

# Perform Basic File Editing Operations Using vi

- **Introduction**
  - **Lab Topology**
  - **Exercise 1 - Perform Basic File Editing Operations Using vi**
  - **Review**
- 

## Introduction

Welcome to the **Perform Basic File Editing Operations Using vi** Practice Lab. In this module you will be provided with the instructions and devices needed to develop your hands-on skills.

Editing  
Operations  
vi  
Files

## Learning Outcomes

In this module, you will complete the following exercise:

- Exercise 1 - Perform Basic File Editing Operations Using vi

After completing this lab, you will be able to:

- Create a document using vi
- Navigate a document using vi
- Manage a file using vi

## Exam Objectives

The following exam objectives are covered in this lab:

- **LPI: 103.8 Basic file editing**
- **CompTIA: 2.3 Given a scenario, create, modify, and redirect files.**

**Note:** Our main focus is to cover the practical, hands-on aspects of the exam objectives. We recommend referring to course material or a search engine to research theoretical topics in more detail.

## Lab Duration

It will take approximately **1 hour** to complete this lab.

## Help and Support

For more information on using Practice Labs, please see our **Help and Support** page. You can also raise a technical support ticket from this page.

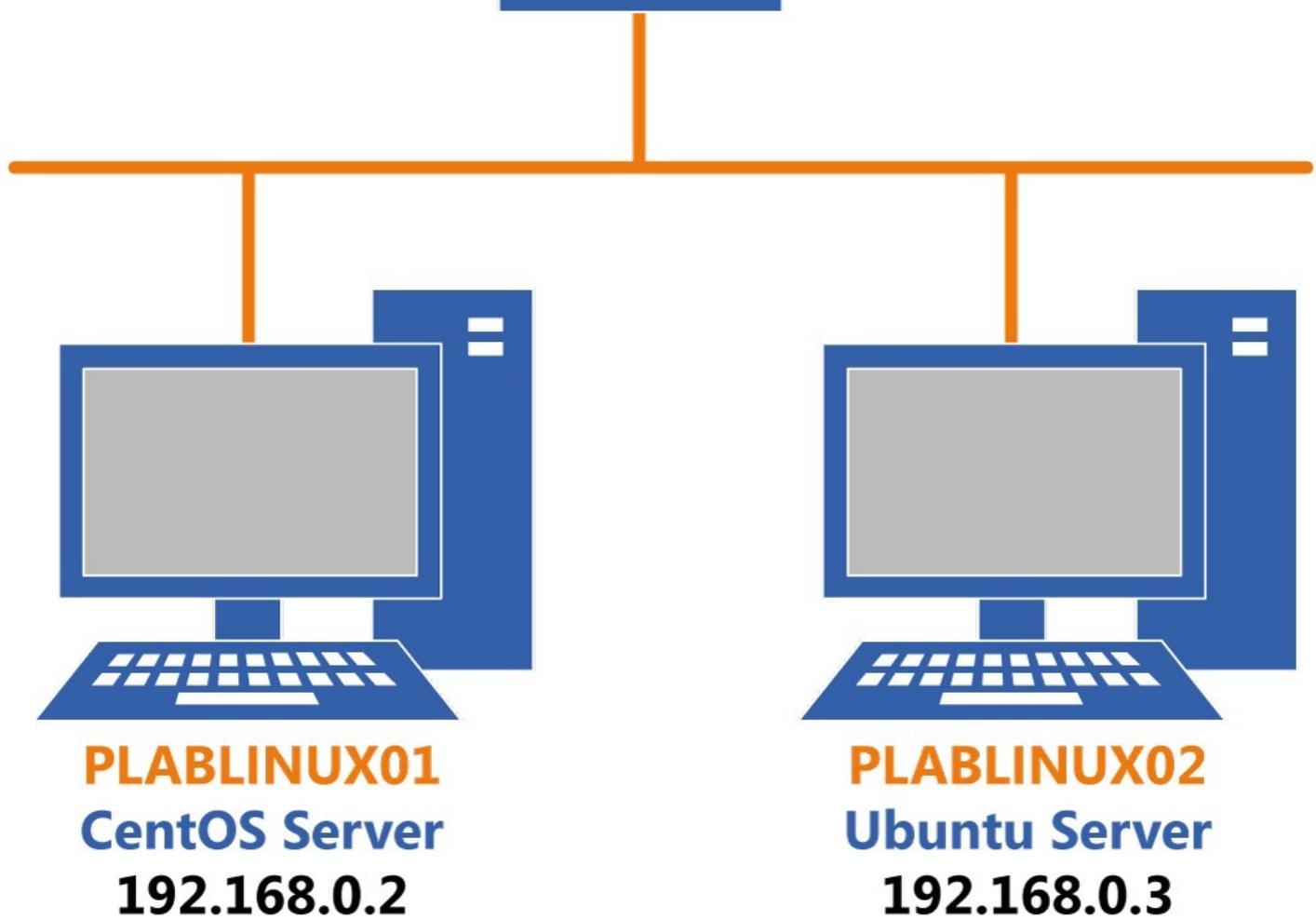
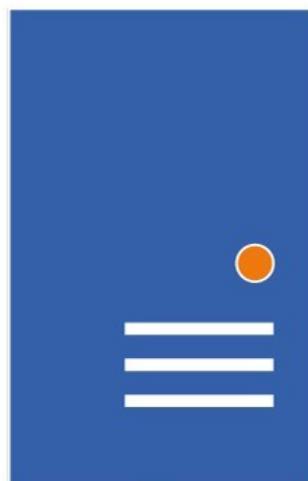
Click Next to view the Lab topology used in this module.

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## Lab Topology

During your session, you will have access to the following lab configuration.

**PLABSA01**  
**Windows Server 2016**  
**192.168.0.1**



Depending on the exercises you may or may not use all of the devices, but they are shown here in the layout to get an overall understanding of the topology of the lab.

- **PLABSA01** (Windows Server 2016)
- **PLABLINUX01** (CentOS Server)
- **PLABLINUX02** (Ubuntu Server)

Click Next to proceed to the first exercise.

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## Exercise 1 - Perform Basic File Editing Operations Using vi

Basic file editing includes viewing, inserting, deleting, or making such modifications to a file. Linux offers the **vi** editor to enable the users to perform these operations. In addition, you can use vi to create, copy, and delete files.

In this exercise, you will understand how to perform basic file editing operations using the vi editor.

## Learning Outcomes

After completing this exercise, you will be able to:

- Log into a Linux System
- Create a document using vi
- Navigate a document using vi
- Manage a file using vi

## Your Devices

You will be using the following device in this lab. Please power these on now.

- **PLABLINUX01** (CentOS Server)



## Task 1 - Create a Document Using vi

In this task, you will create a file, enter text, save, and then close the file using vi editor.

To use basic vi modes, perform the following steps:

## Step 1

On the desktop, right-click and select **Open Terminal**.

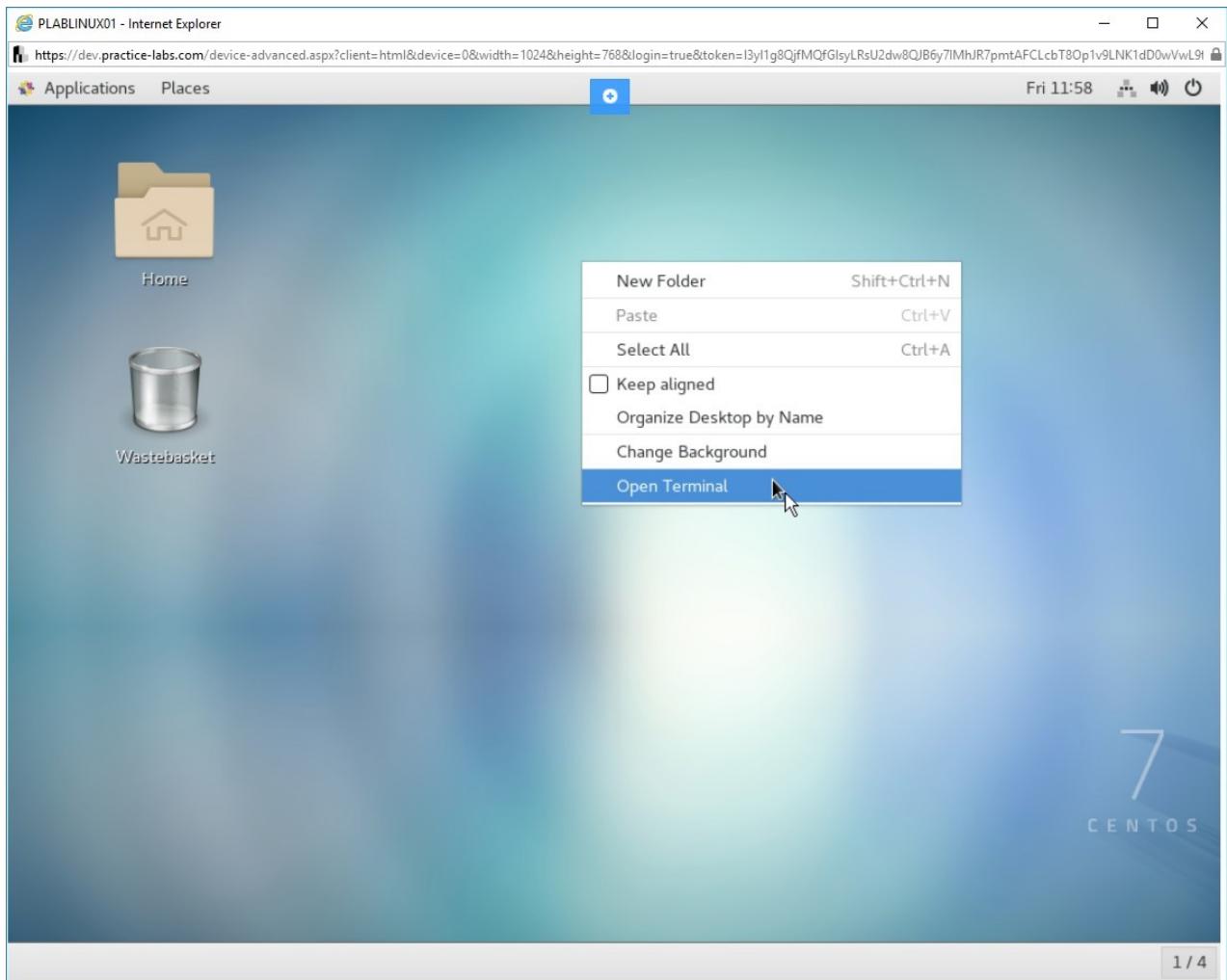


Figure 1.1 Screenshot of PLABLINUX01: Selecting the Open Terminal option from the context menu.

## Step 2

To create a new document using the vi editor, type the following command:

```
vi test.txt
```

Press **Enter**.

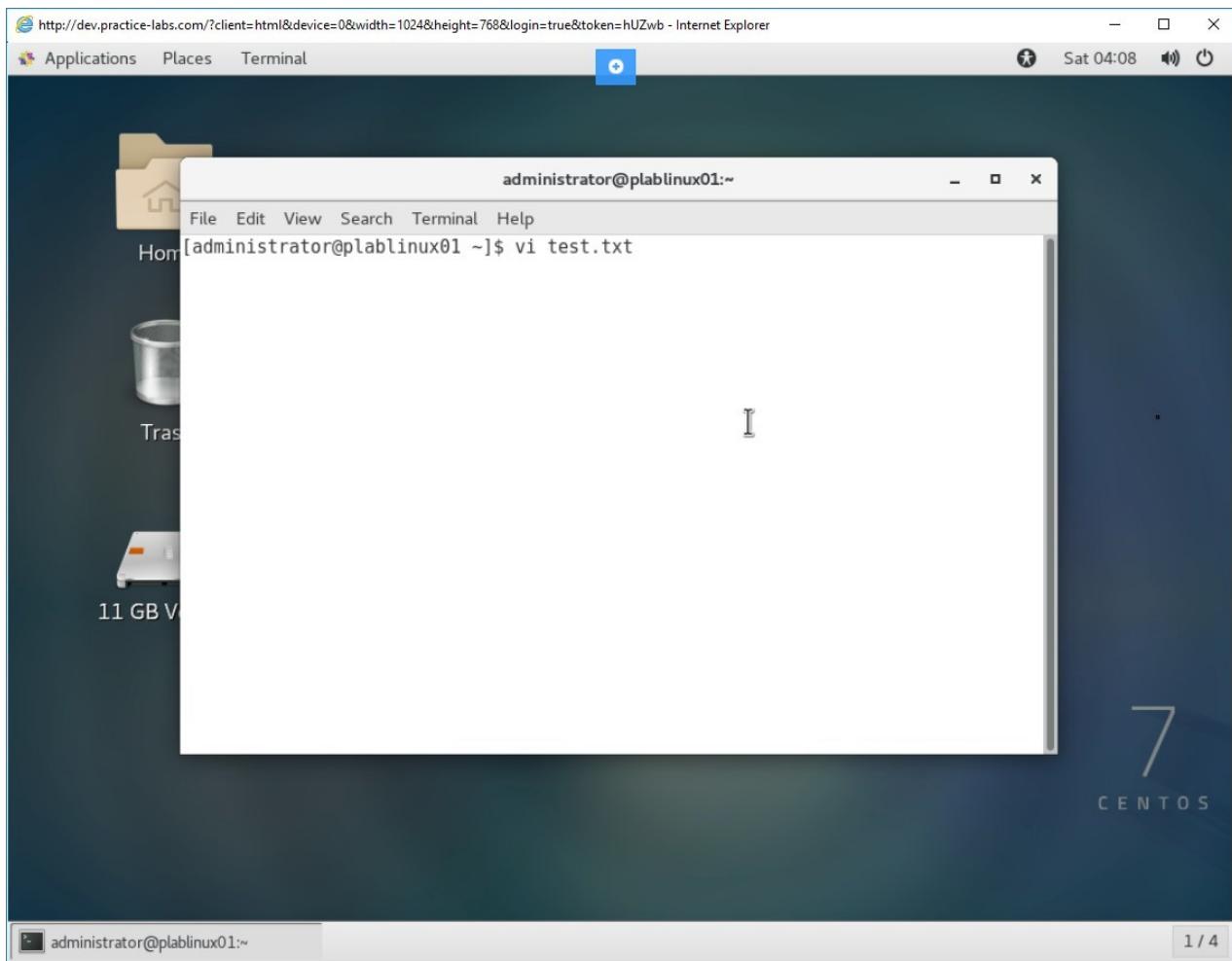


Figure 1.2 Screenshot of PLABLINUX01: Creating a new document using the **vi** editor.

## Step 3

A new document is created with the name **test.txt**, and it is now available for editing in the **vi** editor.

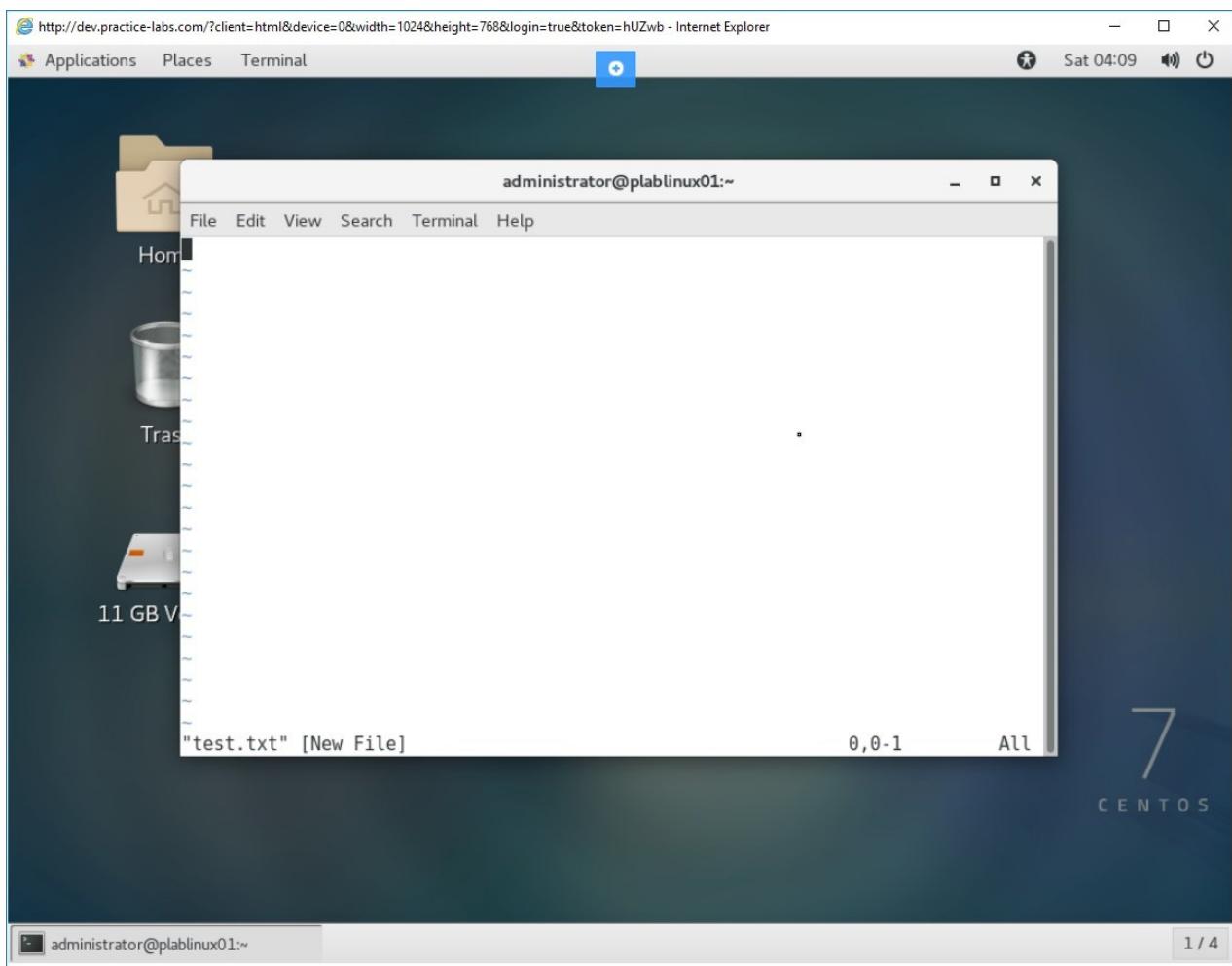


Figure 1.3 Screenshot of PLABLINUX01: Showing the newly created document.

## Step 4

The vi editor has two modes: **command** and **insert** modes. You use the command mode to execute various commands while the insert mode is used to enter text into a file.

Press **i** to get into the **insert mode** and type the following text in the document:

**Note:** Pressing **a** will also put the document in the insert mode.

This is a test file.

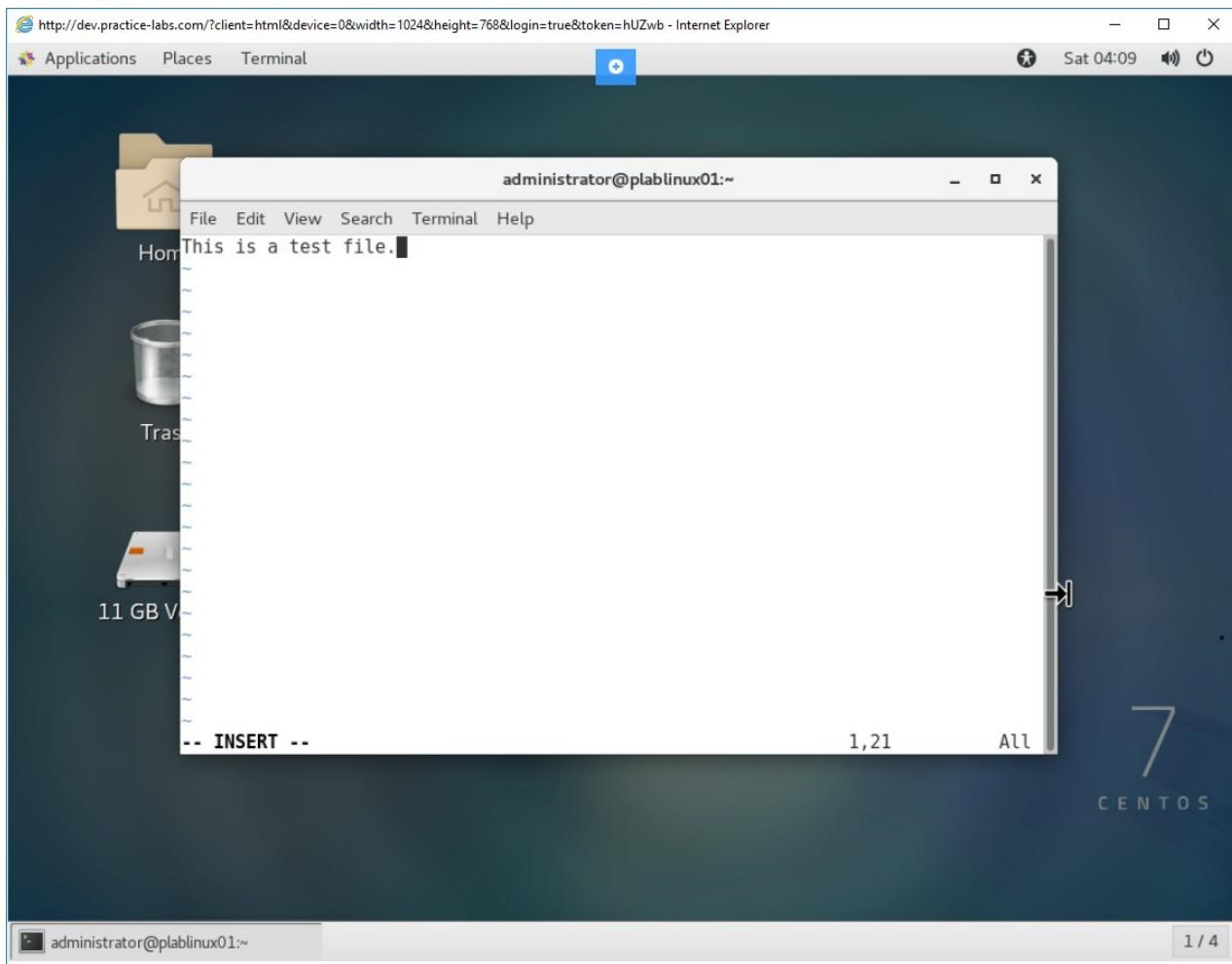


Figure 1.4 Screenshot of PLABLINUX01: Entering the text using the Insert mode in the test.txt file.

## Step 5

You will now need to save and close the file with the typed text. Press **ESC** and type the following command:

```
:wq
```

Press **Enter**.

You will now be navigated back to the command prompt. The file is now saved and closed.

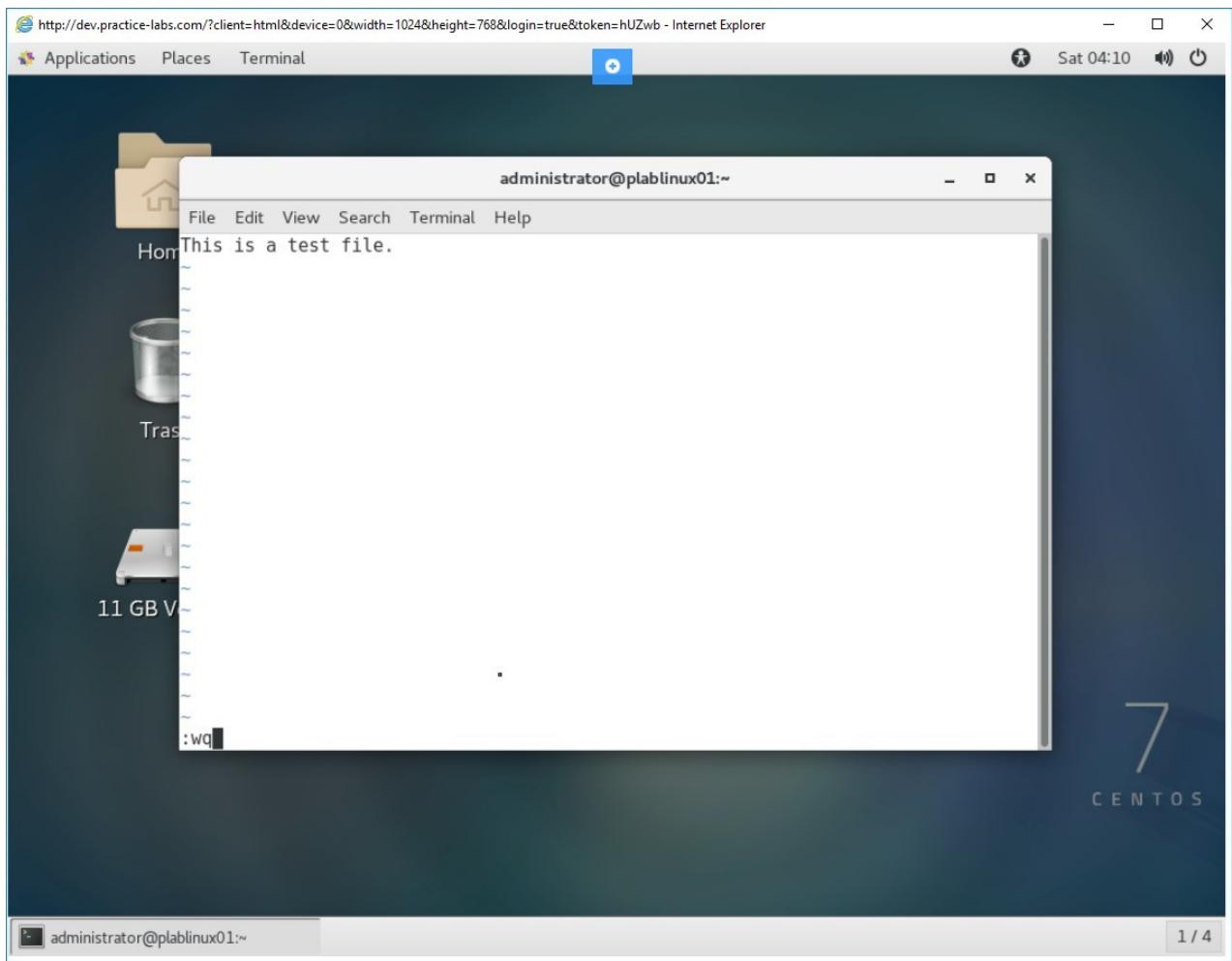


Figure 1.5 Screenshot of PLABLINUX01: Saving the file in the vi editor.

## Step 6

You will now be navigated back to the command prompt. The file is now saved and closed.

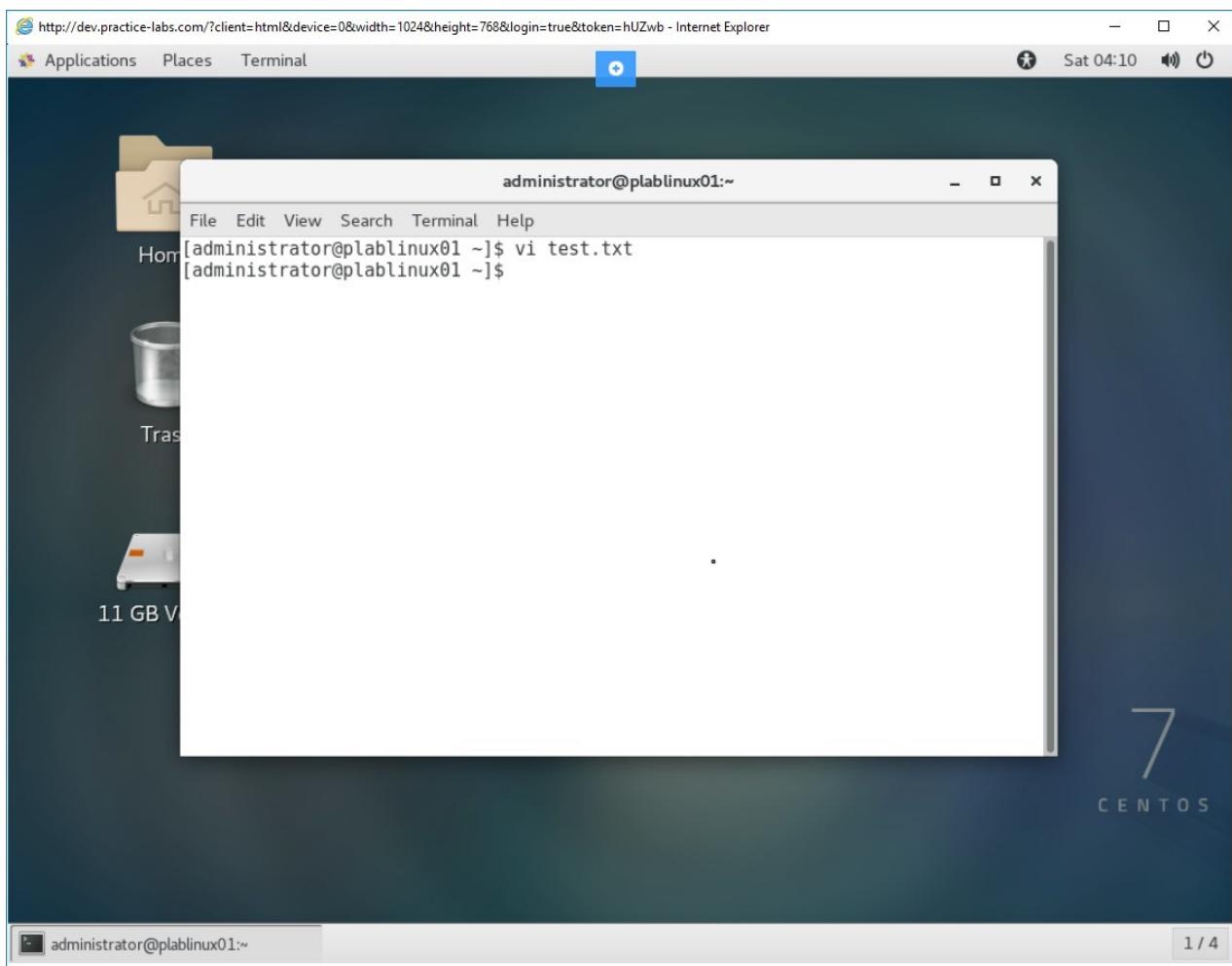


Figure 1.6 Screenshot of PLABLINUX01: Returning to the terminal window after saving and exiting the file.

## Task 2 - Navigate a Document Using vi

To navigate a document using vi, perform the following steps:

### Step 1

Open the **test.txt** file once again. Type the following command:

```
vi test.txt
```

Press **Enter**.

**Note:** Since this file is already created, you may see a message that this process is already open. Press **R** and then press **Enter** to continue. You may encounter this message whenever you attempt to open the file again after creating it.

The output displays the text you entered in the file.

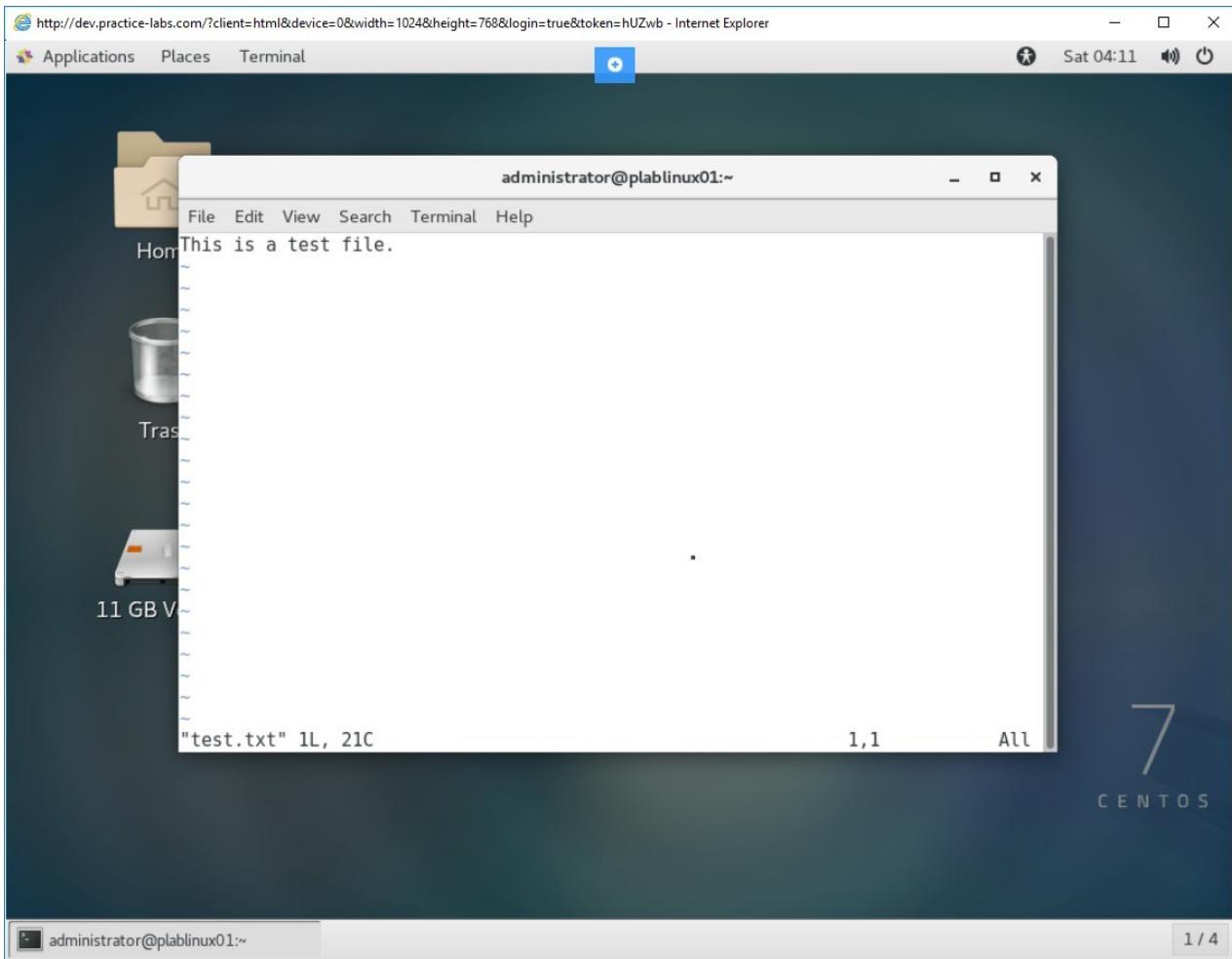


Figure 1.7 Screenshot of PLABLINUX01: Opening the file again in the vi editor.

## Step 2

You can start navigating the text within the file. Alternately, you can use the keys to navigate within the file.

The character **h** moves left one character, **j** moves down one character, **k** moves up one character, and **l** moves right one character.

Press **l** to move one character to the right.

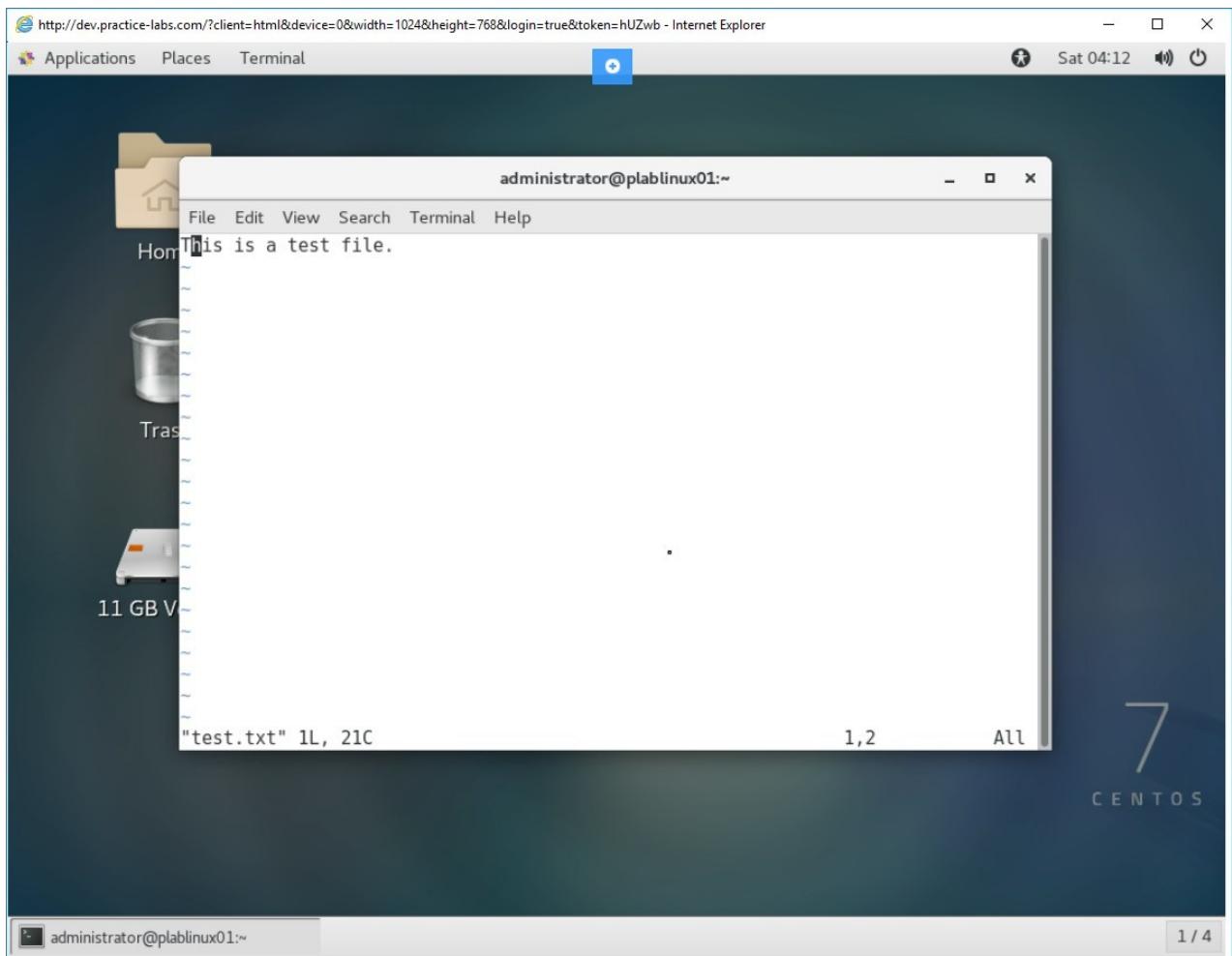


Figure 1.8 Screenshot of PLABLINUX01: Moving one character to the right.

## Step 3

To go back to the previous character, press **h**.

**Note:** you can use the arrow keys to perform these functions as well.

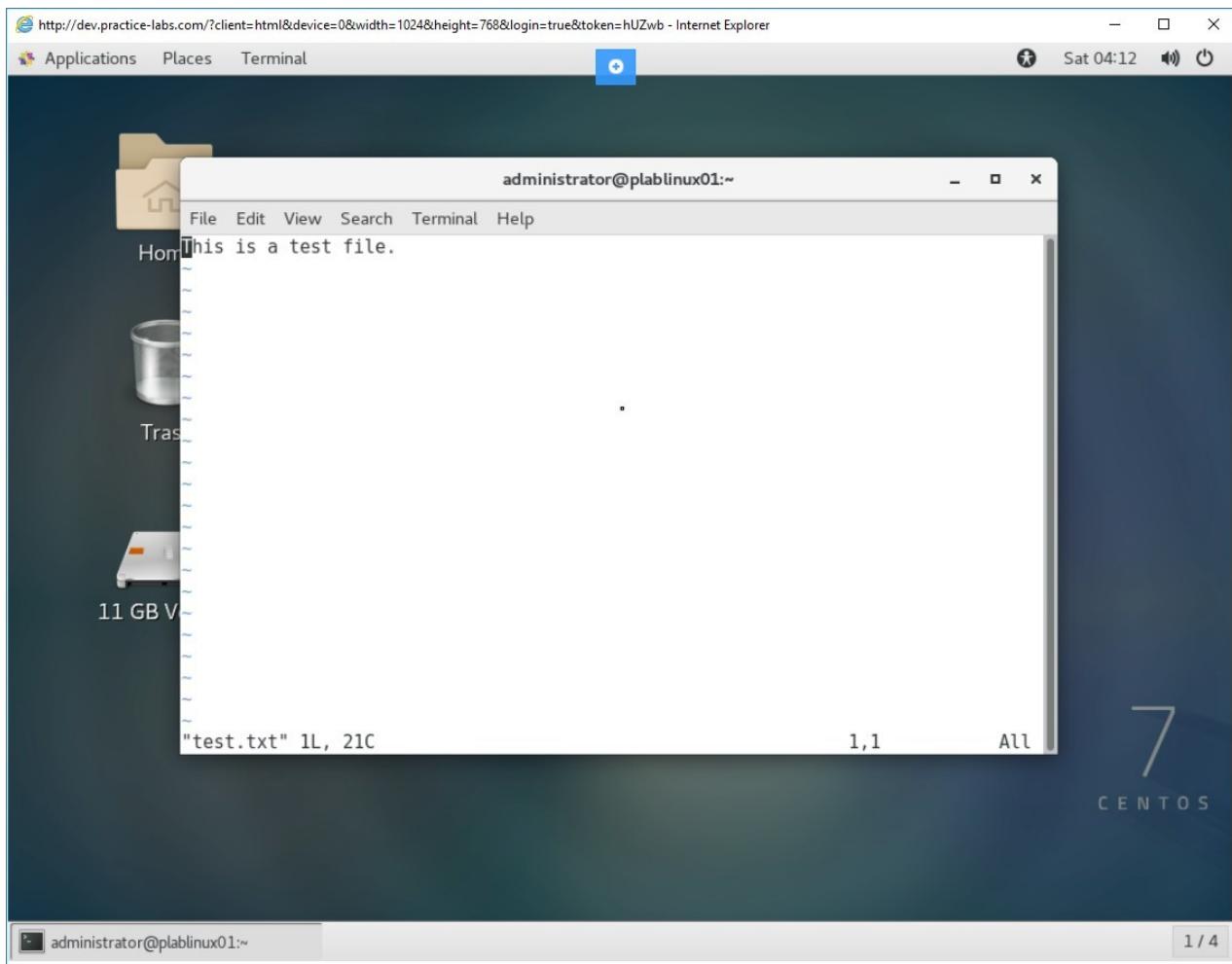


Figure 1.9 Screenshot of PLABLINUX01: Moving to the previous character.

## Step 4

Before moving ahead, enter a few more lines in the **test.txt** file. You can add any text to make more lines in the **test.txt** file.

**Note:** Remember to press **i** to bring the document into the insert mode.

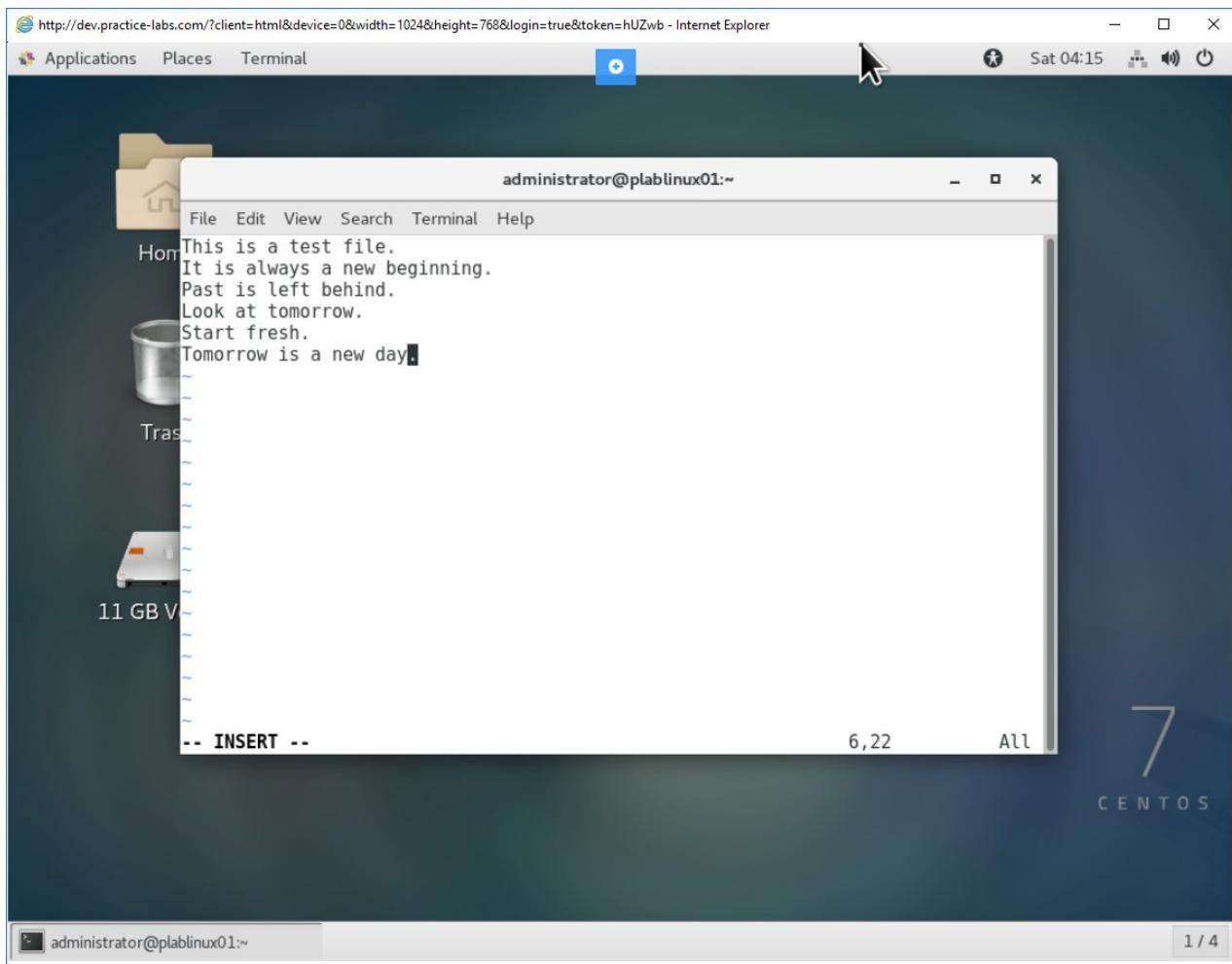


Figure 1.10 Screenshot of PLABLINUX01: Adding more text lines in the insert mode.

## Step 5

If you have more lines in the file, then you can jump a specific number of lines by entering # along with **j**. You need to ensure that you are not in the insert mode.

For example, you will need to type **5k**.

To move to the next line, you can press **j**.

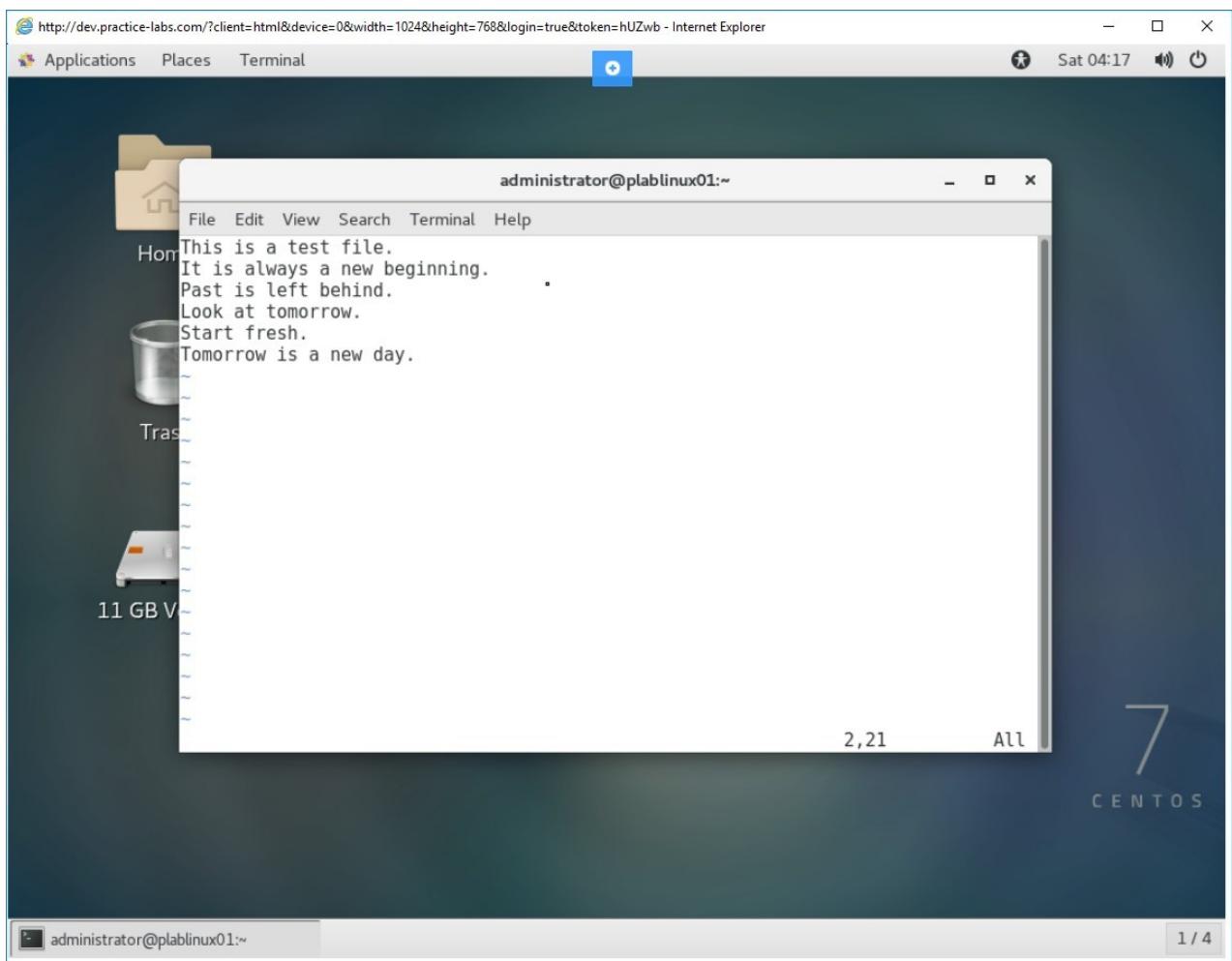


Figure 1.11 Screenshot of PLABLINUX01: Moving to the next line.

## Step 6

To navigate to the end of a line, press **\$**. You will jump to the end of the line.

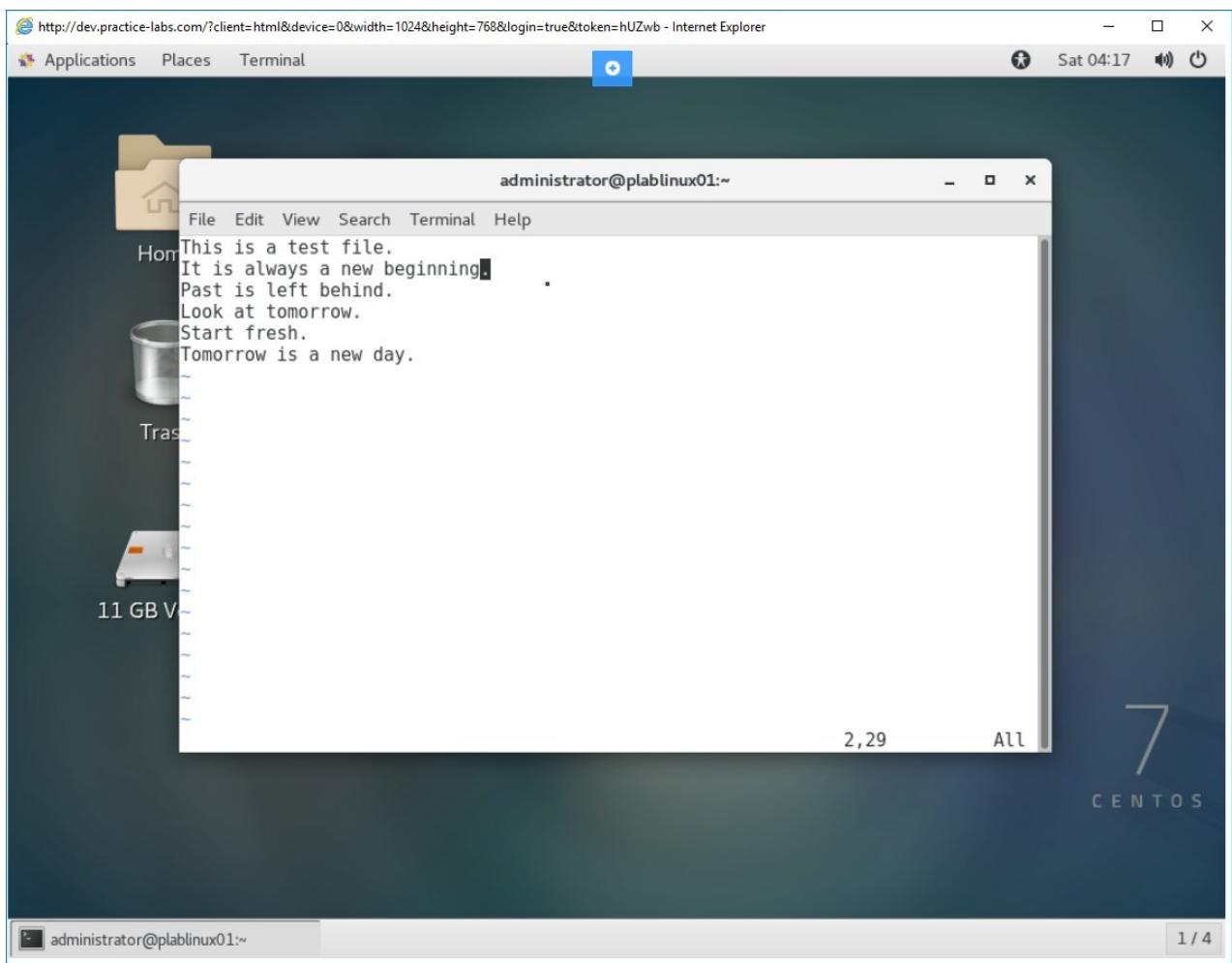


Figure 1.12 Screenshot of PLABLINUX01: Moving to the end of the line.

## Step 7

To jump to the start of the line, enter ^.

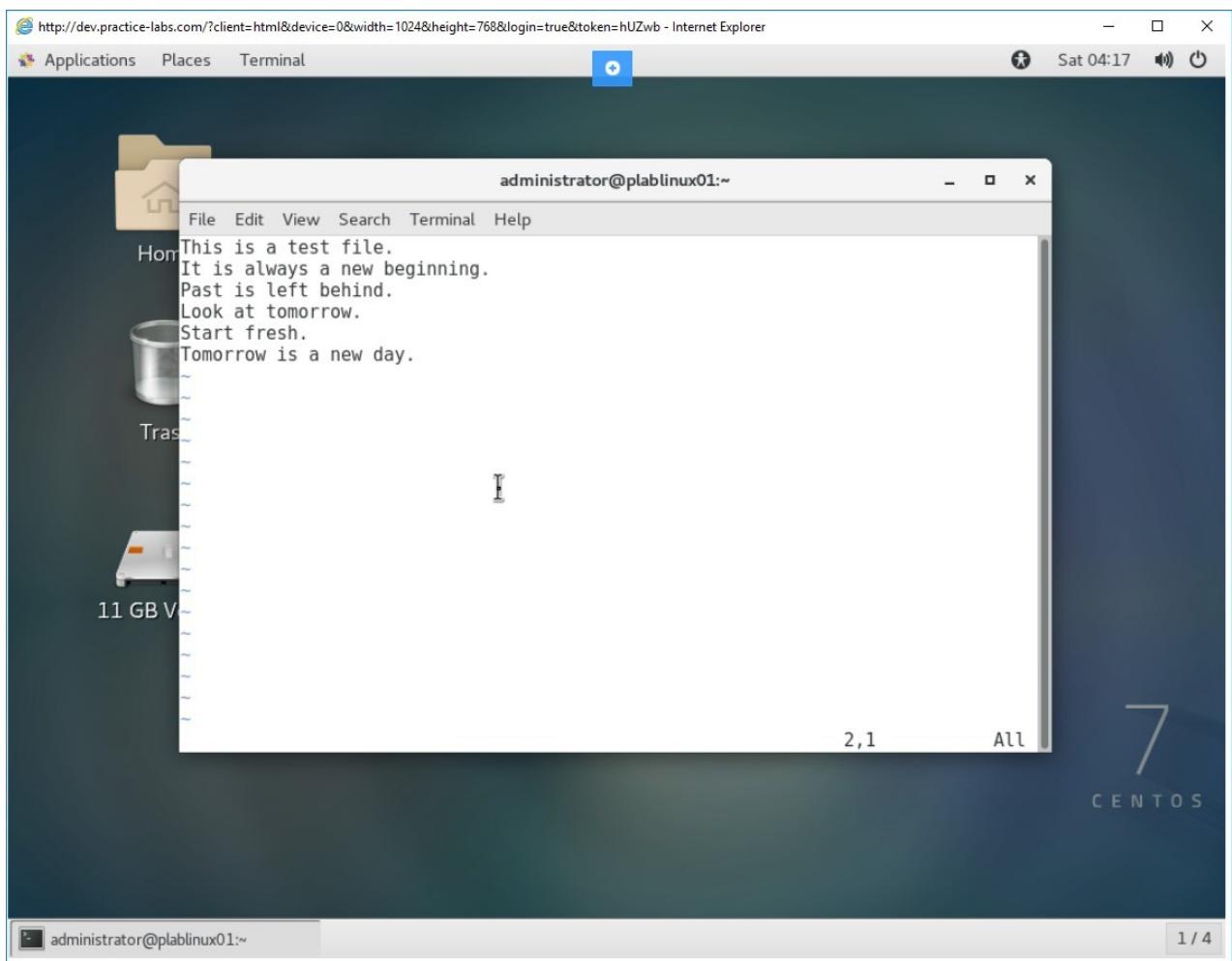


Figure 1.13 Screenshot of PLABLINUX01: Jumping to the start of the line.

## Step 8

To jump to the start of the file, press **1H**.

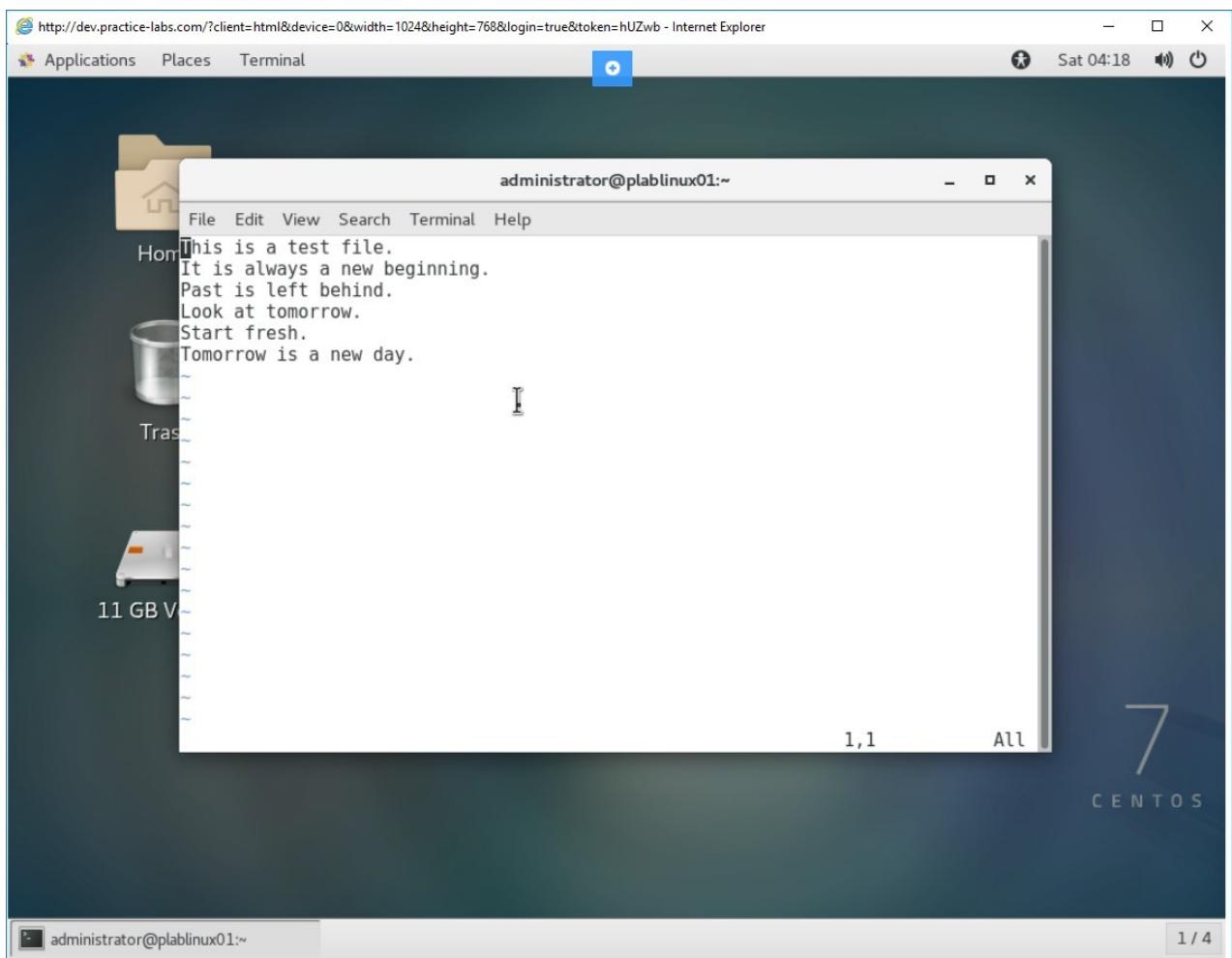


Figure 1.14 Screenshot of PLABLINUX01: Jumping to the start of the line.

## Step 9

To navigate to the end of a word, enter **e** you will jump to the end of the word.

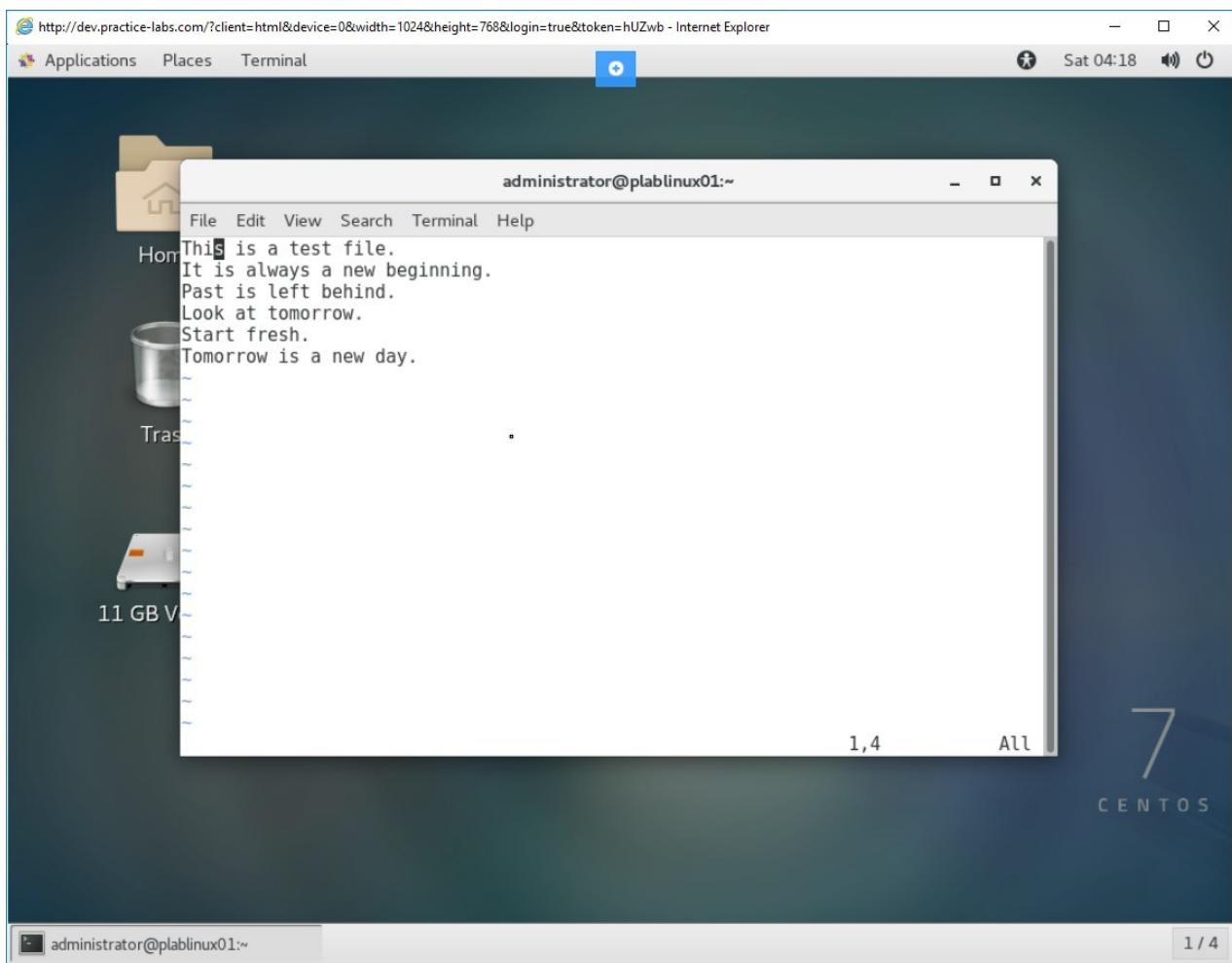


Figure 1.15 Screenshot of PLABLINUX01: Navigating to the end of the word.

## Step 10

The letter **w** is similar to **e** but includes the space after the word.

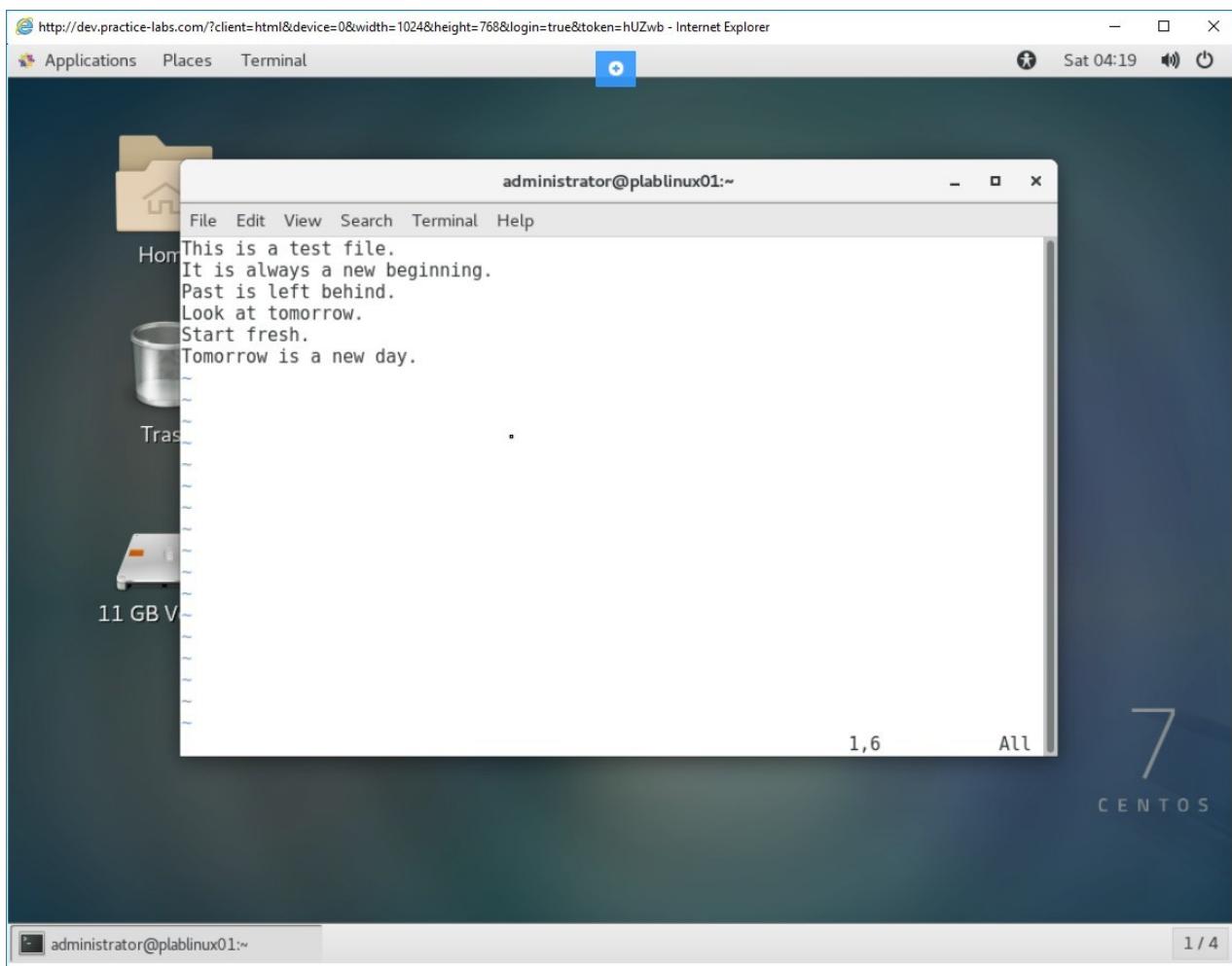


Figure 1.16 Screenshot of PLABLINUX01: Jumping to the end of the word including its space.

## Step 11

To navigate to the start of the previous word, enter **b**.

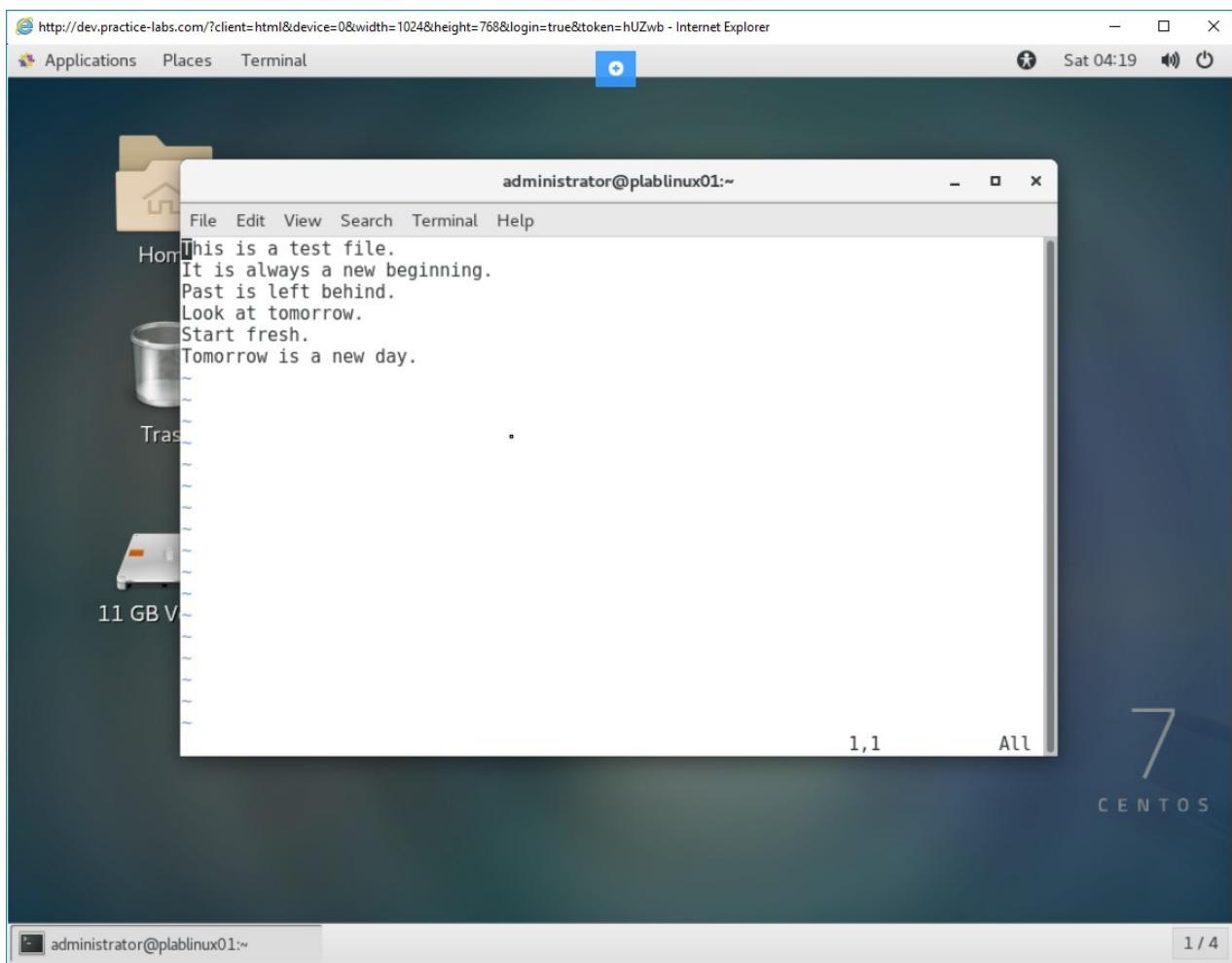


Figure 1.17 Screenshot of PLABLINUX01: Navigating to the start of the previous word.

## Step 12

To navigate to the start of the next sentence, enter **).**.

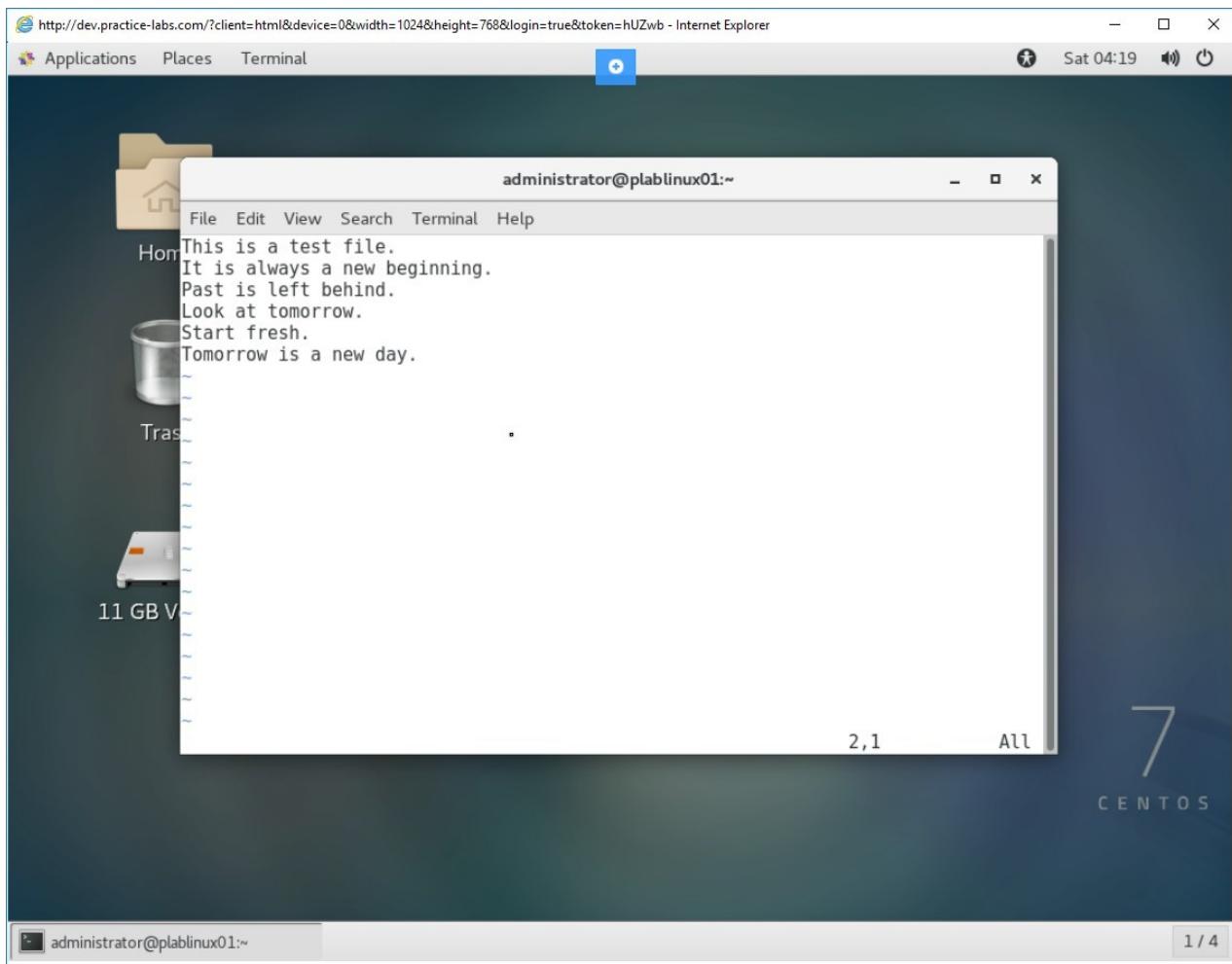


Figure 1.18 Screenshot of PLABLINUX01: Navigating to the start of the next sentence.

## Step 13

To navigate to the start of the previous sentence, enter (.

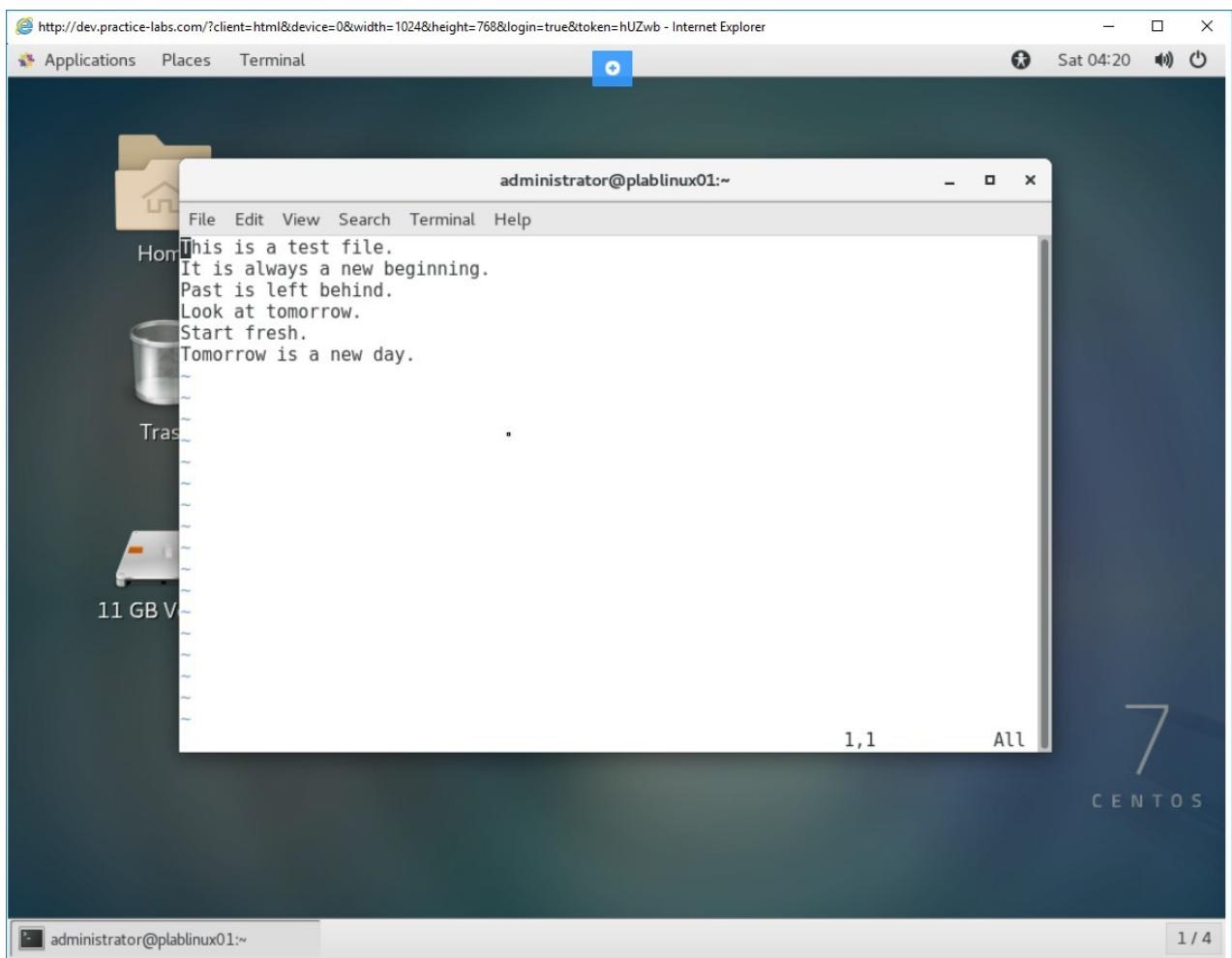


Figure 1.19 Screenshot of PLABLINUX01: Navigating to the start of the previous sentence.

## Step 14

To navigate to the end of the paragraph, enter }.

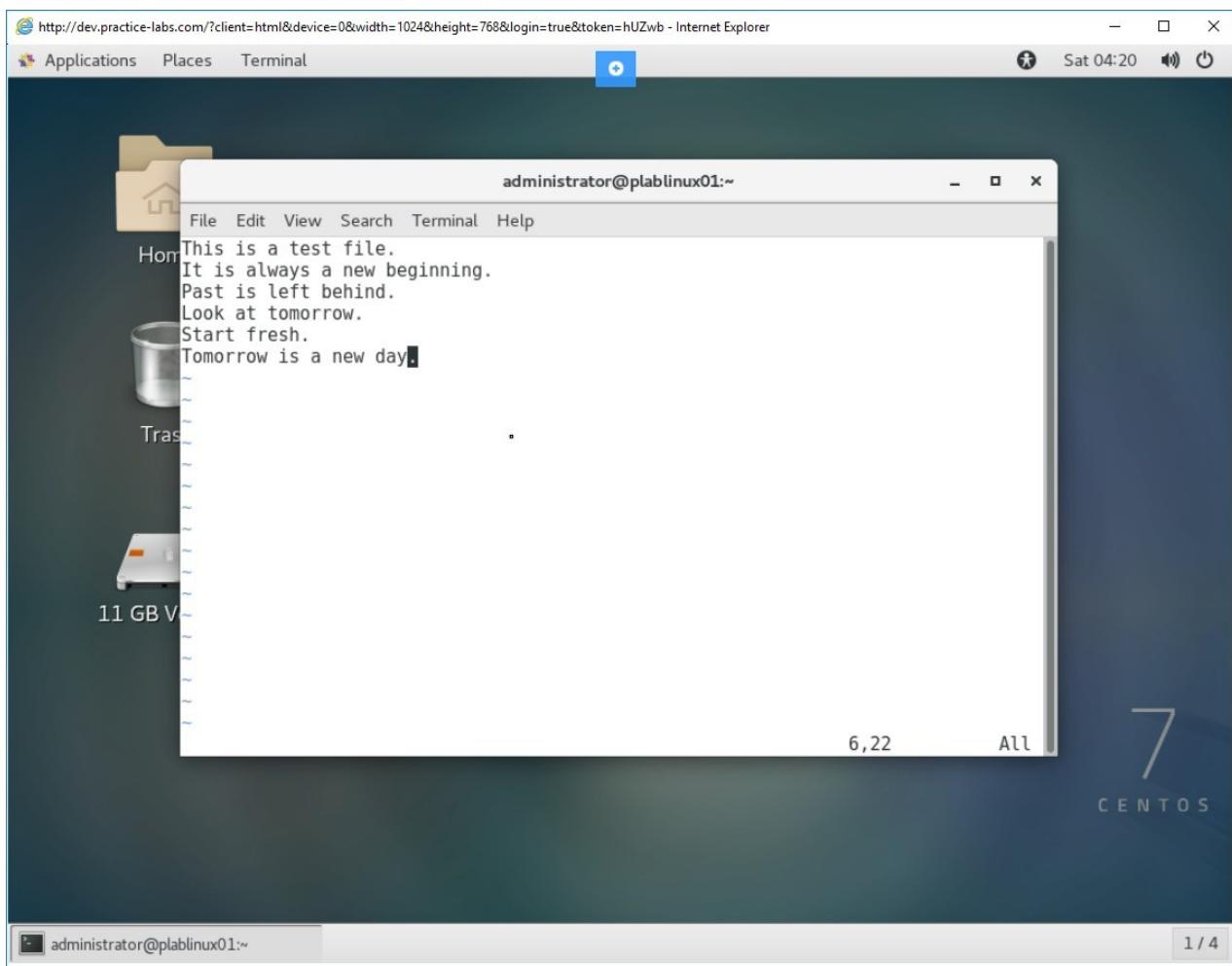


Figure 1.20 Screenshot of PLABLINUX01: Navigating to the end of the paragraph.

## Step 15

To navigate to the start of the paragraph, enter {.

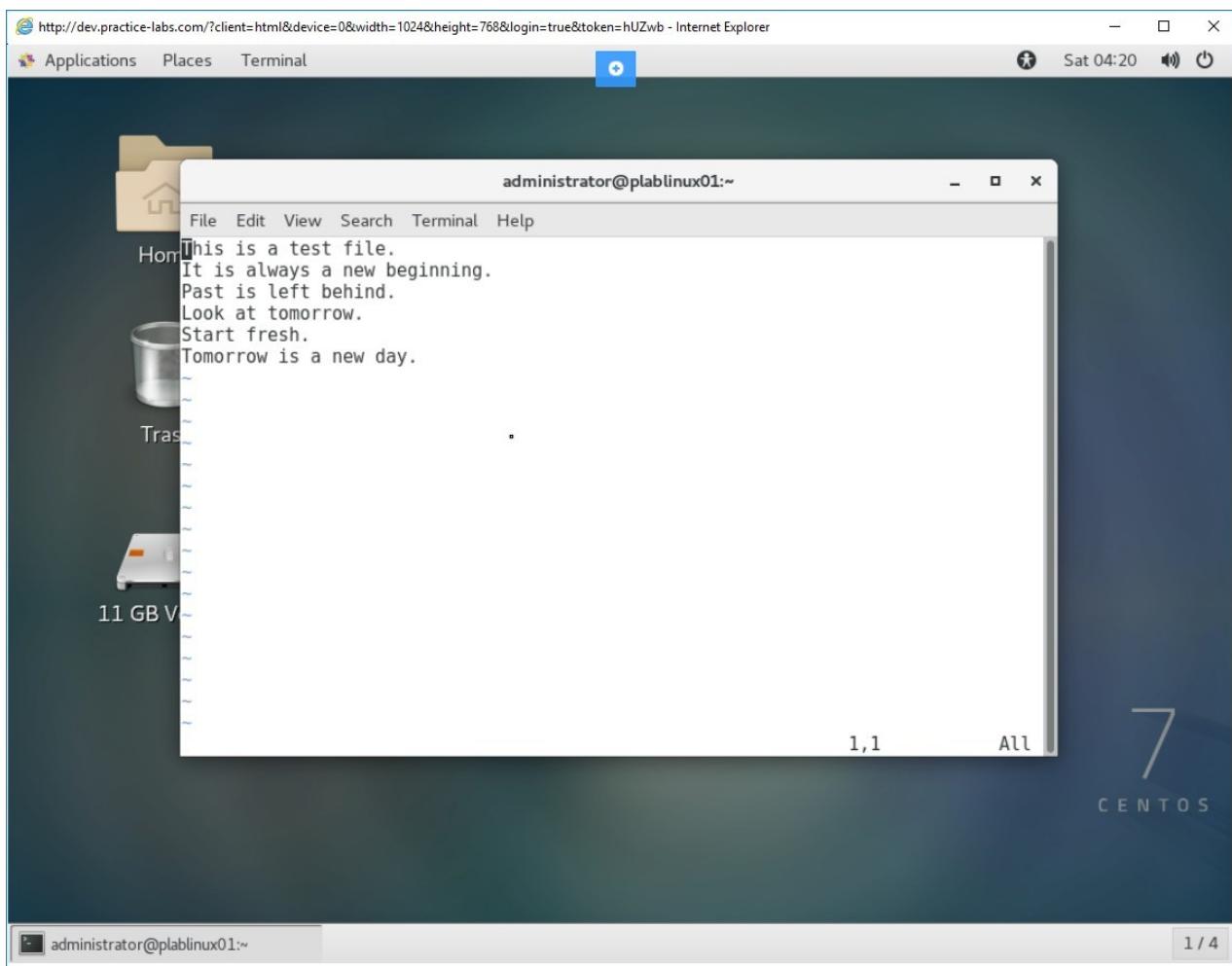


Figure 1.21 Screenshot of PLABLINUX01: Navigating to the start of the paragraph.

## Step 16

To search forward for a specific string of text, enter the string after a “/”. For example, to search for “tomorrow” in the file, enter **/tomorrow**.

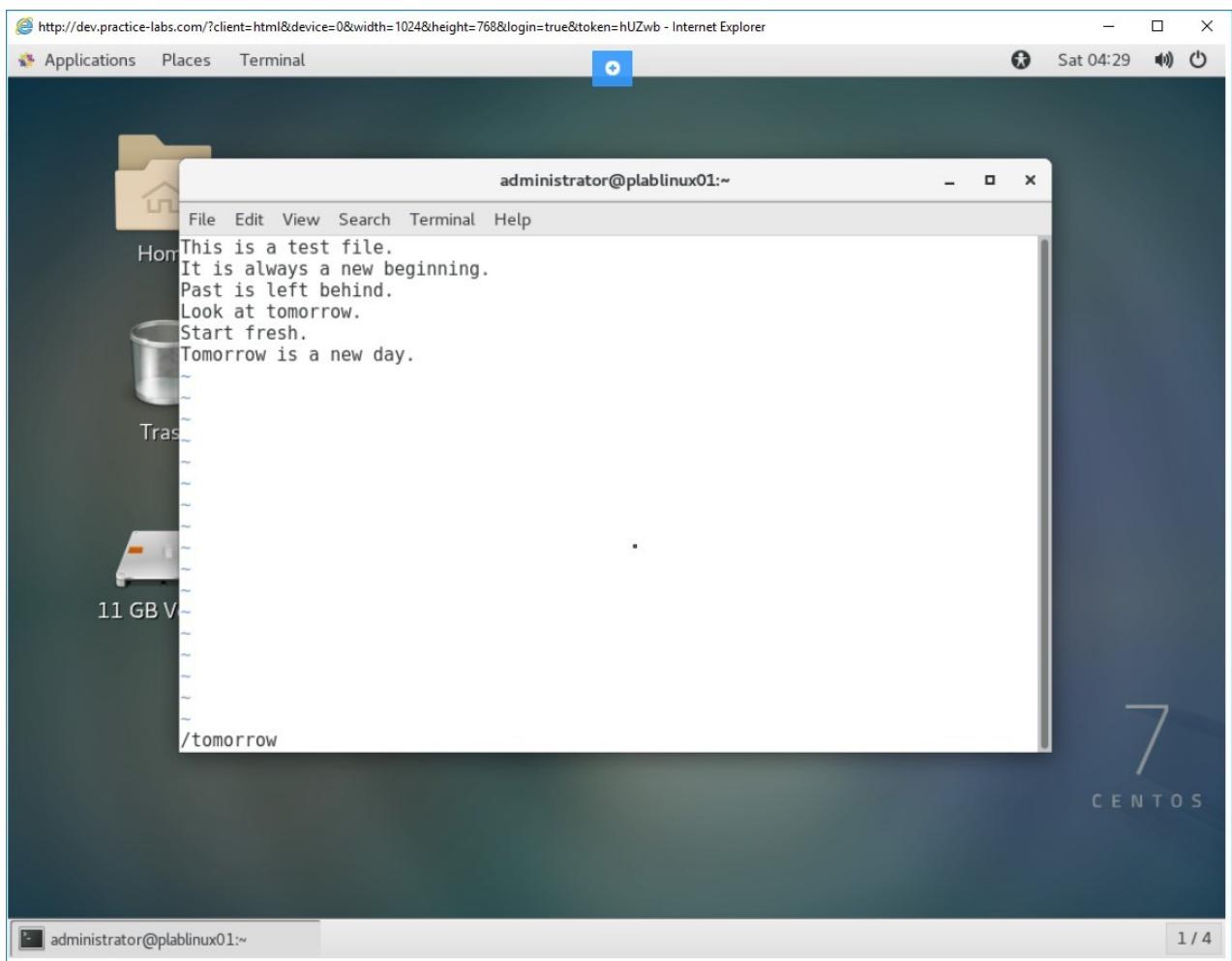


Figure 1.22 Screenshot of PLABLINUX01: Searching for a word.

## Step 17

Note that the first character of tomorrow is highlighted.

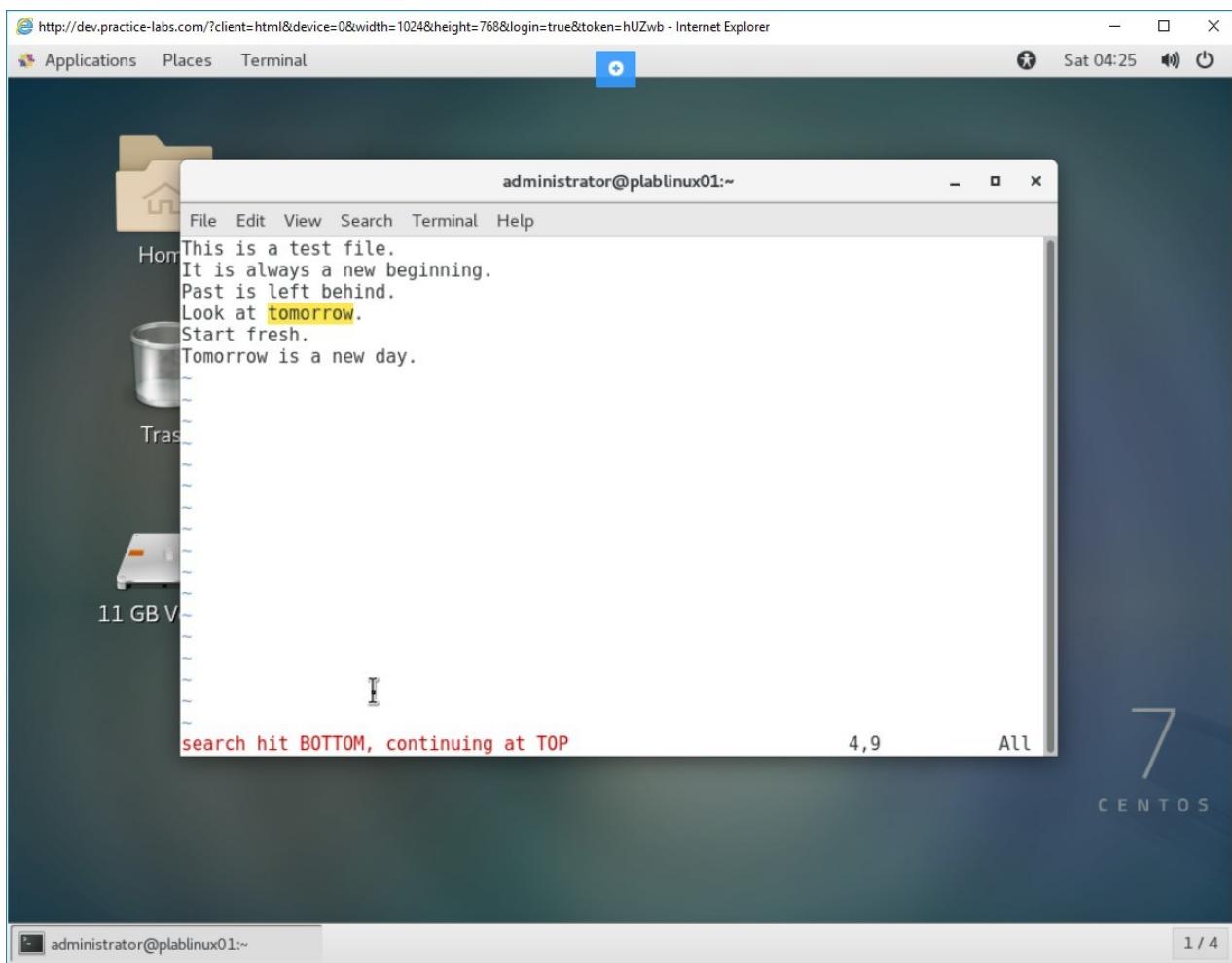


Figure 1.23 Screenshot of PLABLINUX01: Locating the searched word.

## Step 18

Similarly, to search backward for a specific string of text, enter **?tomorrow**

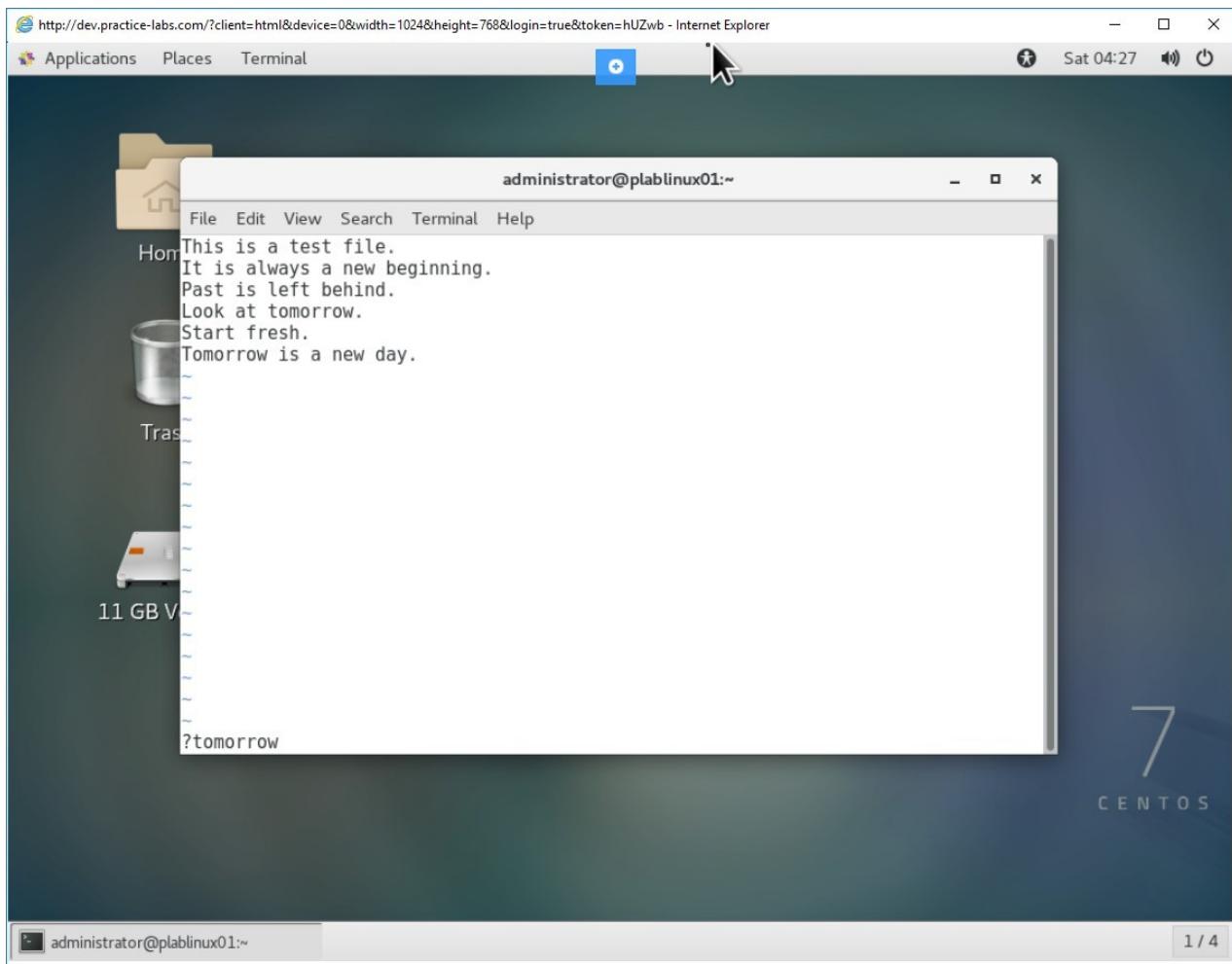


Figure 1.24 Screenshot of PLABLINUX01: Searching backward for a specific string of text.

## Step 19

Notice that the tomorrow is highlighted.

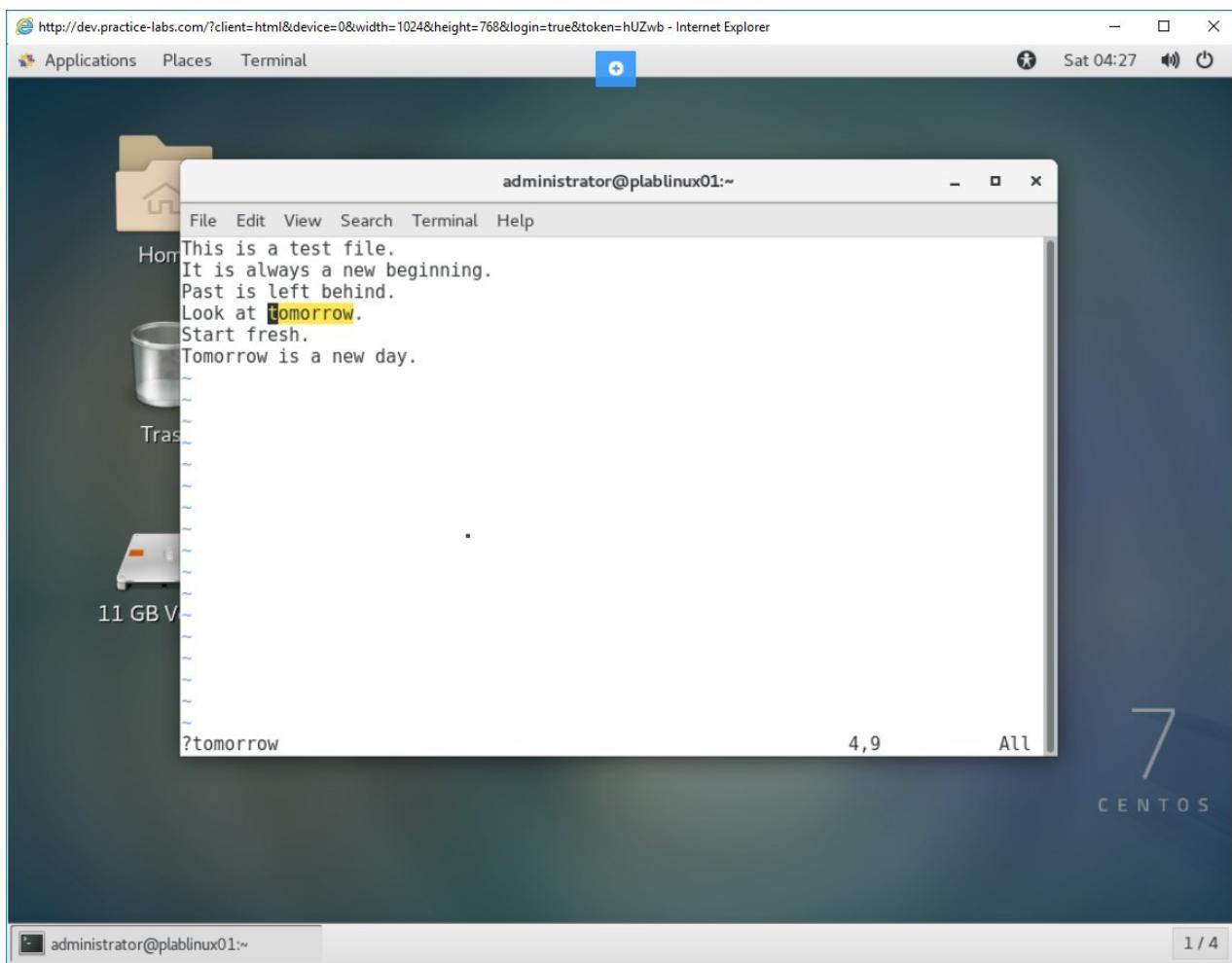


Figure 1.25 Screenshot of PLABLINUX01: Highlighting the searched word.

## Task 3 - Manage a File Using vi

The **command mode** and the **insert mode** of the vi editor are mutually exclusive. This means that only one mode is activated at a time. Therefore, the commands are entered only when the editor is **not** in the **insert mode**.

The commands are identified by the special characters, including /, ?, or :, and appear in the left bottom corner of the file. Remember - the commands in the **vi** editor are case-sensitive. In this task, you will perform basic file functions, including insert, edit, delete, copy, and finding text in a file.

To manage a file, perform the following steps:

### Step 1

Move the cursor to the end of the line by pressing **End**.

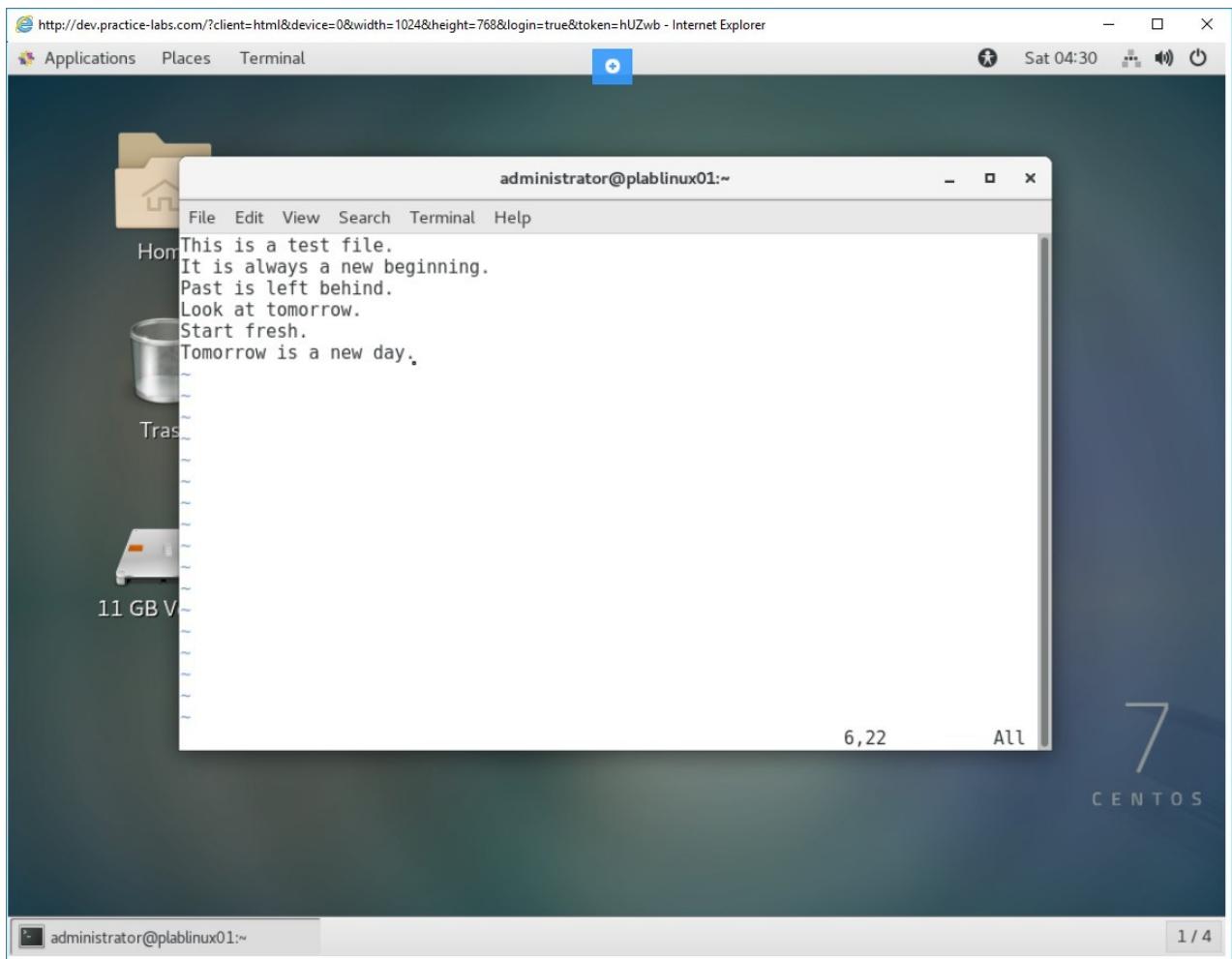


Figure 1.26 Screenshot of PLABLINUX01: Moving the cursor to the end of the line.

## Step 2

To enter a new line of text below the current line, press **o**

The **vi** editor gets into the insert mode.

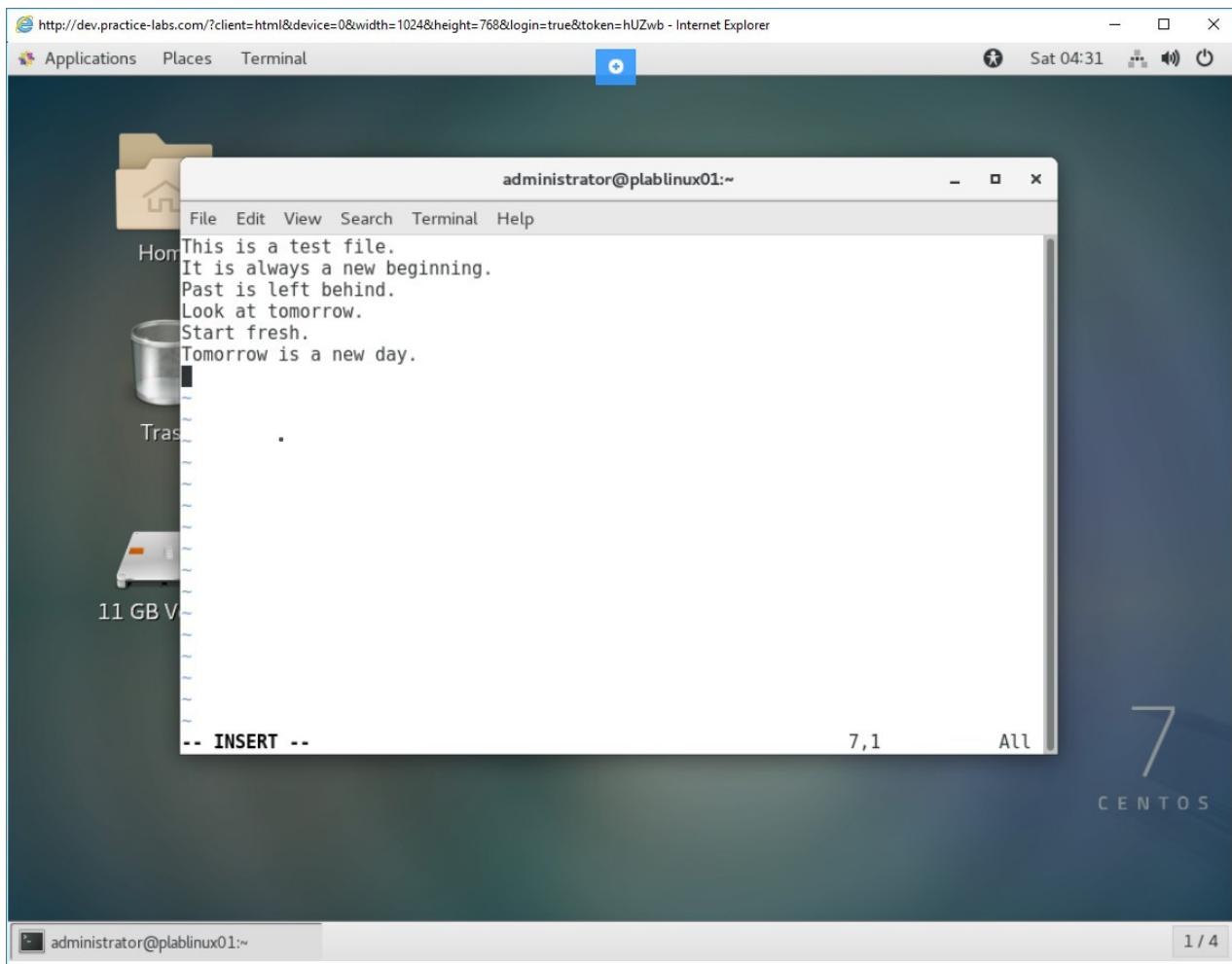


Figure 1.27 Screenshot of PLABLINUX01: Entering a new line of text below the current line.

## Step 3

Press **ESC** to get out of the insert mode.

Press **o** again to notice that there are now two blank lines at the end.

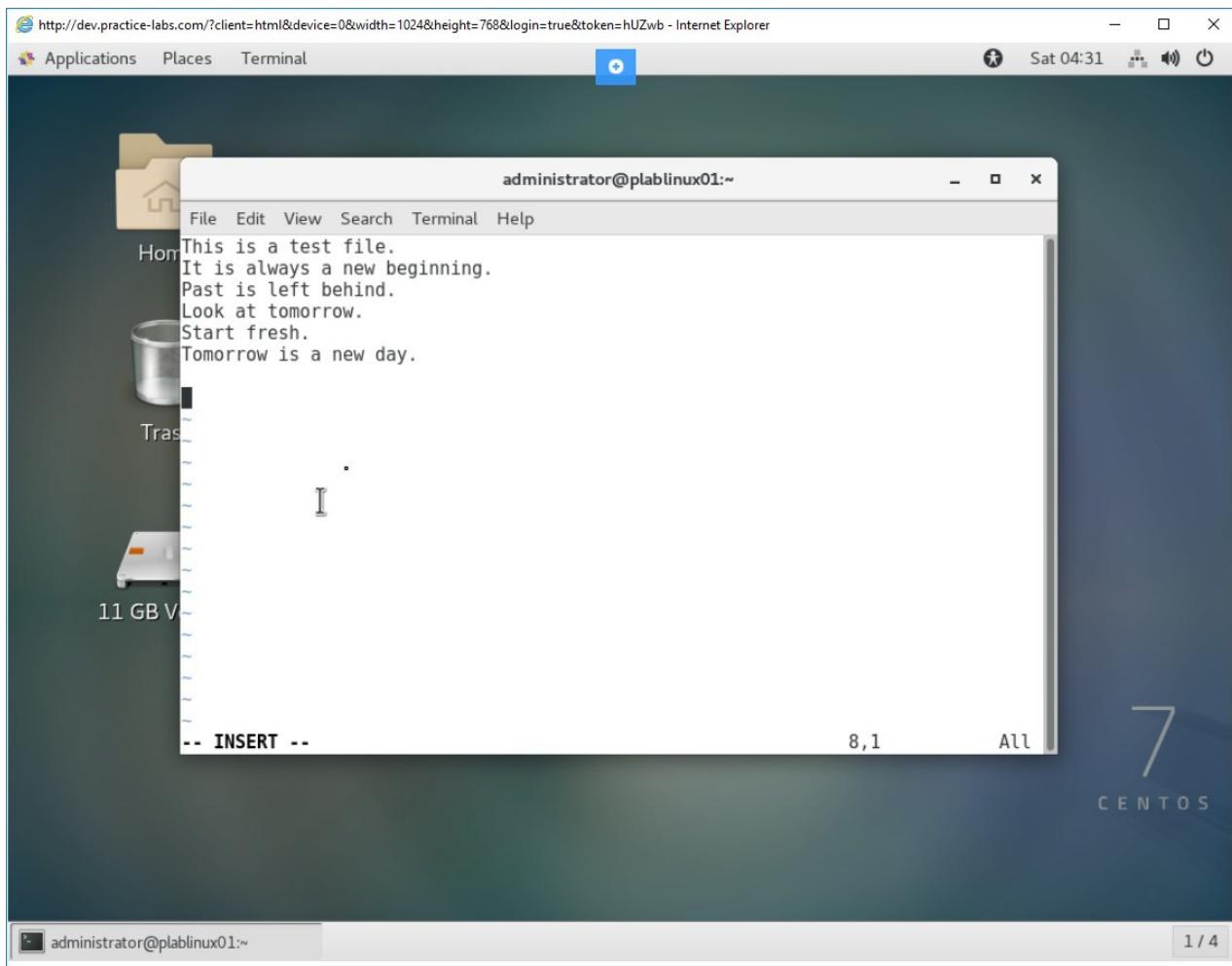


Figure 1.28 Screenshot of PLABLINUX01: Entering a new line of text below the current line.

## Step 4

Move your cursor on any of the characters in the file and press **x**.

Notice that the character highlighted by the cursor is deleted. You have highlighted and deleted the . (period) at the end of the word day.

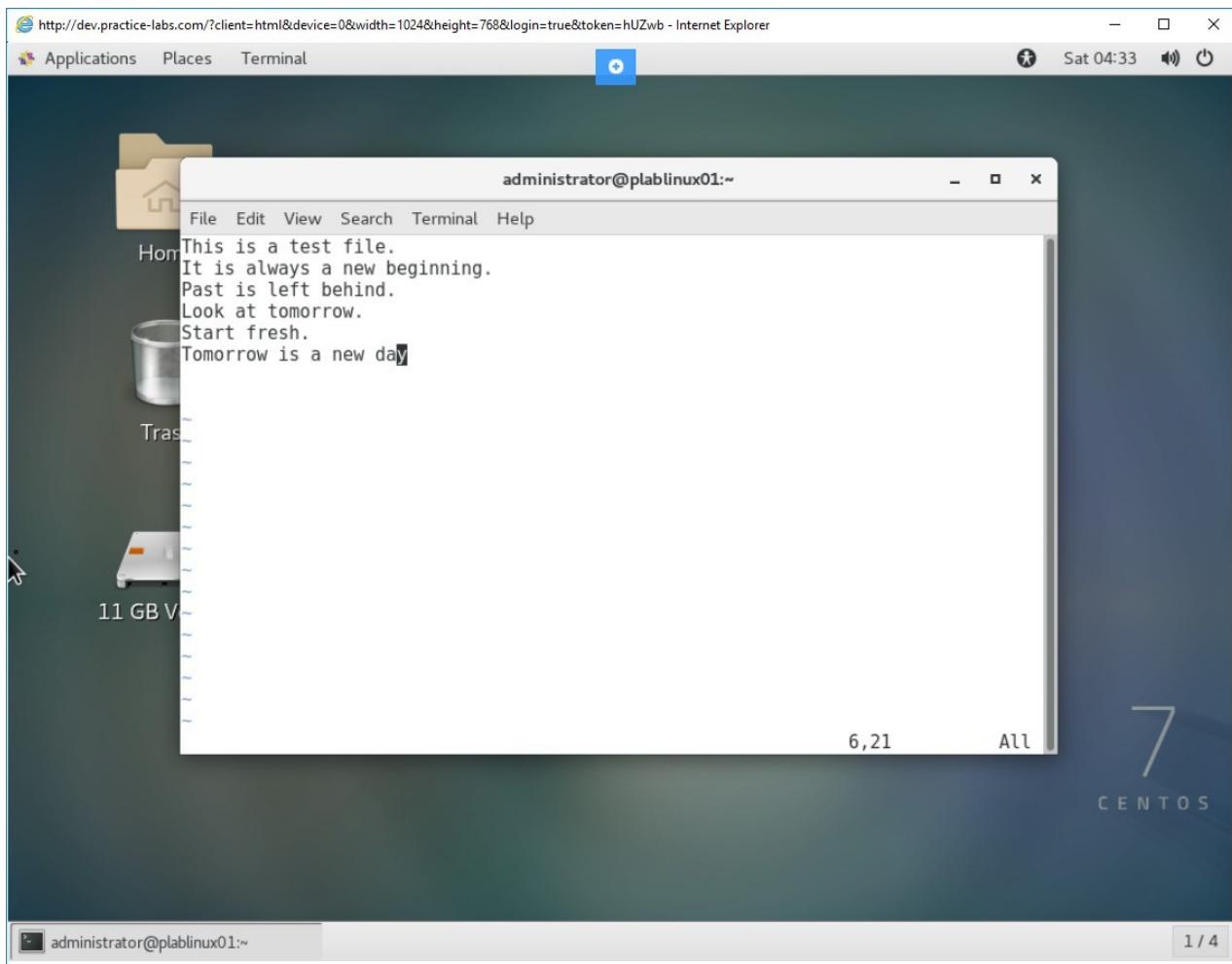


Figure 1.29 Screenshot of PLABLINUX01: Moving the cursor on any of the characters in the file.

## Step 5

Press **ESC** to get out of the insert mode.

Move your cursor on any of the characters in the middle of any line. To append text after the last letter at the end of the line, press **A**. Notice that the file is back into the insert mode and the cursor is shifted to the end of the line.

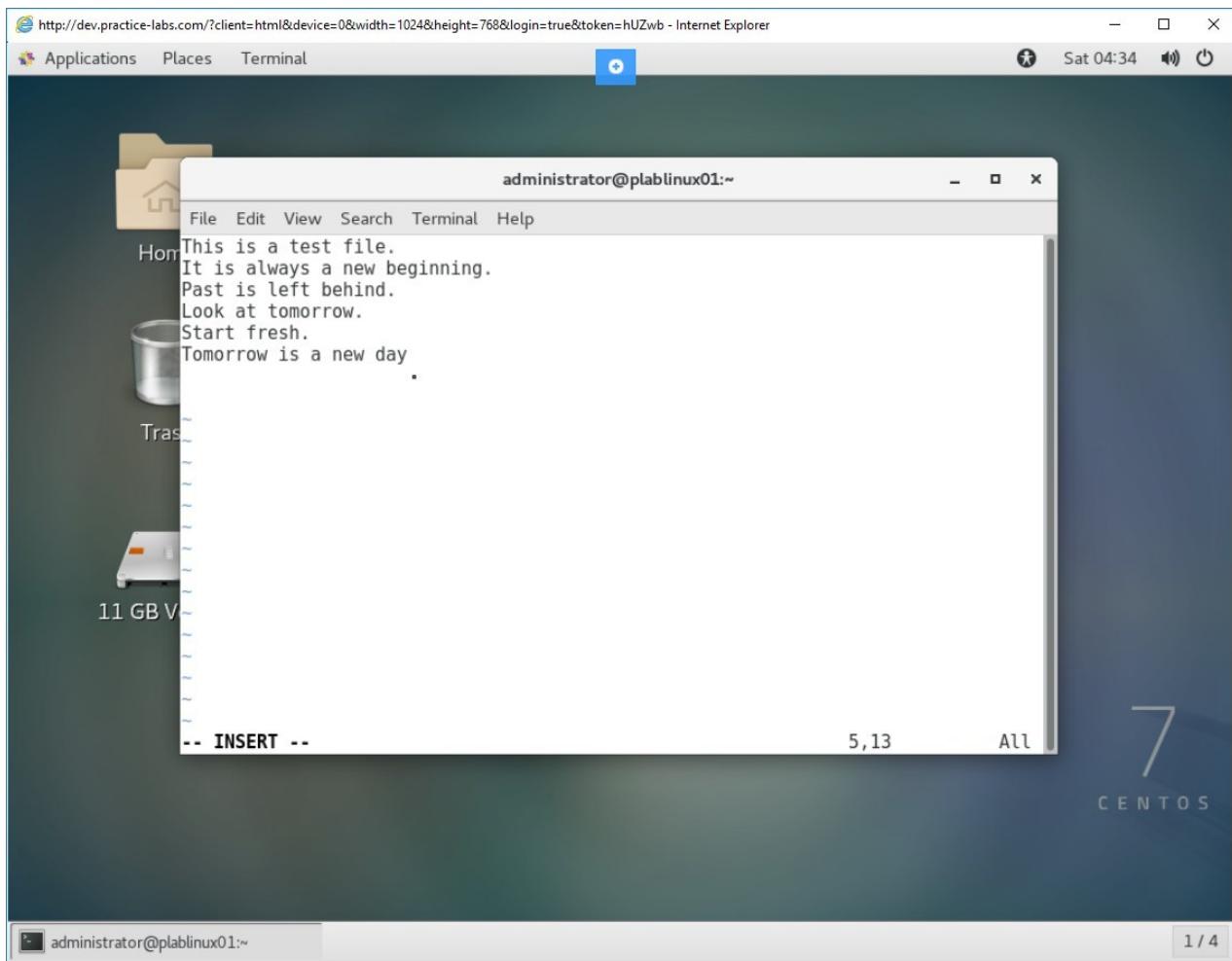


Figure 1.30 Screenshot of PLABLINUX01: Moving the cursor on any of the characters in the middle of any line.

## Step 6

Press **ESC** to get out of the insert mode. Place the cursor on any of the words.

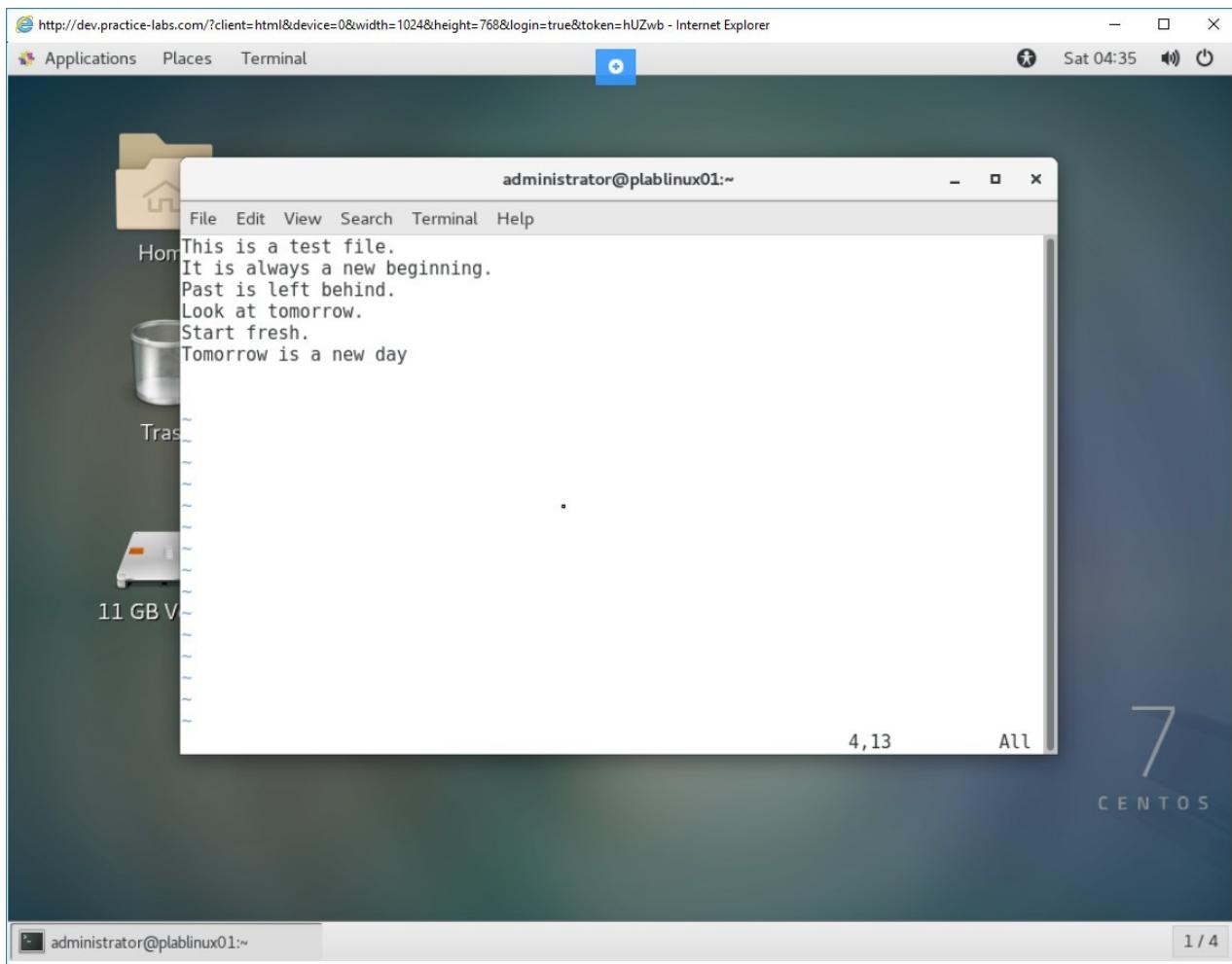


Figure 1.31 Screenshot of PLABLINUX01: Placing the cursor on a word.

## Step 7

To append after the current cursor position, enter **a**.

Note that the cursor moves to the next letter and insert mode is activated.

Press **ESC** to get out of the insert mode.

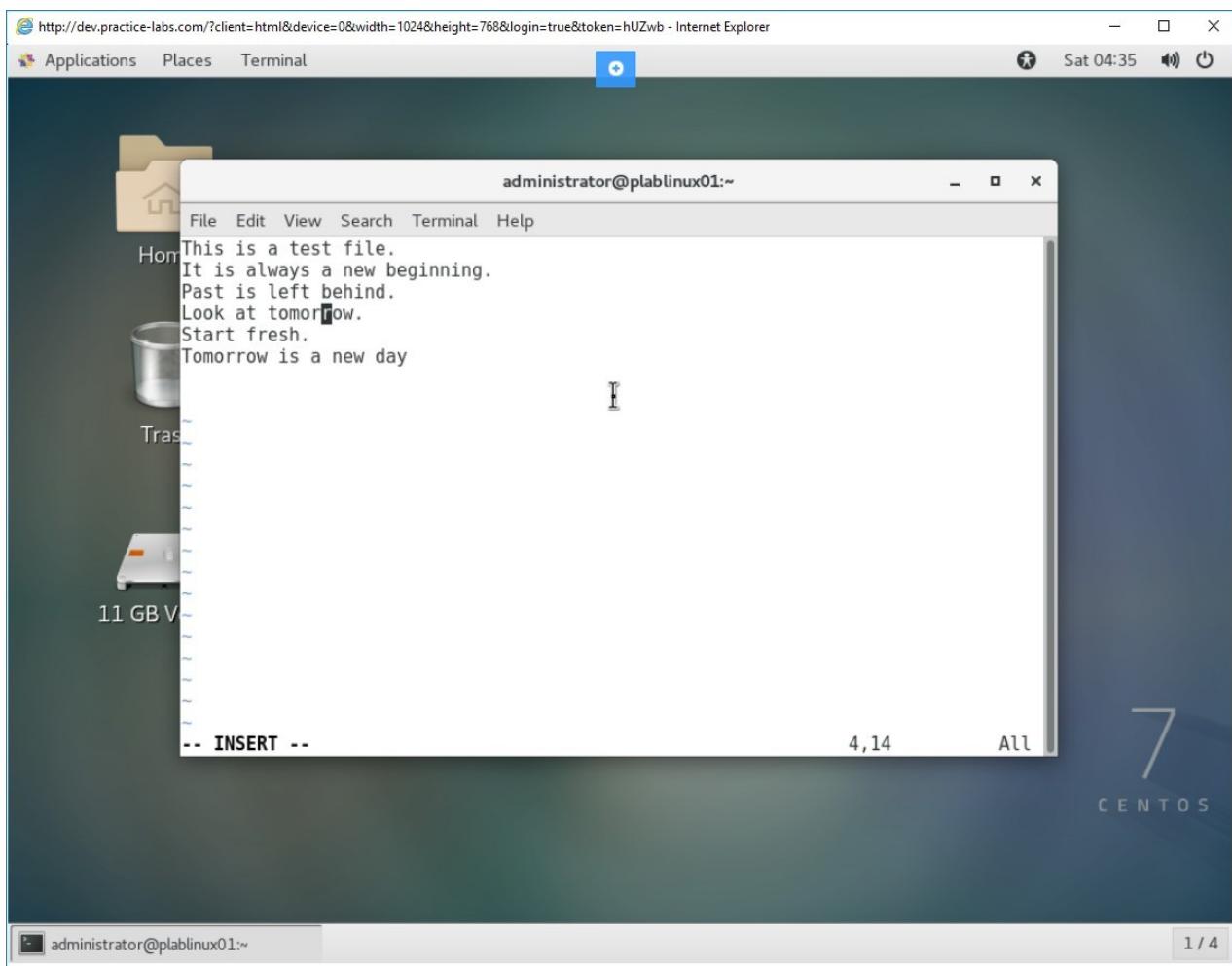


Figure 1.32 Screenshot of PLABLINUX01: Appending after the current cursor position.

## Step 8

To delete the current letter, press **x**. The letter o after m in tomorrow is now deleted.

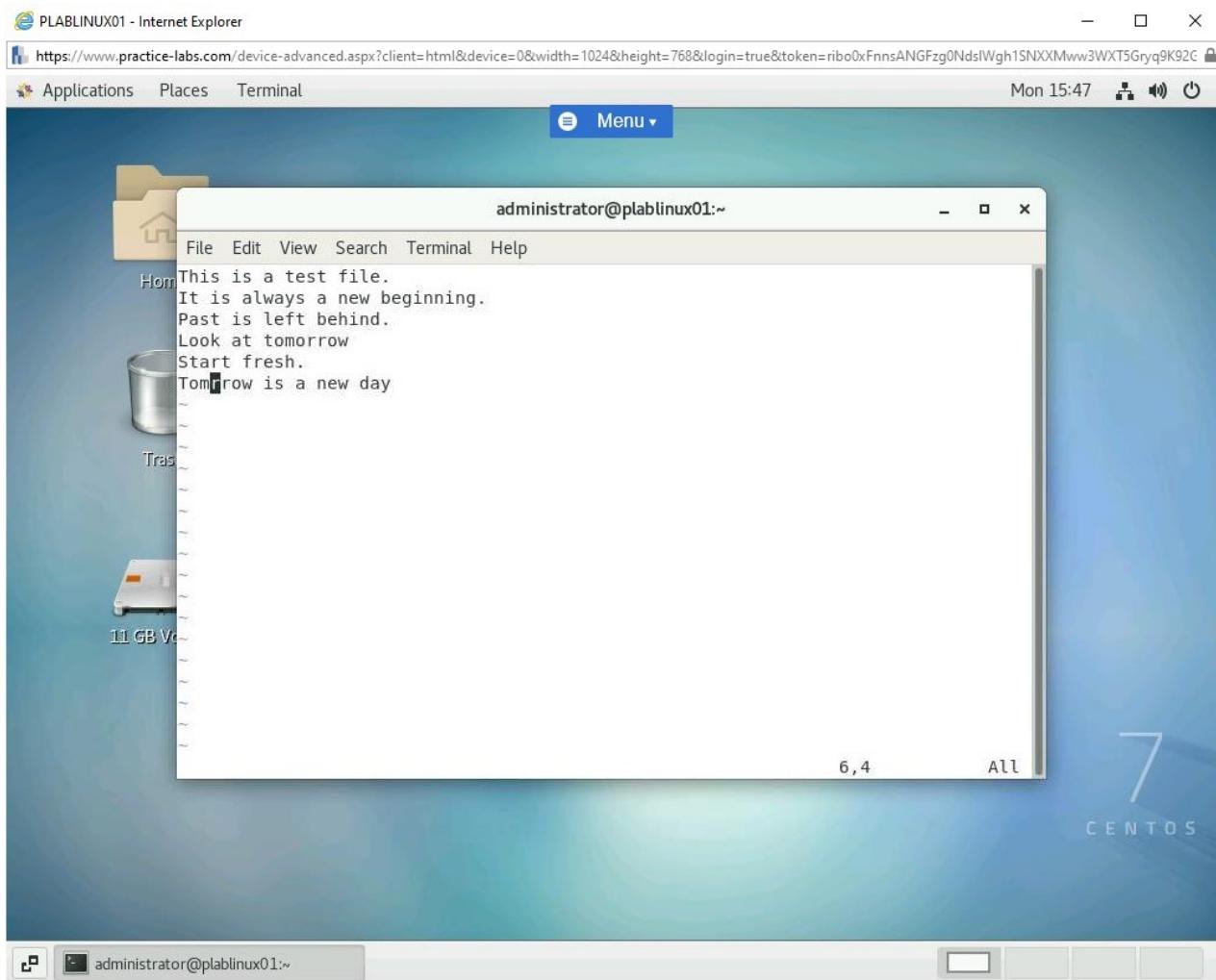


Figure 1.33 Screenshot of PLABLINUX01: Deleting the current letter.

## Step 9

To delete the current line and go into the insert mode, enter **S**. Press **ESC** to get out of the insert mode.

Note that the complete line is now deleted

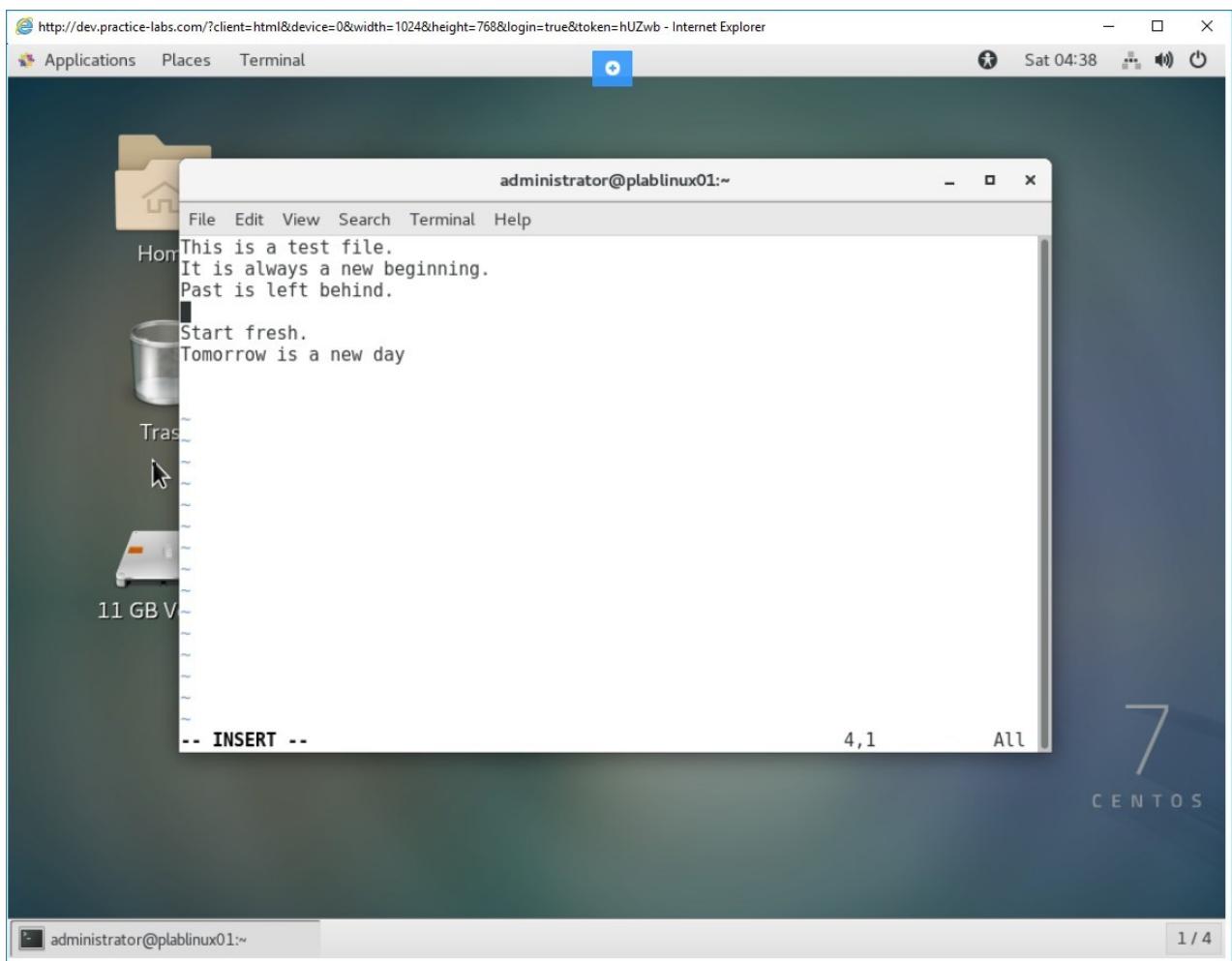


Figure 1.34 Screenshot of PLABLINUX01: Deleting the current line.

## Step 10

Enter :q! to exit the file without saving.

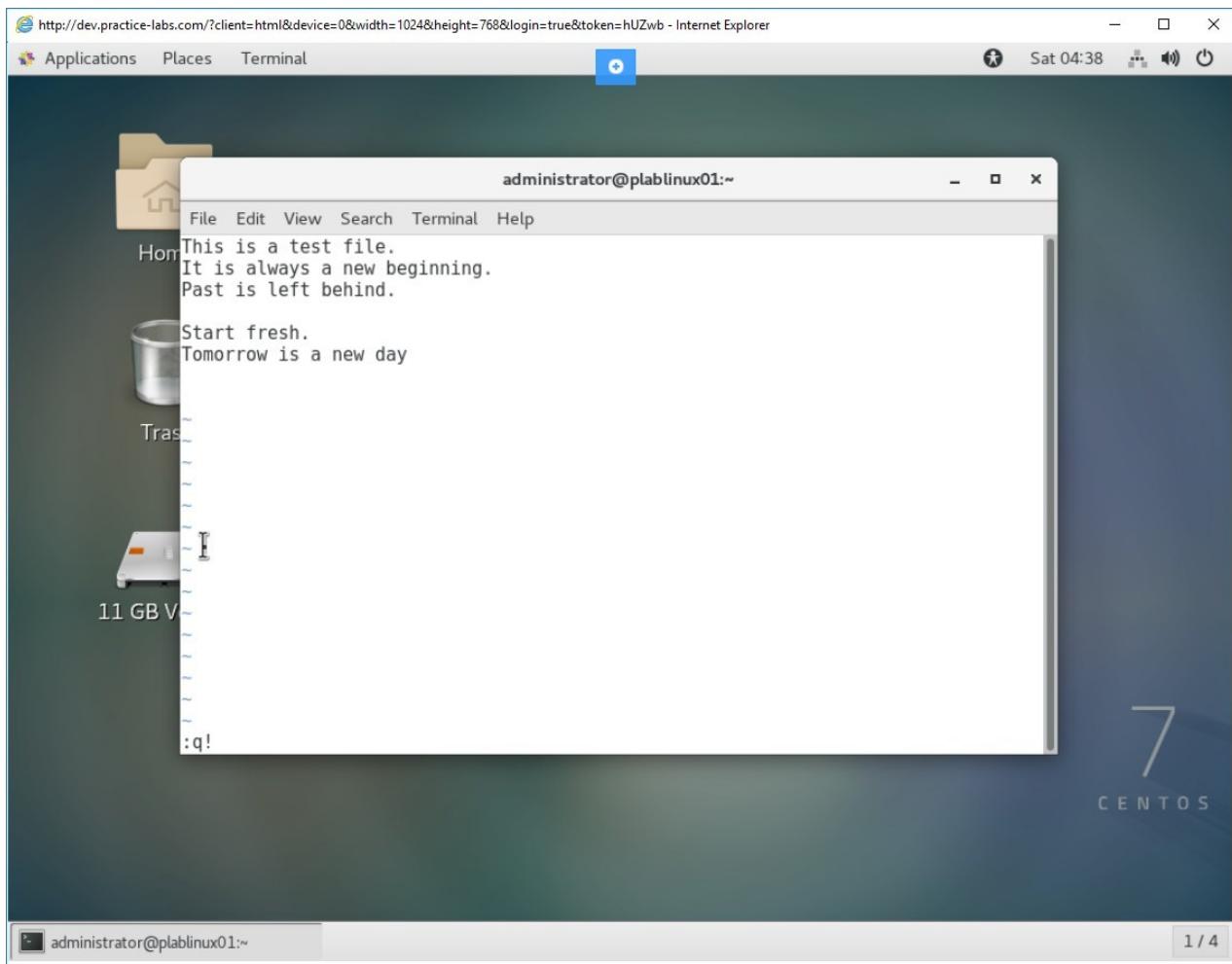


Figure 1.35 Screenshot of PLABLINUX01: Closing the file without saving.

## Step 11

The file is now closed without saving changes and you are navigated to the command prompt.

Open the file, **test.txt**, once again using the following command:

```
vi test.txt
```

Press **Enter**.

*Note that the changes have not been retained as you quit without saving the file in the previous task.*

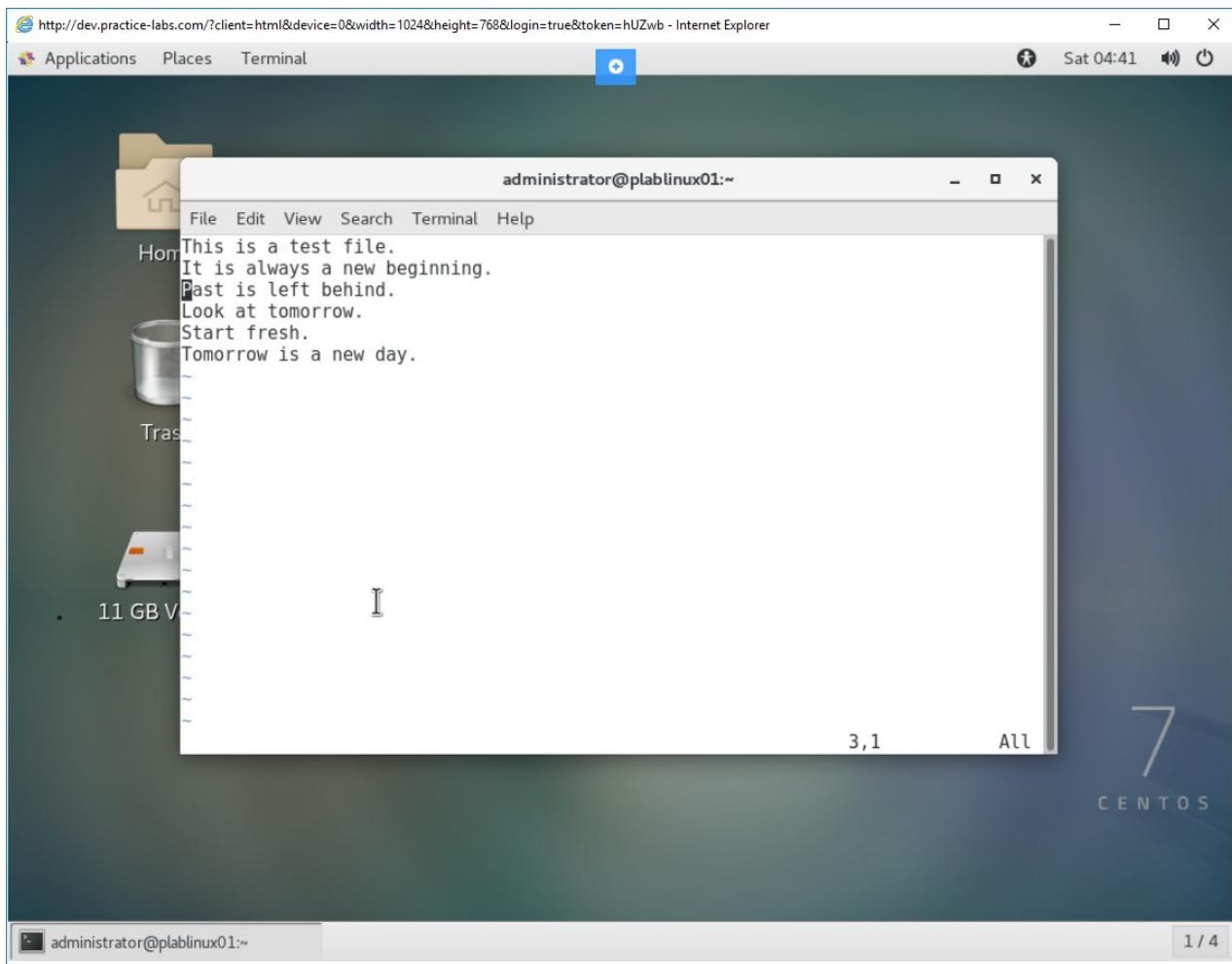


Figure 1.36 Screenshot of PLABLINUX01: Opening the test.txt file again.

## Step 12

To delete the word on which the cursor is placed and enter **dw**. For example, in this task, note that the first word of the first sentence is now deleted.

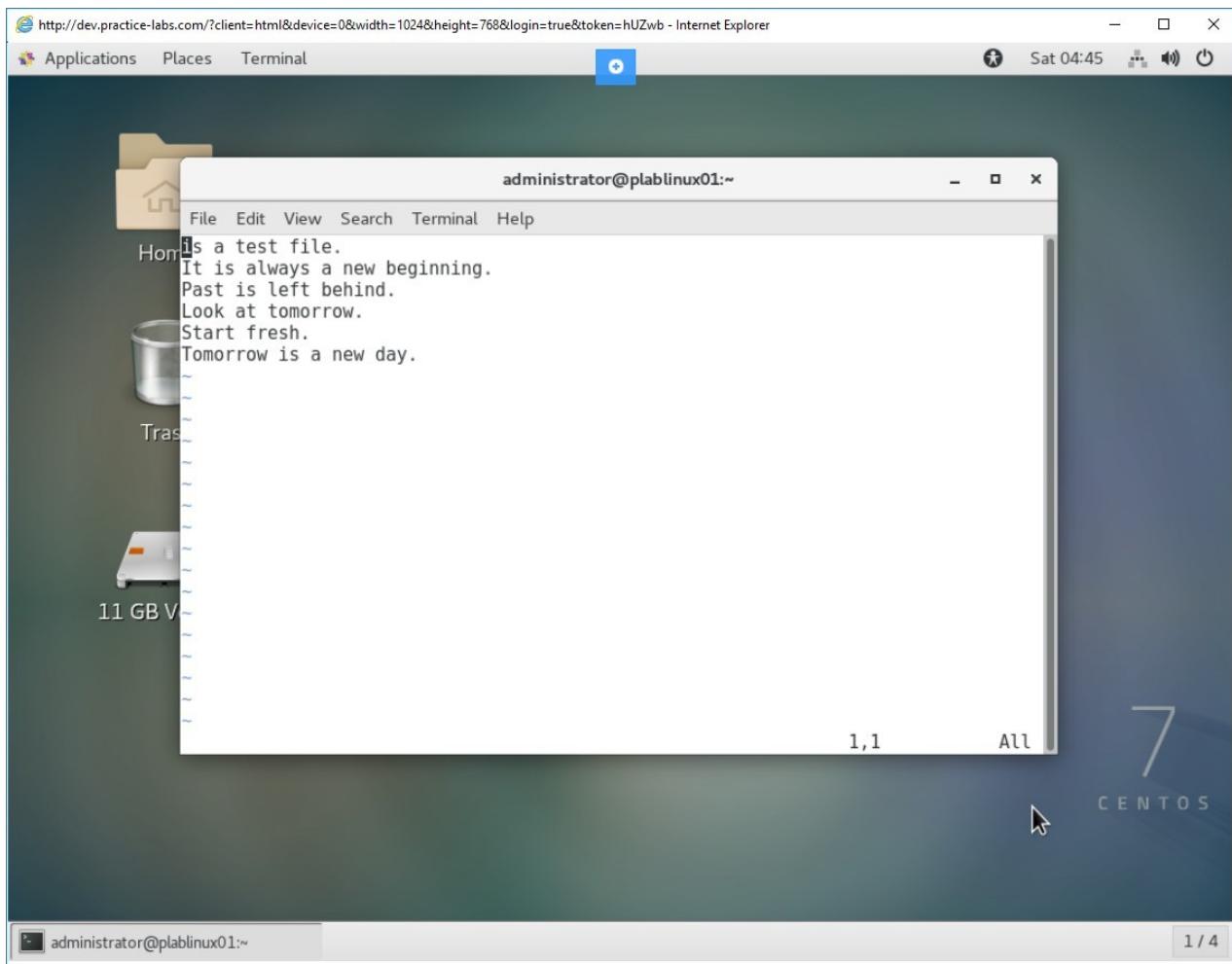


Figure 1.37 Screenshot of PLABLINUX01: Deleting the word on which the cursor is placed.

## Step 13

To delete text from here to the end of the current line, enter **d\$**

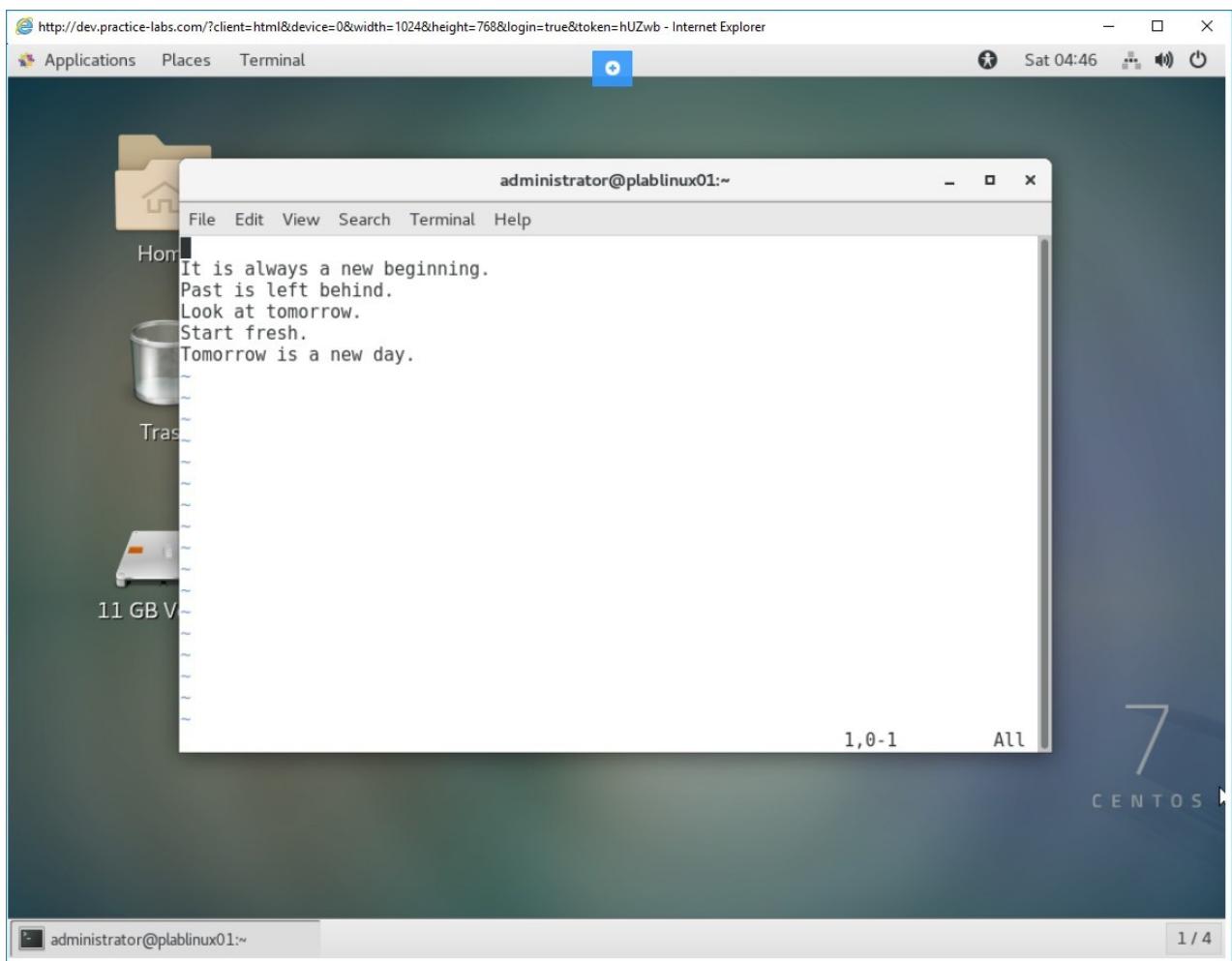


Figure 1.38 Screenshot of PLABLINUX01: Deleting text from the current cursor position to the end of the line.

## Step 14

Enter the following command to close the file without saving : **q!**

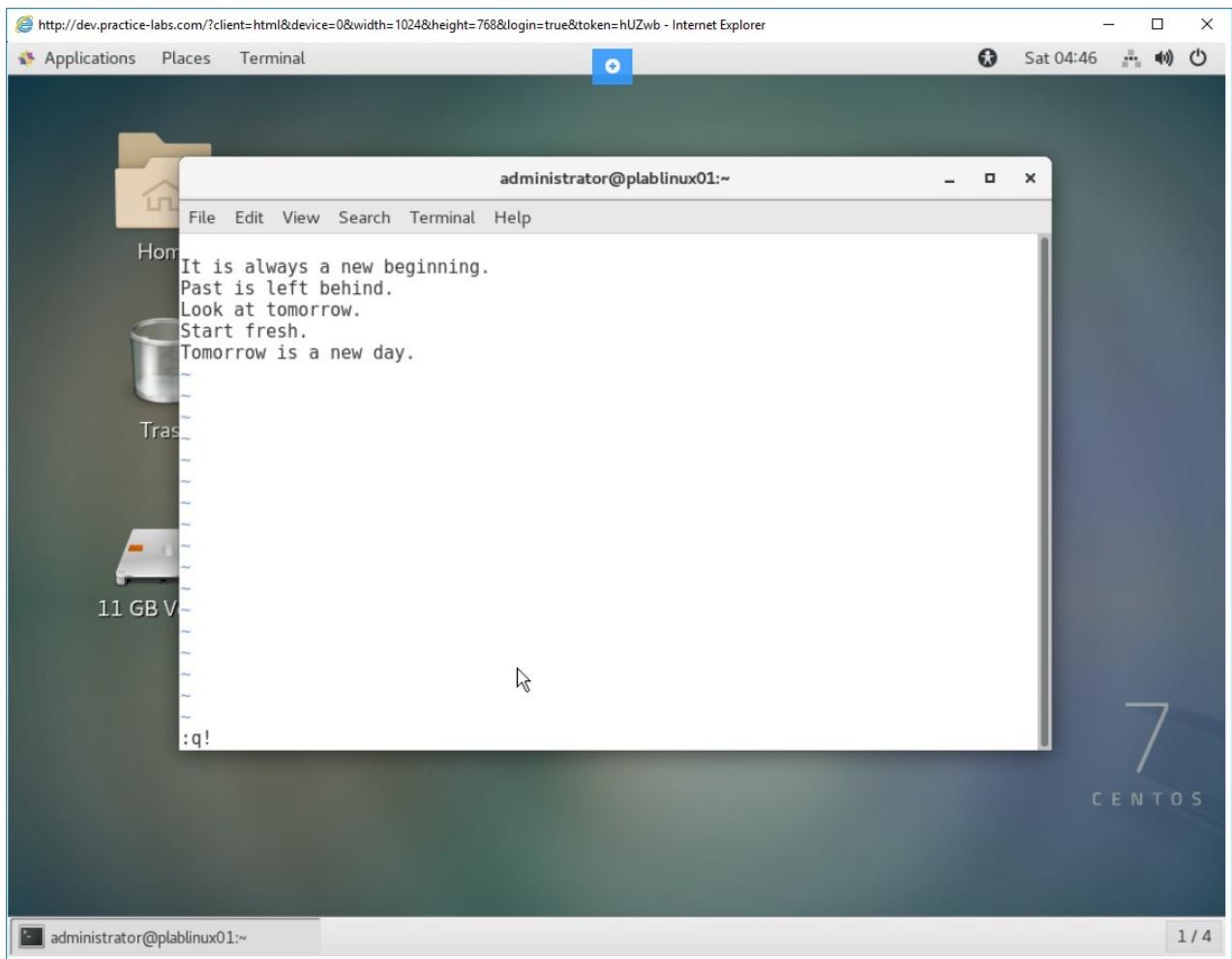


Figure 1.39 Screenshot of PLABLINUX01: Closing the file without saving.

## Step 15

You are back on the command prompt.

Open the file using the following command:

```
vi test.txt
```

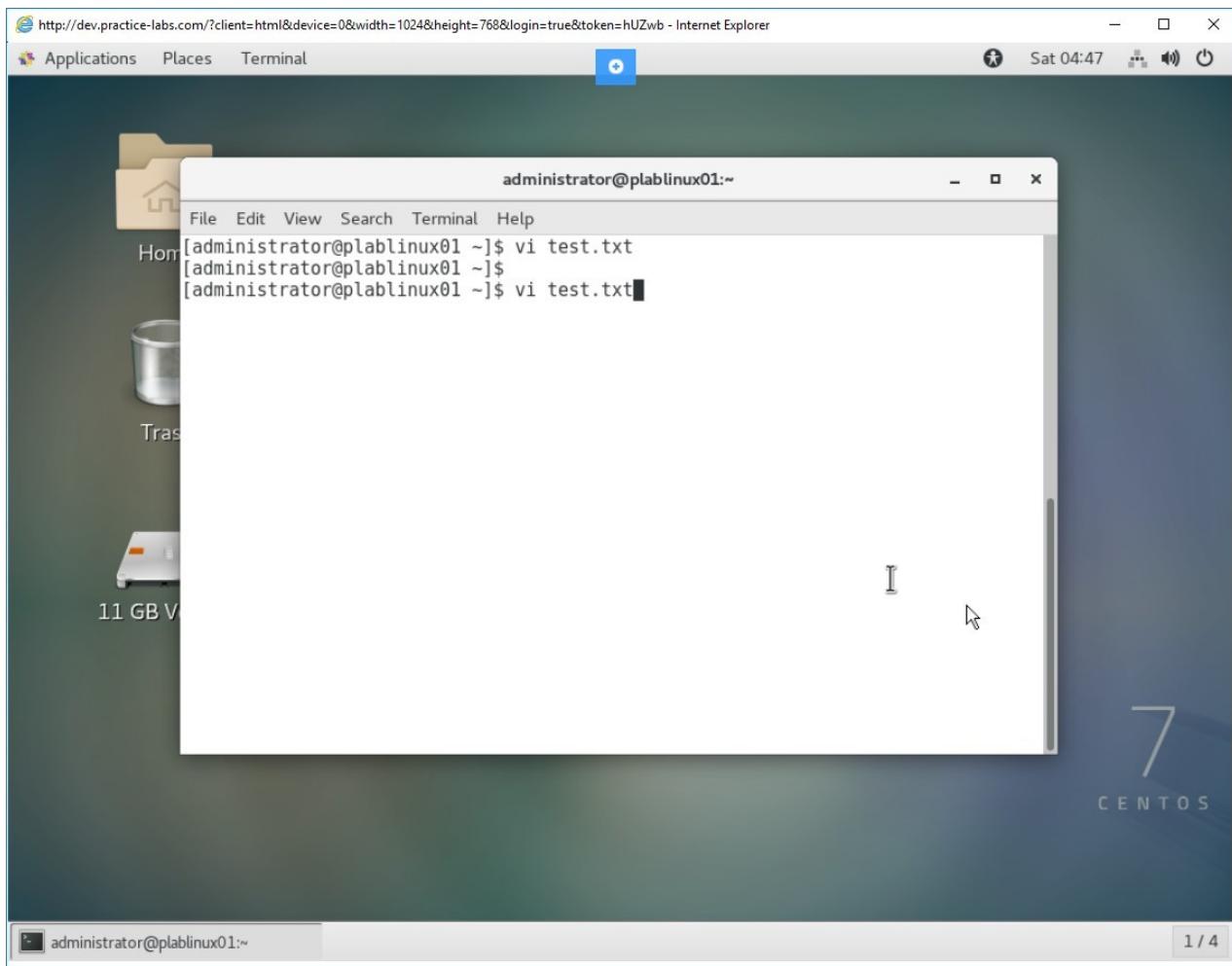


Figure 1.40 Screenshot of PLABLINUX01: Opening the file again.

## Step 16

To delete text from here to the end of the current paragraph, enter **d}**

Note that the first sentence, which is considered a paragraph, is deleted.

**Note:** The command **d}** is useful when there are multiple lines of text to delete. The **d\$** command will delete only the current line, not the entire paragraph.

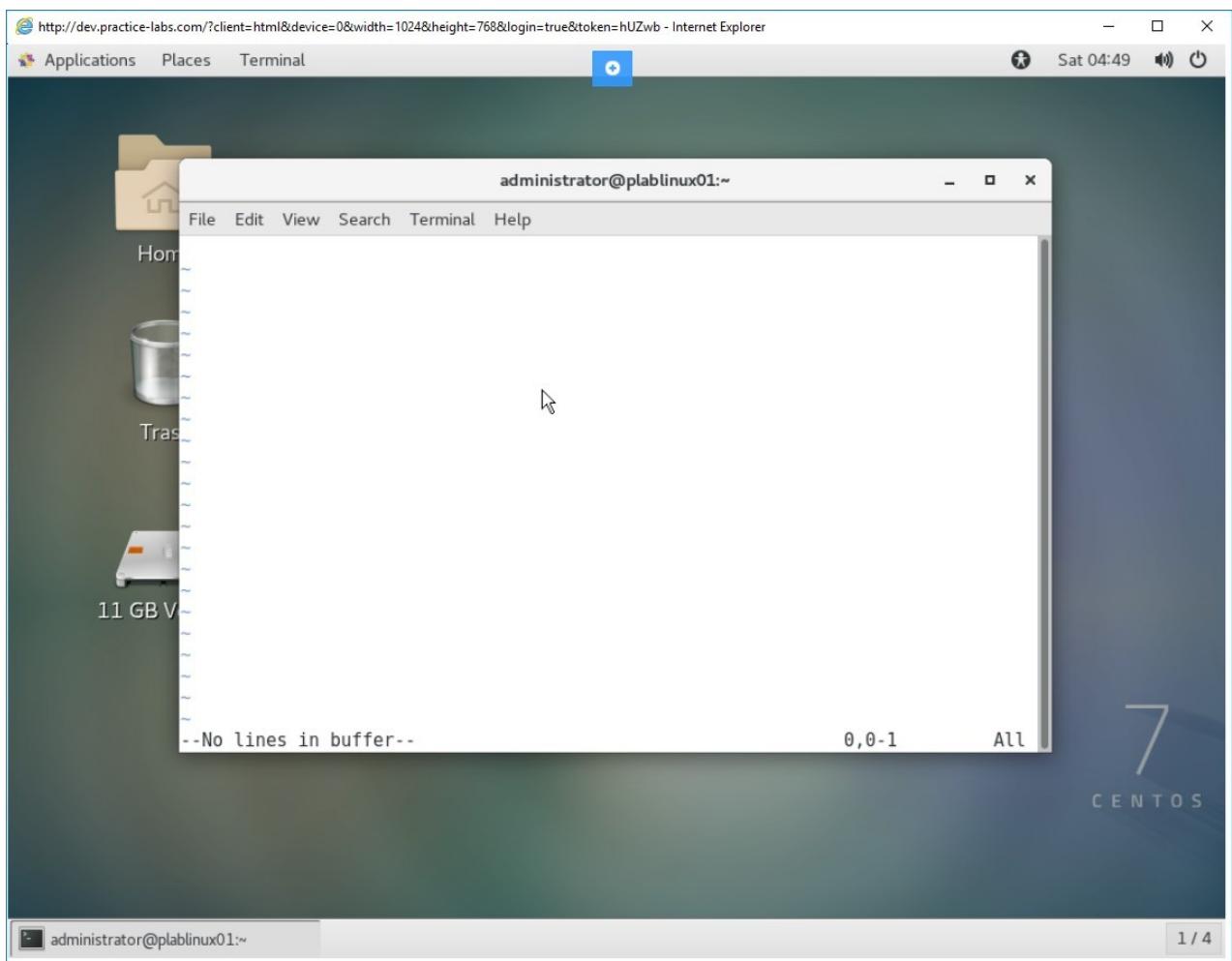


Figure 1.41 Screenshot of PLABLINUX01: Deleting text from the current cursor position to the end of the current paragraph.

## Step 17

Close the file without saving and then open the file once again.

To copy the text from here to the end of the current line, enter **yy**

**Note:** You will not see any changes on the vi editor.

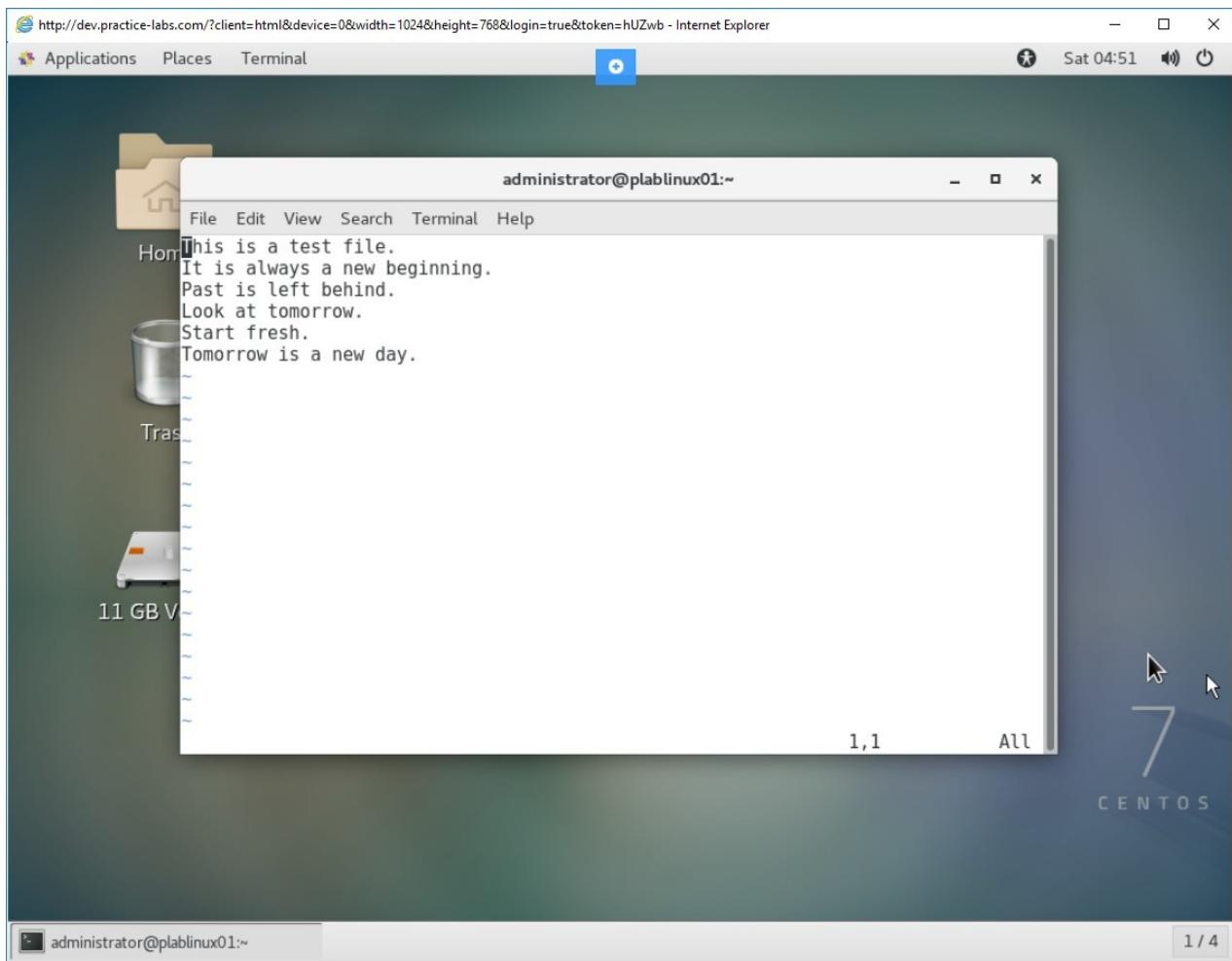


Figure 1.42 Screenshot of PLABLINUX01: Copying the line from the current cursor position to the end of the line.

## Step 18

To paste the line, press **p**.

Use the **p** command a few times to paste the line multiple times.

To copy a specific number of lines, enter **#yy**. Ensure your cursor is on the first character of the first line and then enter **1yy**. Note that **1yy** is similar to **yy**. To copy two lines, you can press **2yy**, and so on.

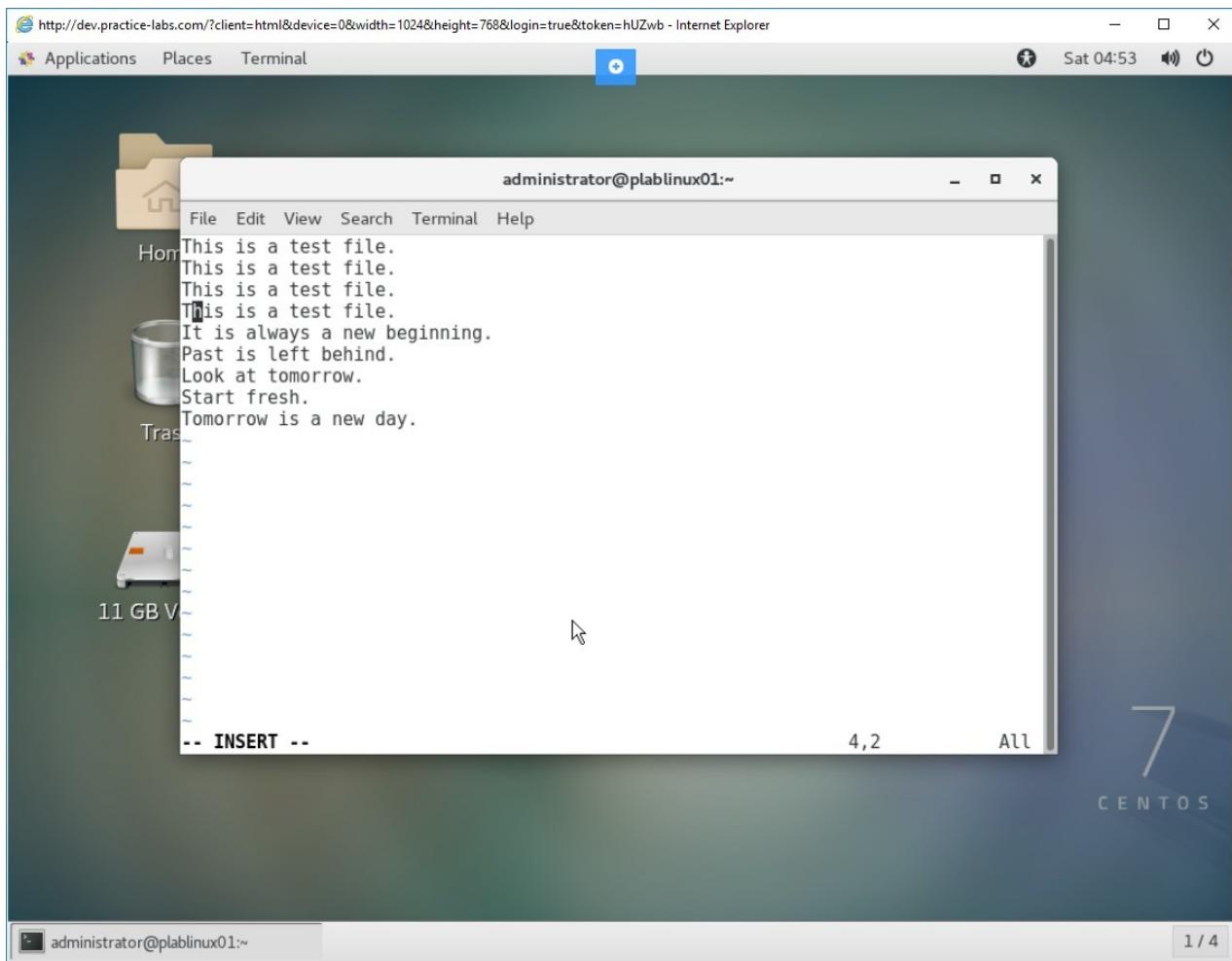


Figure 1.43 Screenshot of PLABLINUX01: Pasting the copied line multiple times.

## Step 19

Move to in the middle of the document. To delete, press **D**.

You can also press **dd** to delete the entire line you are on.

**Note:** You can also use **D\$** to delete a line from your cursor to the end of the line.

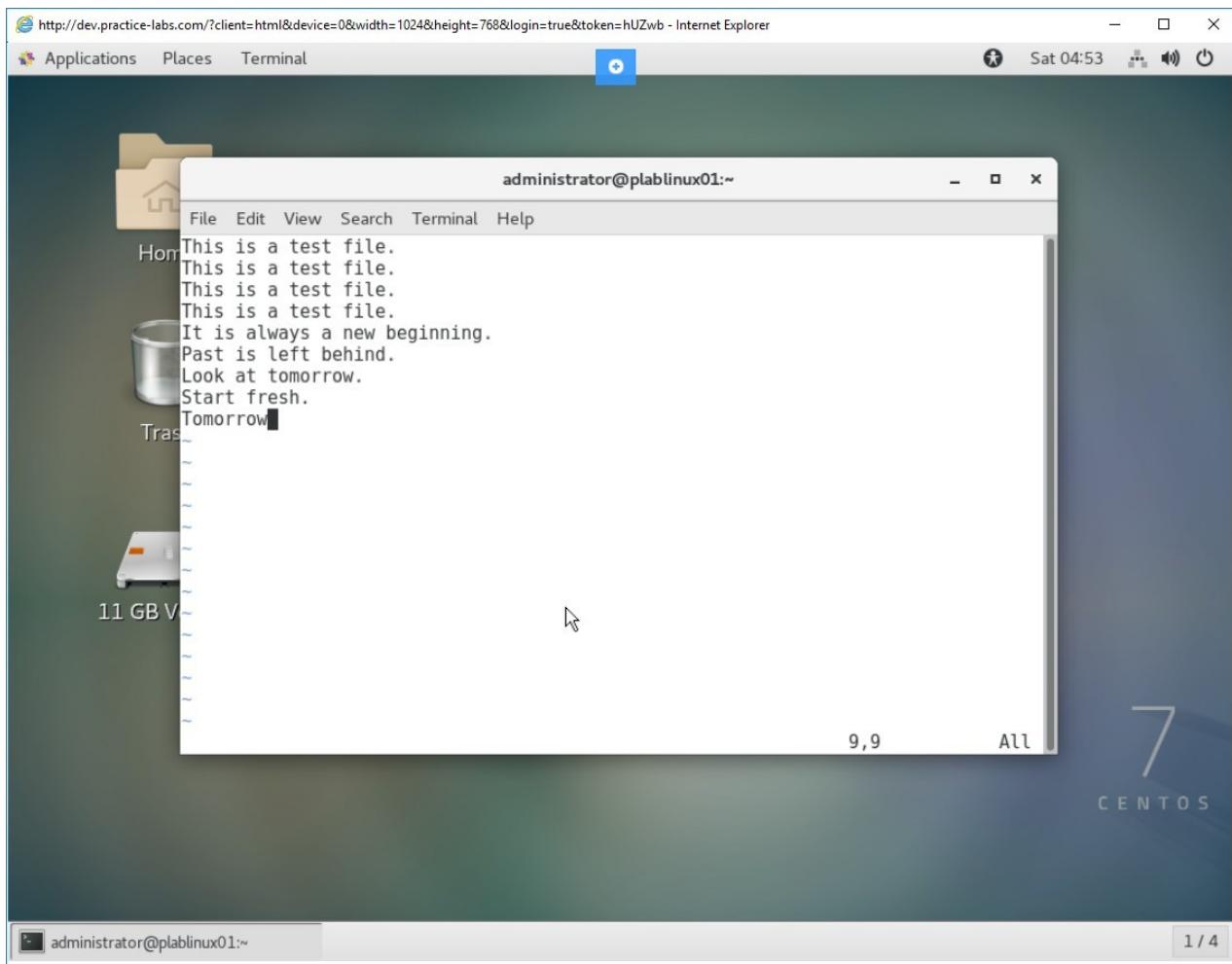


Figure 1.44 Screenshot of PLABLINUX01: Deleting the line from the current cursor position.

## Step 20

Now, paste the line by pressing p.

**Note:** There is a difference between p and P. When you use P, it will paste the line before the current cursor position. When you use p, it will paste the line after the current cursor position.

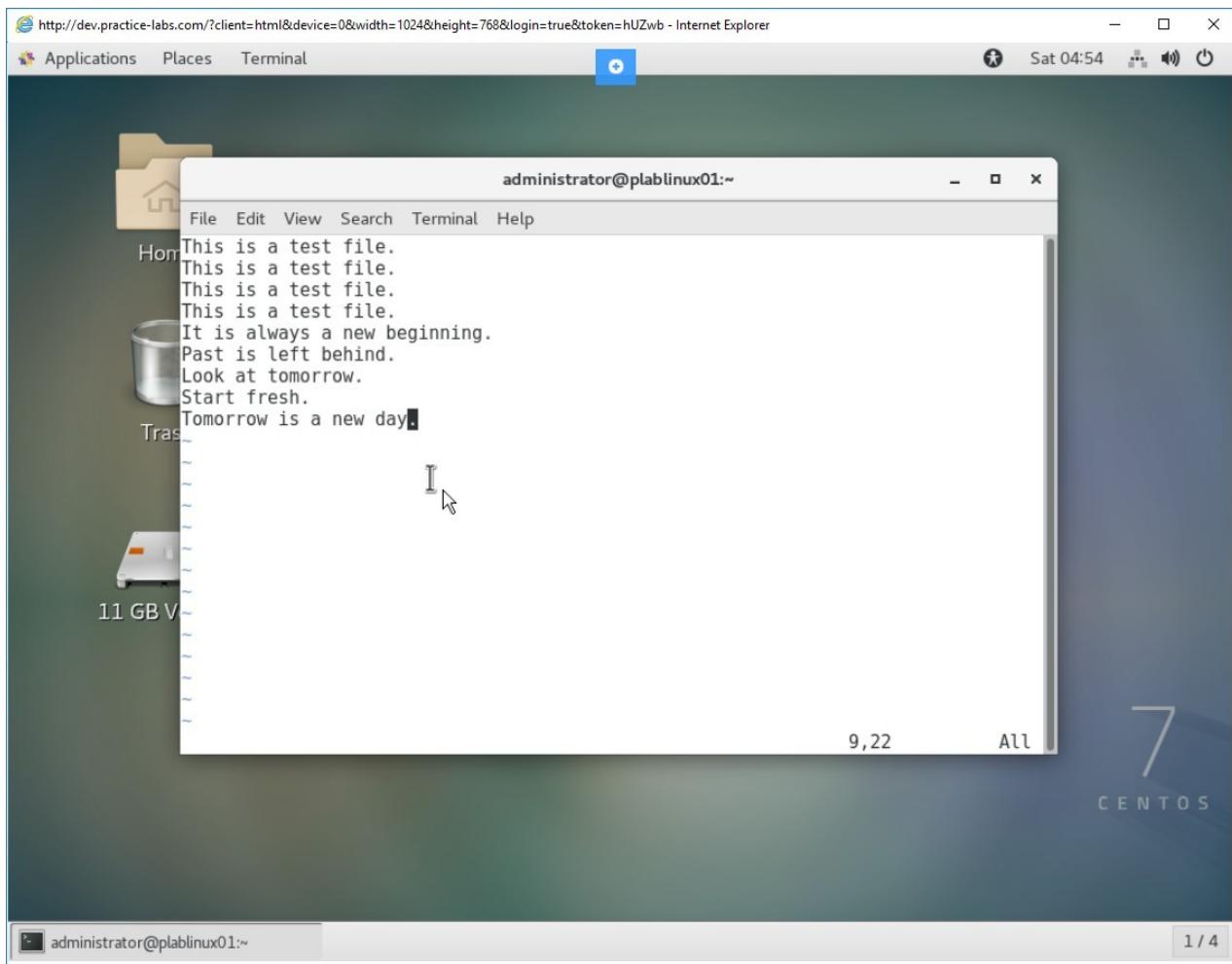


Figure 1.45 Screenshot of PLABLINUX01: Pasting the deleted line.

## Step 21

Press ZZ to save the file and exit.

The file is now closed.

You can open the file again to see that all the contents of the file are intact.

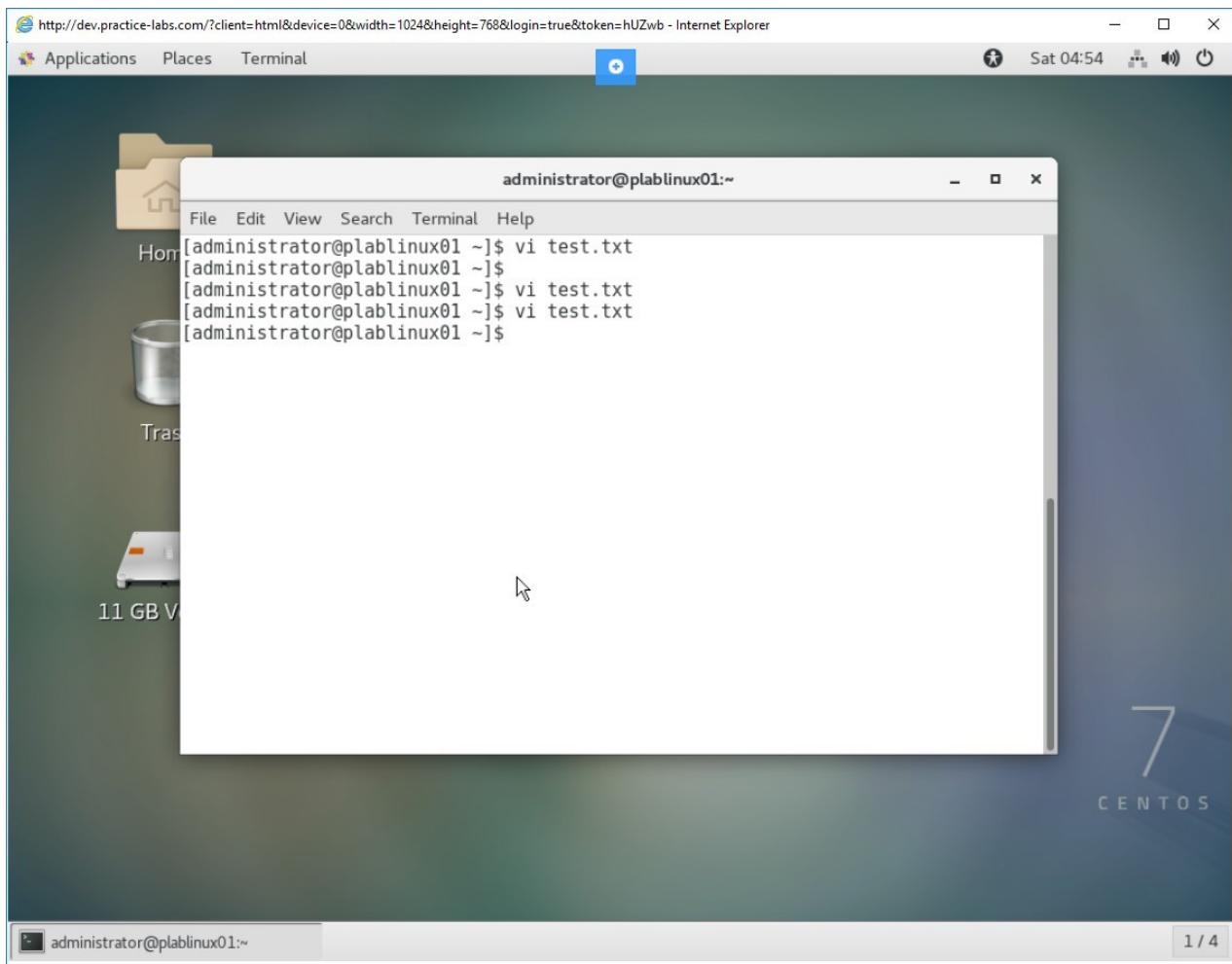


Figure 1.46 Screenshot of PLABLINUX01: Saving and exiting the file.

## Step 22

The **vi** editor enables you to create or load another file from within an existing file. Using the command **:e!** forces the **vi** editor to save and exit the current file and open a new one.

For example, to open a new file by the name of **Newfile.txt** from within the **test.txt** file, type the following command:

```
:e! Newtest.txt
```

Press **Enter**.

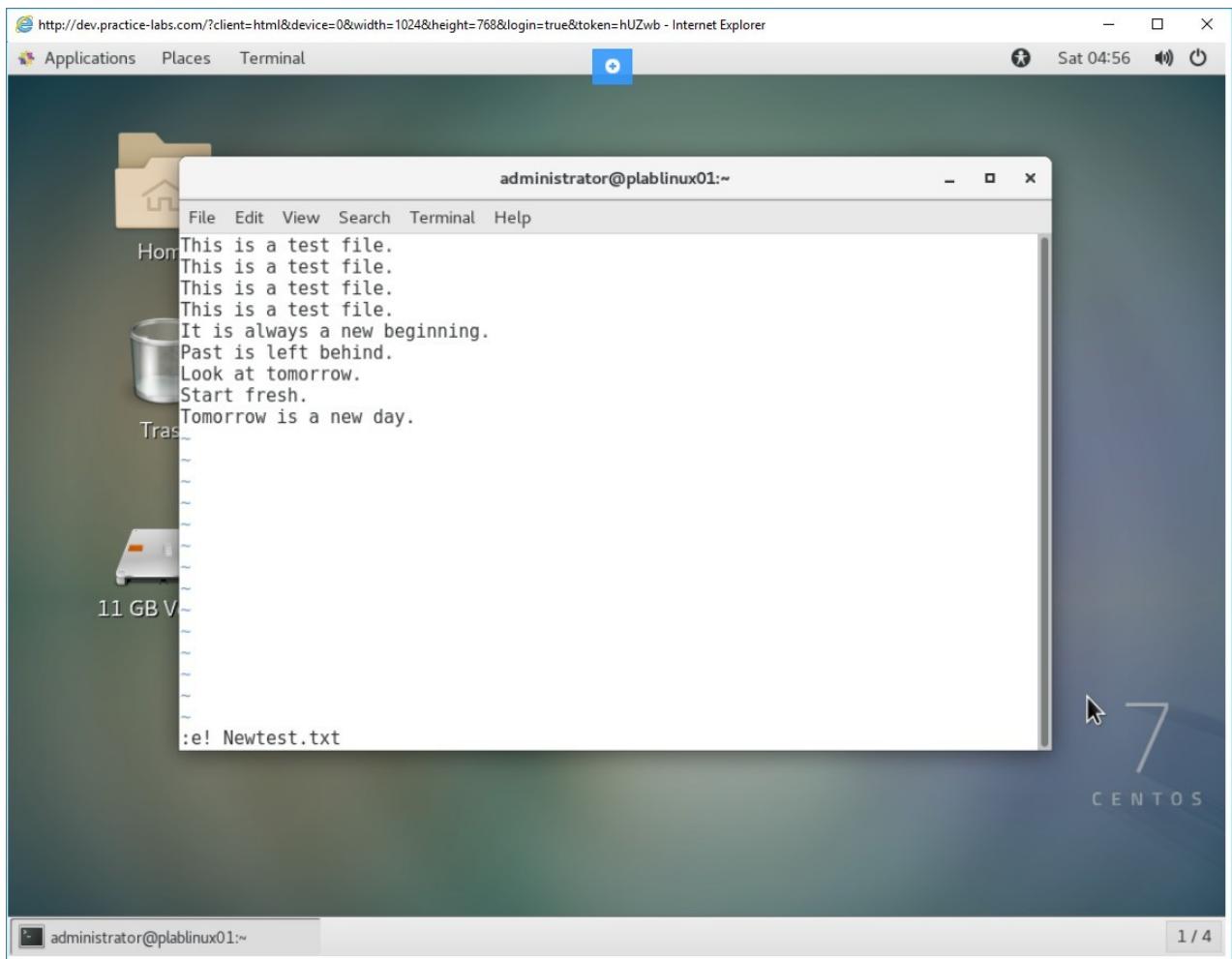


Figure 1.47 Screenshot of PLABLINUX01: Creating another file within an existing file.

## Step 23

The new file is now opened.

**Note:** ! (exclamation mark) is used to force the action of the command.

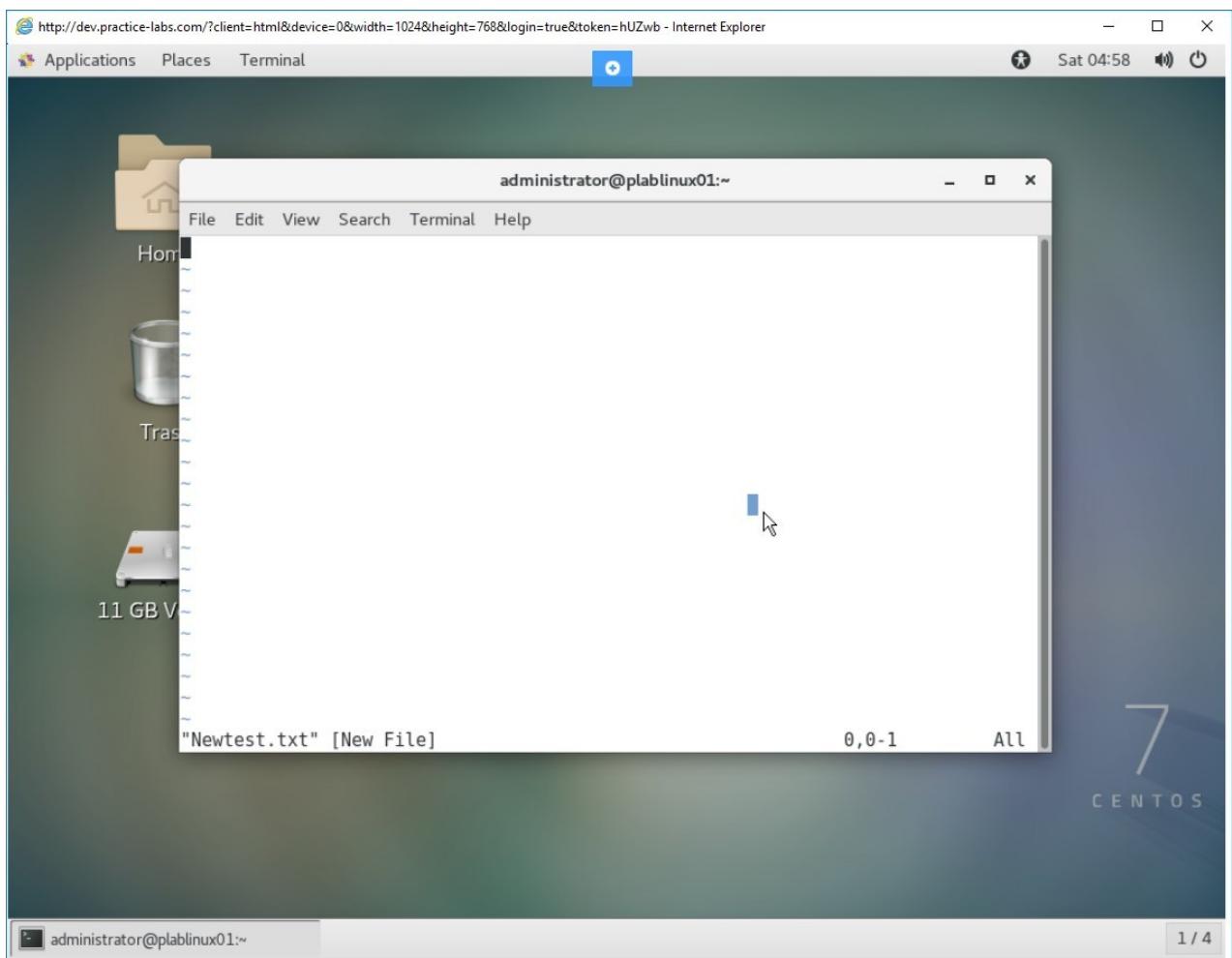


Figure 1.48 Screenshot of PLABLINUX01: Displaying the newly created file.

## Step 24

Exit the file by using the following command:

```
wq!
```

Press **Enter**.

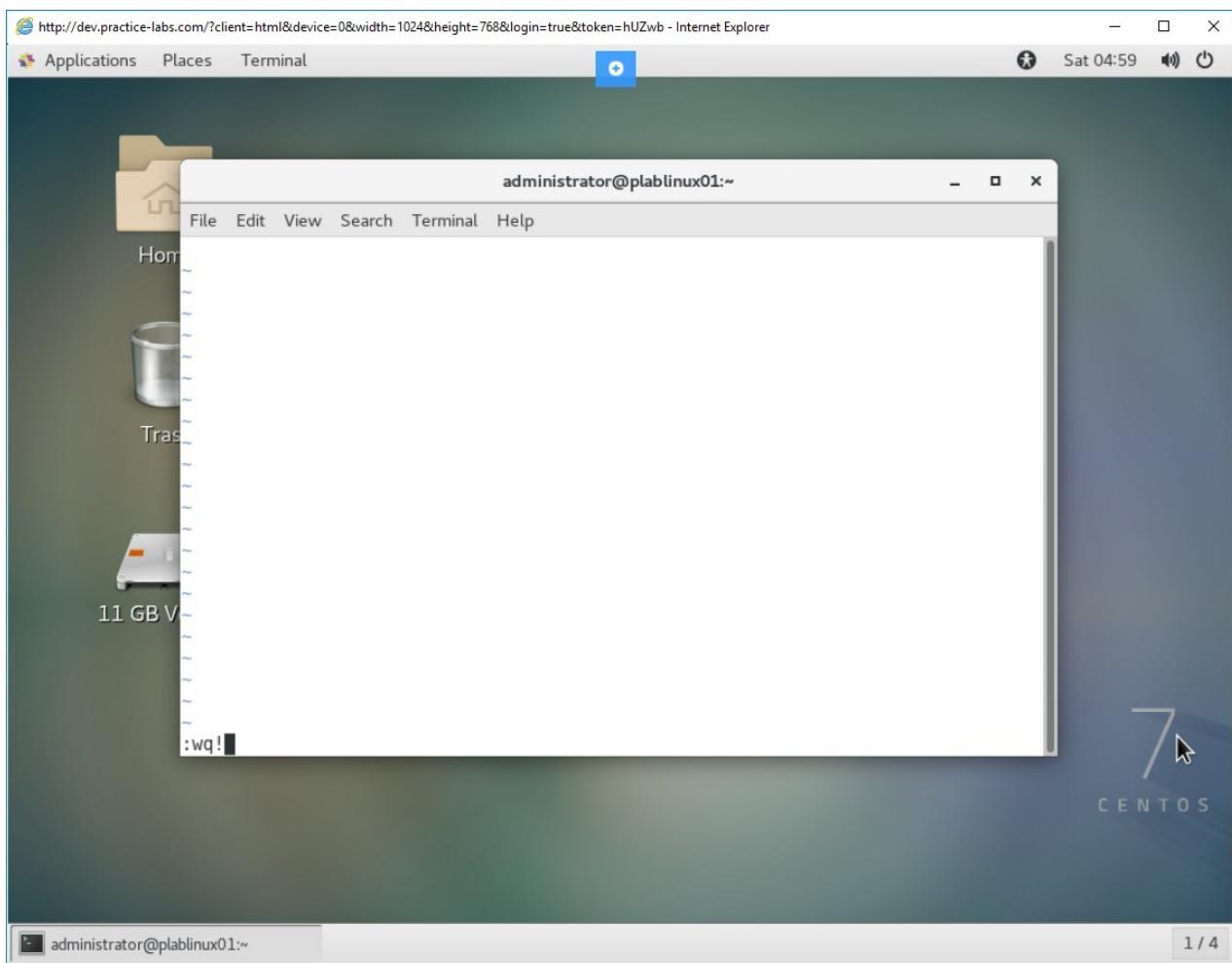


Figure 1.49 Screenshot of PLABLINUX01: Closing the current file without saving.

## Step 25

You are back on the command line.

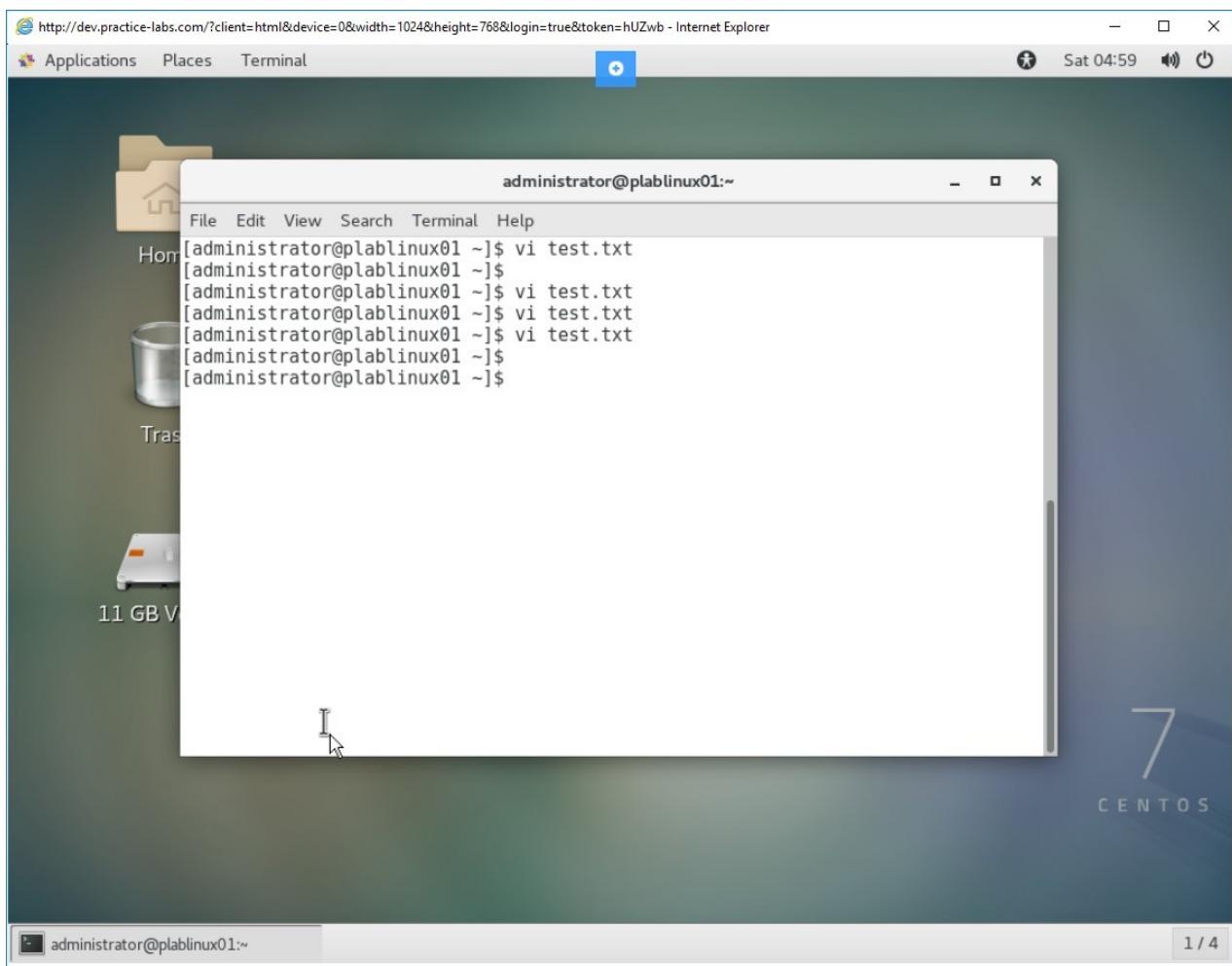


Figure 1.50 Screenshot of PLABLINUX01: Navigating back to the terminal window.

## Step 26

Open the **test.txt** file once again. In the **vi** editor, you can search for specific words, lines, and characters within a file.

To search for lines starting with a specific character, enter the following command:

```
/^<alphabet to search>
```

*Note: The / is for forward (downward) search and ? for backward (upward) search.*

For example, open the **test.txt** file. To perform a forward search of lines starting with the letter **S**, type the following command:

/^S

Press **Enter**.

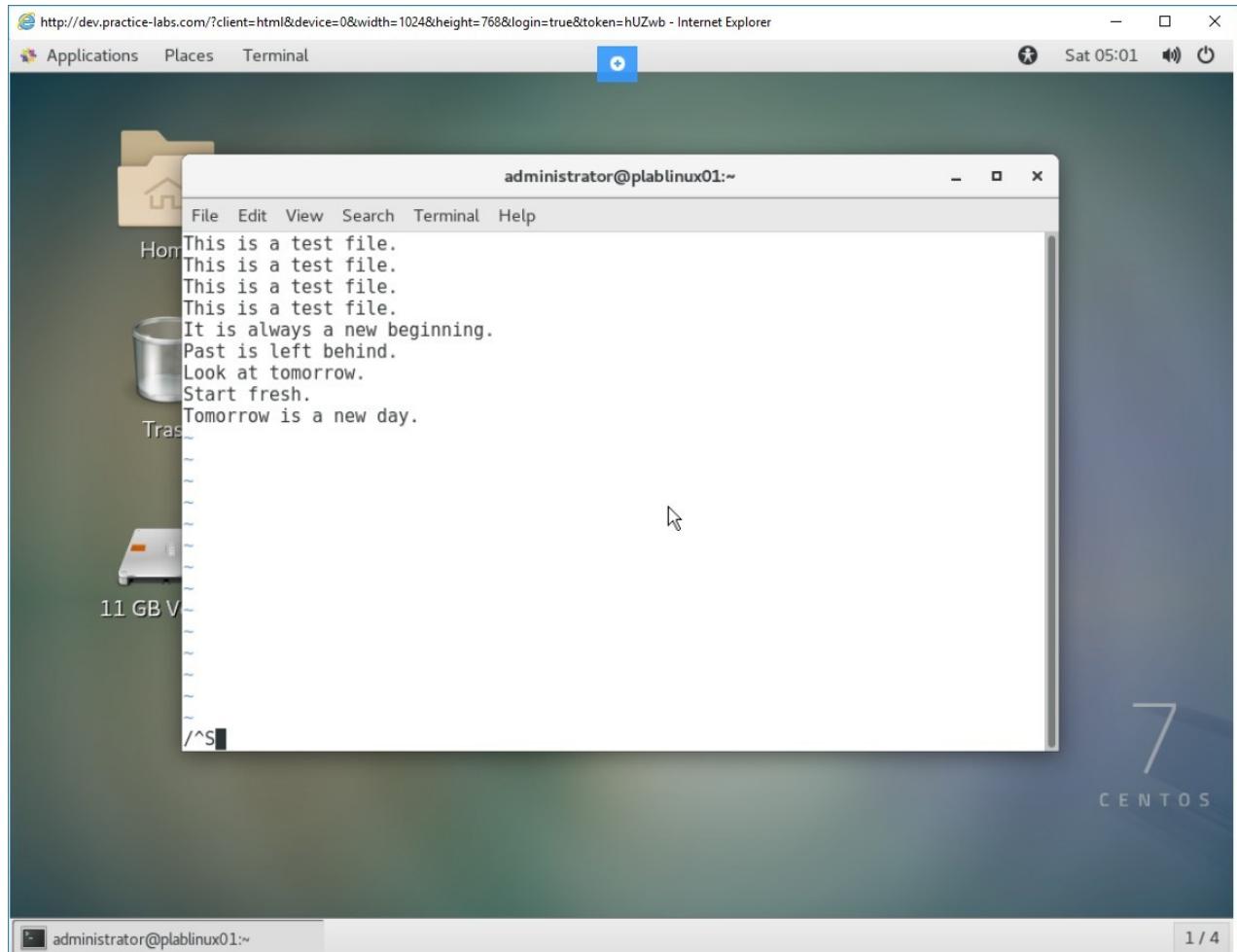


Figure 1.51 Screenshot of PLABLINUX01: Searching for lines starting with a specific character.

Note the output is now highlighted.

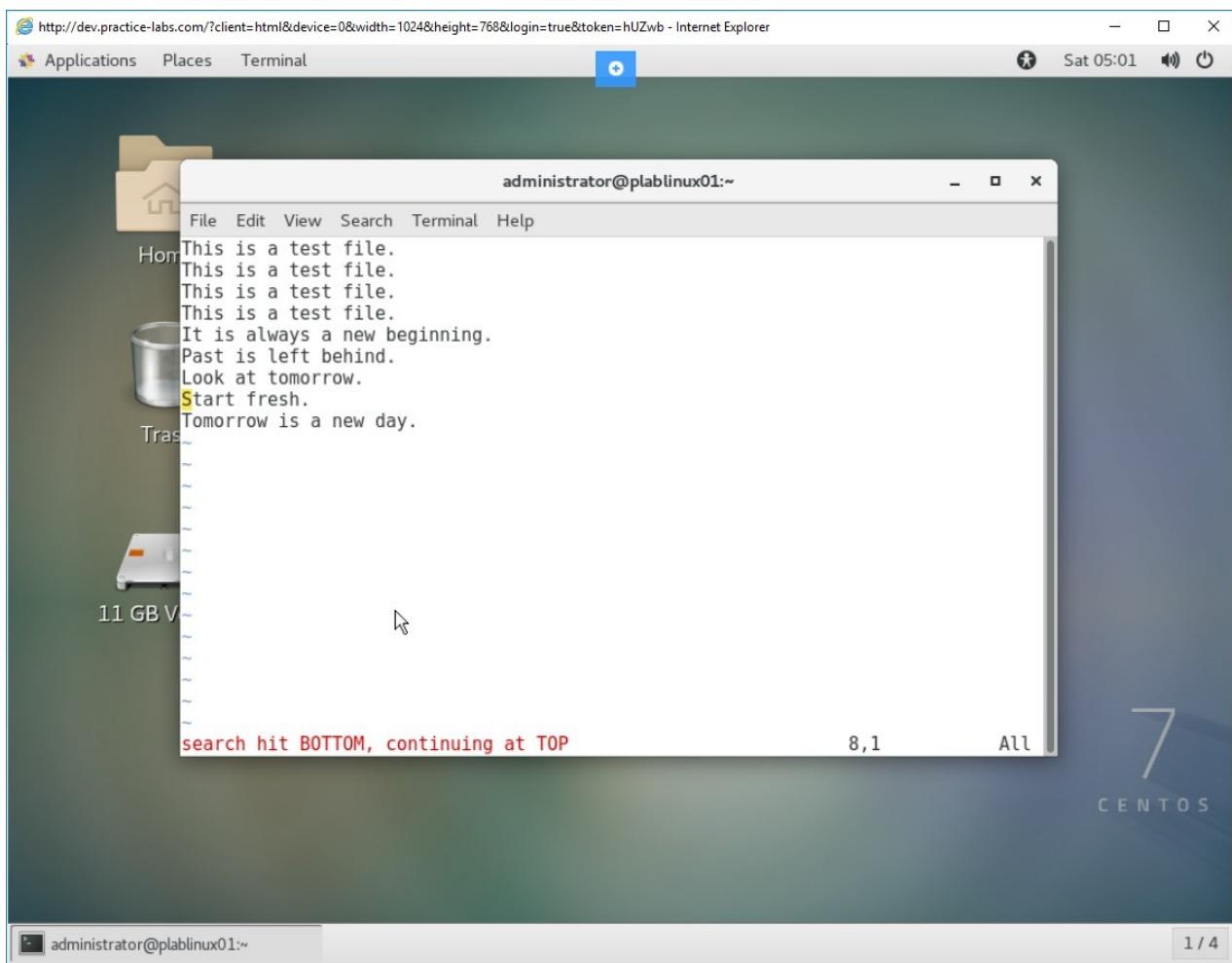


Figure 1.52 Screenshot of PLABLINUX01: Highlighting the searched output.

## Step 27

You can also search for specific words. For example, to search for the word **fresh**, type the following command:

```
/\<fresh
```

Press **Enter**.

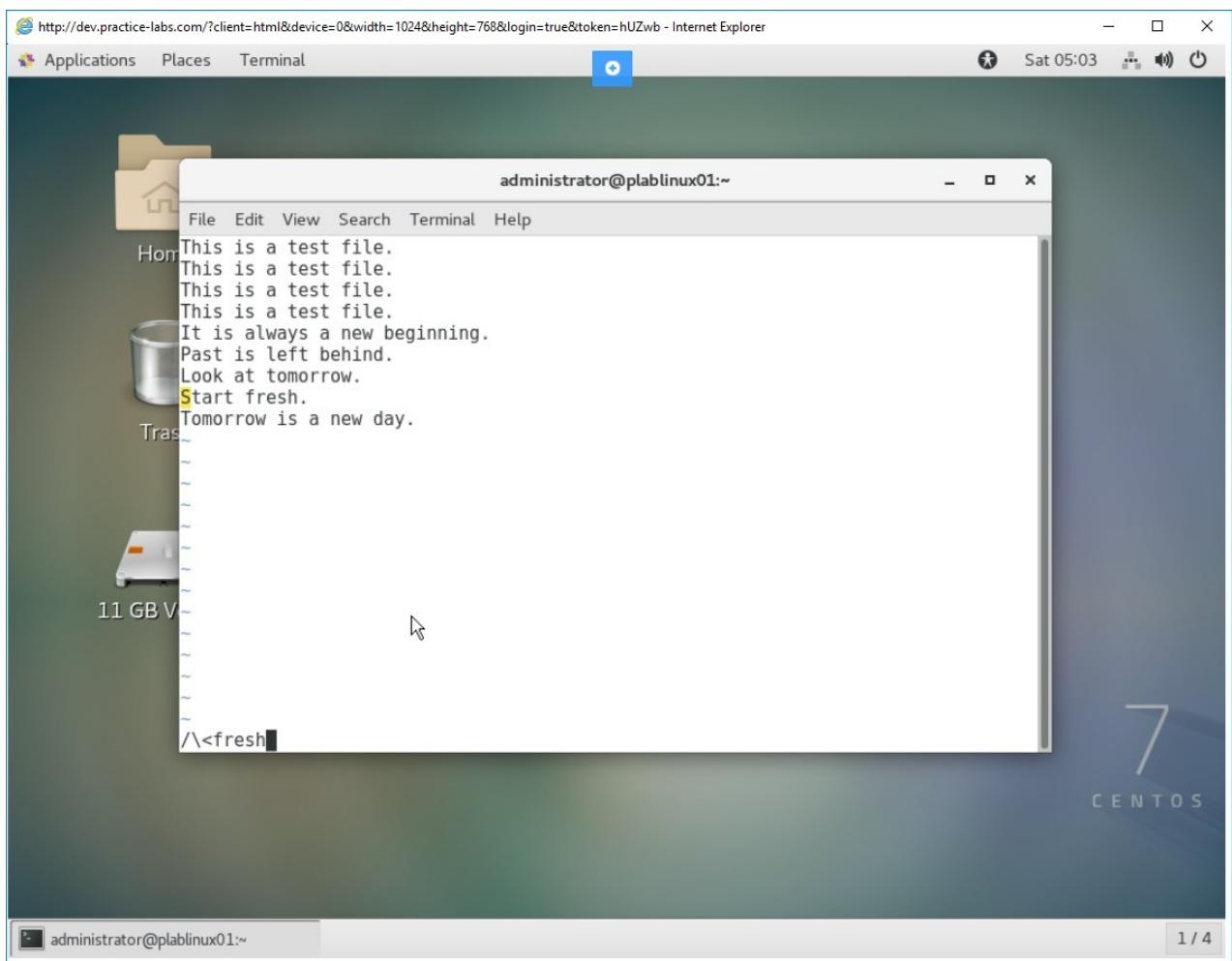


Figure 1.53 Screenshot of PLABLINUX01: Searching for specific words.

The output is now displayed.

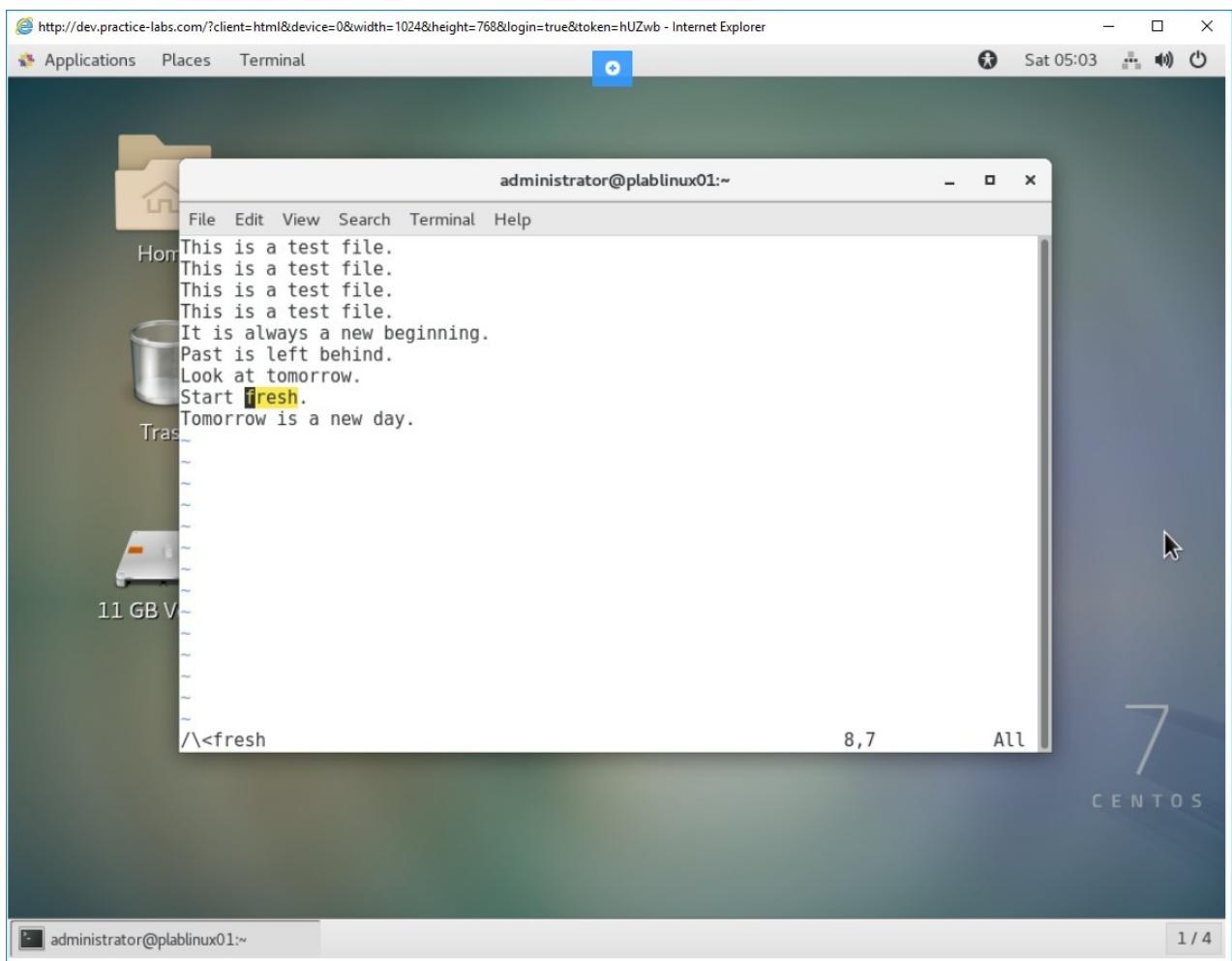


Figure 1.54 Screenshot of PLABLINUX01: Highlighting the searched word.

## Step 28

To search and replace a word, type the following command:

```
: %s/fresh/FRESH/
```

Press **Enter**.

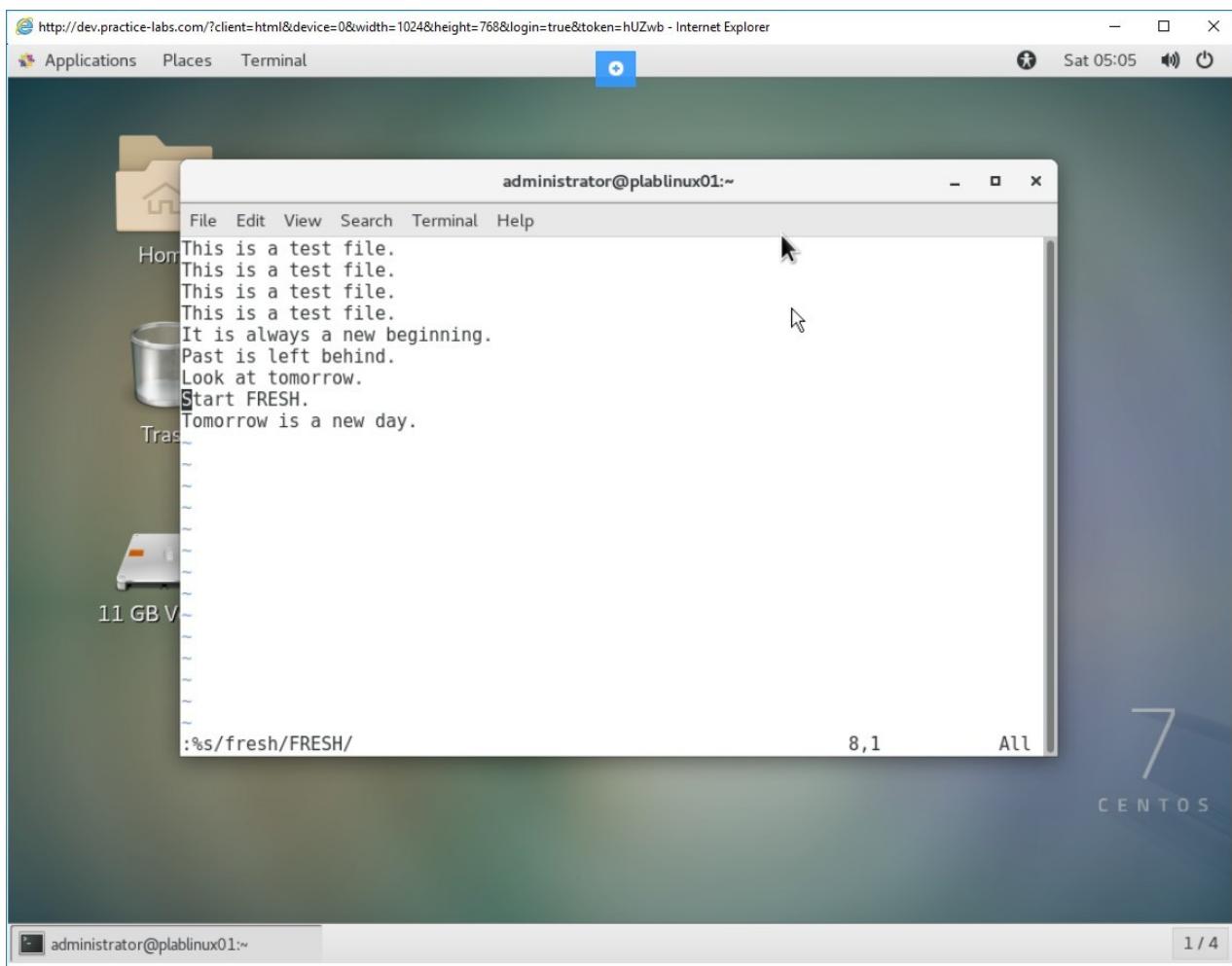


Figure 1.55 Screenshot of PLABLINUX01: Searching and replacing a word.

## Step 29

In the vi editor, you can undo the last changes.

For example, to change the word FRESH back to lower case, ensure that you are in the command mode and press **u**.

**Note:** **FRESH** which you replaced in the last command, is now changed back to **fresh**.

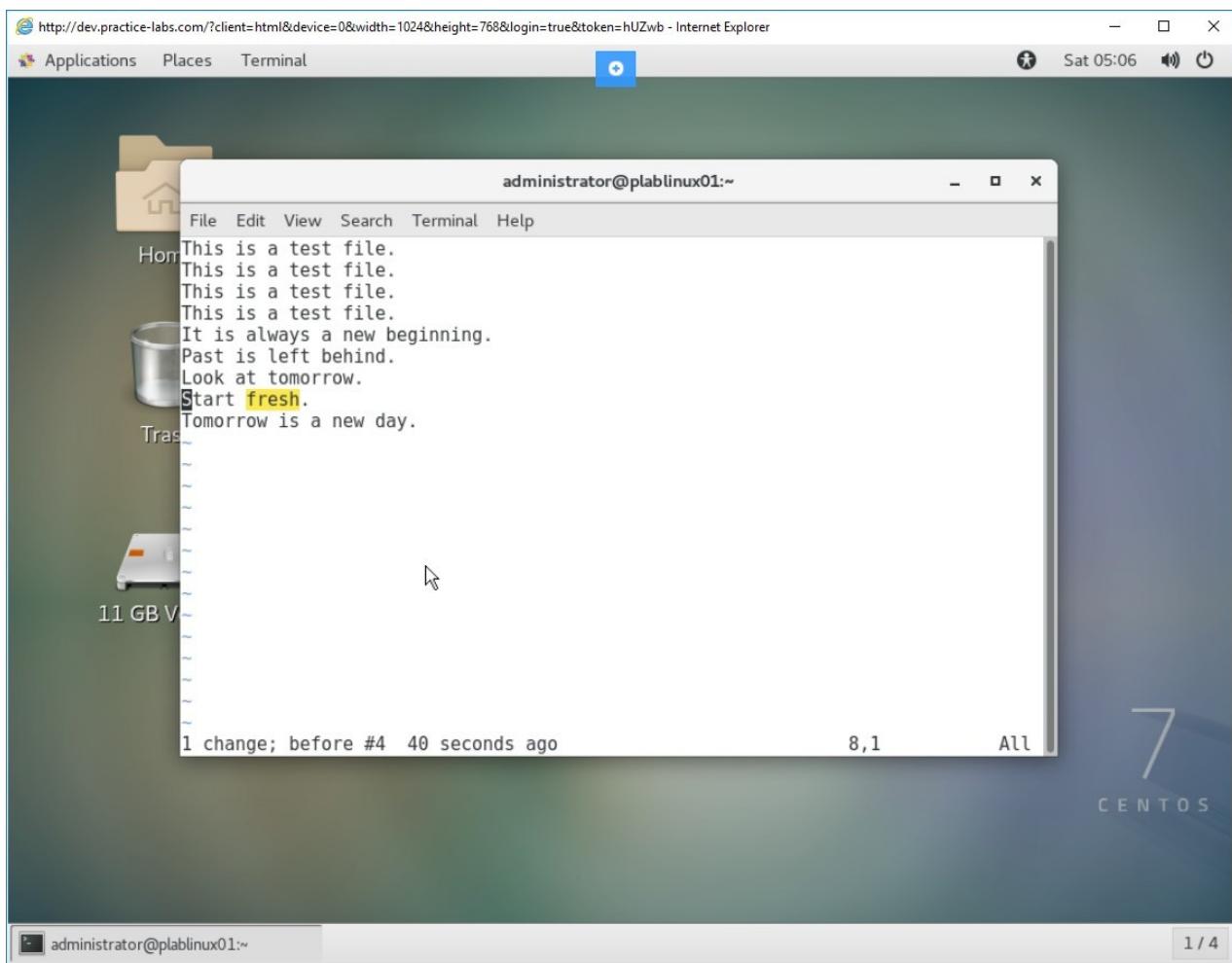


Figure 1.56 Screenshot of PLABLINUX01: Reversing the changed word to its original word.

Keep all devices in their current state and proceed to the next exercise.

## Review

Well done, you have completed the **Perform Basic File Editing Operations Using vi** Practice Lab.

## Summary

You completed the following exercise:

- Exercise 1 - Perform Basic File Editing Operations Using vi

You should now be able to:

- Create a document using vi
- Navigate a document using vi
- Manage a file using vi

## Feedback

Shutdown all virtual machines used in this lab. Alternatively, you can log out of the lab platform.