .ssh
drwx 2 student 6 Oct 24 Templates
drwx 3 student 18 May 18 .venv
drwx 2 student 6 Oct 24 Videos
-----
lab_review.txt
[student@workstation ~]$
```

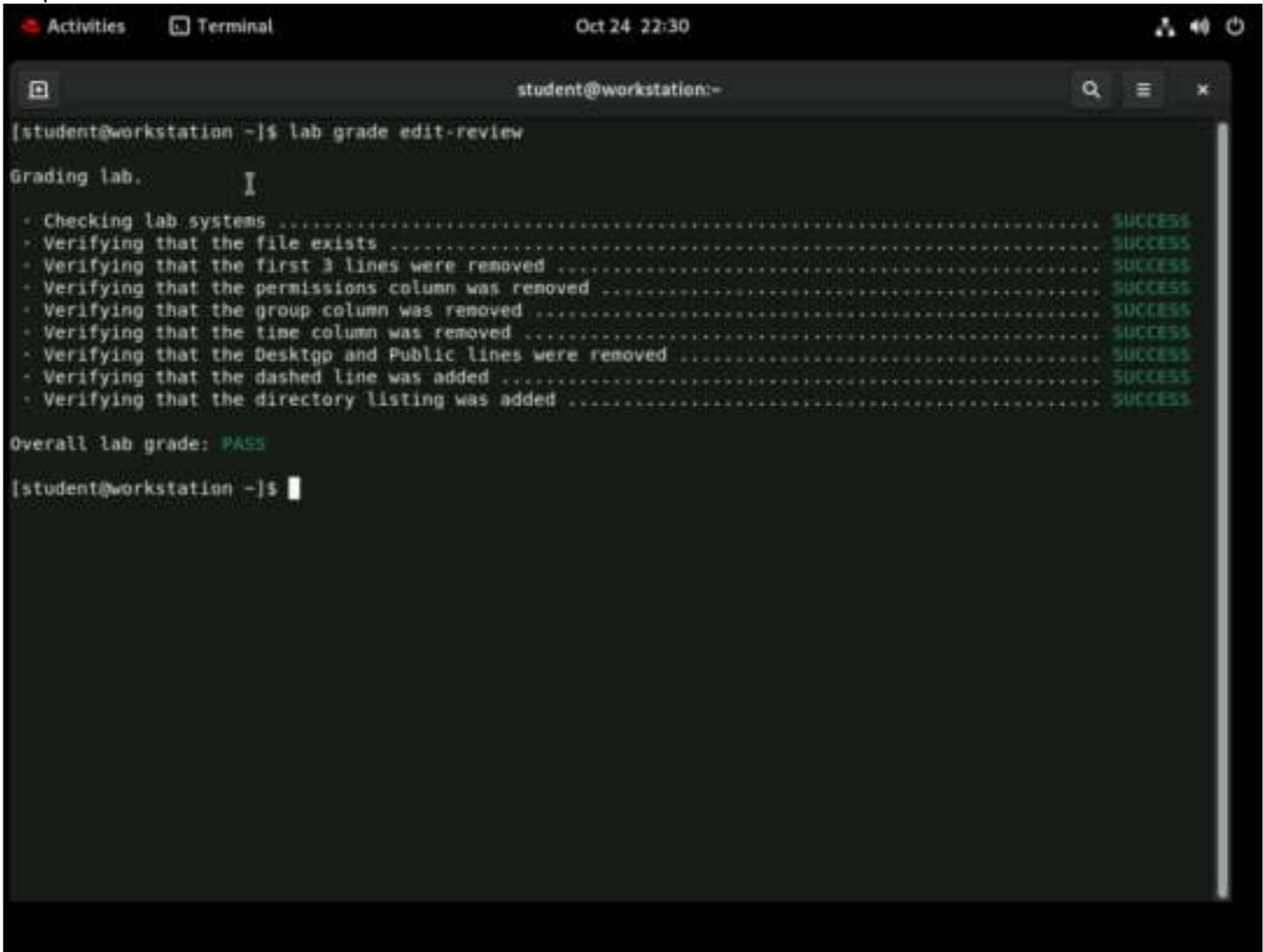
## Evaluation

As the `student` user on the `workstation` machine, use the `lab` command to grade your work. Correct any reported failures and rerun the command until successful.

```
[student@workstation ~]$ lab grade edit-review
```

## Finish

## Chapter 5



```
student@workstation:~$ lab grade edit-review
Grading lab.
- Checking lab systems ..... SUCCESS
- Verifying that the file exists ..... SUCCESS
- Verifying that the first 3 lines were removed ..... SUCCESS
- Verifying that the permissions column was removed ..... SUCCESS
- Verifying that the group column was removed ..... SUCCESS
- Verifying that the time column was removed ..... SUCCESS
- Verifying that the Desktop and Public lines were removed ..... SUCCESS
- Verifying that the dashed line was added ..... SUCCESS
- Verifying that the directory listing was added ..... SUCCESS

Overall lab grade: PASS

student@workstation ~]$
```

On the `workstation` machine, change to the `student` user home directory and use the `lab` command to complete this exercise. This step is important to ensure that resources from previous exercises do not impact upcoming exercises.

```
[student@workstation ~]$ lab finish edit-review
```

This concludes the section.

Chapter 5

```
Activities Terminal Oct 24 22:30 student@workstation:~  
[student@workstation ~]$ lab grade edit-review  
Grading lab.  
· Checking lab systems ..... SUCCESS  
· Verifying that the file exists ..... SUCCESS  
· Verifying that the first 3 lines were removed ..... SUCCESS  
· Verifying that the permissions column was removed ..... SUCCESS  
· Verifying that the group column was removed ..... SUCCESS  
· Verifying that the time column was removed ..... SUCCESS  
· Verifying that the Desktop and Public lines were removed ..... SUCCESS  
· Verifying that the dashed line was added ..... SUCCESS  
· Verifying that the directory listing was added ..... SUCCESS  
Overall lab grade: PASS  
[student@workstation ~]$ lab finish edit-review  
Finishing lab.  
· Checking lab systems ..... SUCCESS  
· Removing lab files ..... SUCCESS  
[student@workstation ~]$
```