

CYSE 270: Linux System for Cybersecurity

Assignment: Lab 3 – VI Editor Goal

- Practice using the vi editor.

Notes:

- Remember the “**modes**” in the vi editor.
- You may use the “**Escape**” key to return to command mode if you get confused and need to start over.

Submission Instructions

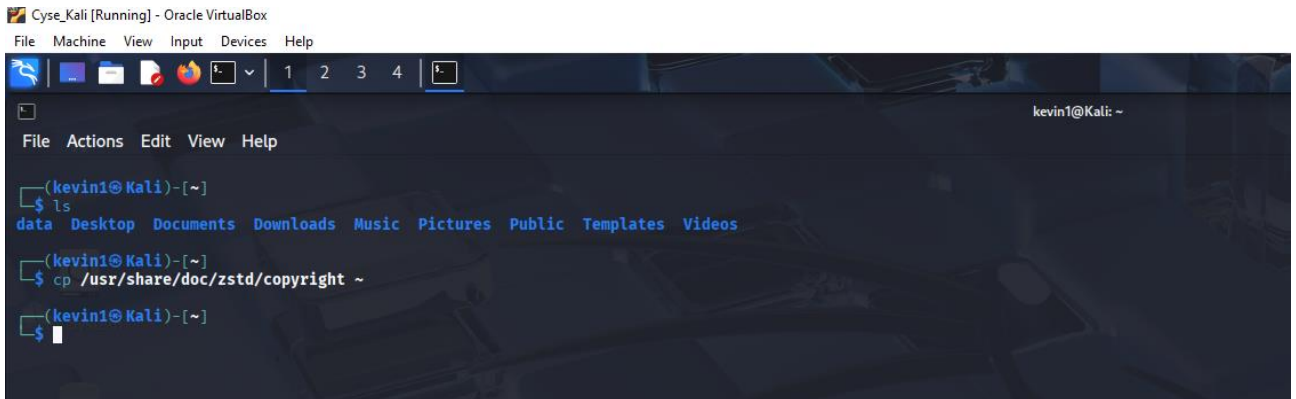
- Take **screenshots** for each step you perform and **write down the correct command** corresponding to each step number. Submit this in a **PDF** file.

Task: vi Practice on Kali Linux (20 * 5 = 100 points)

Open the terminal in your VM, then complete the following tasks. **Please take the screenshots of all the necessary commands that you execute for each step and submit the screenshots with their step number in a pdf file.**

NOTE: You may write the correct vi editor commands, if screenshot is not applicable. Please see the note added to some steps below.

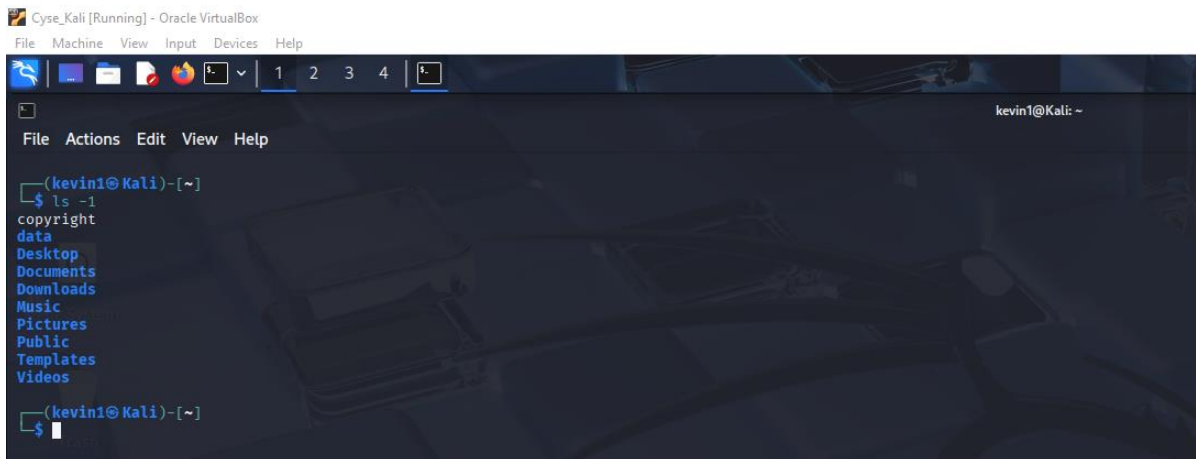
1. Copy the file `/usr/share/doc/zstd/copyright` to your home directory.



```
Cyse_Kali [Running] - Oracle VirtualBox
File Machine View Input Devices Help
kevin1@Kali: ~
File Actions Edit View Help
(kevin1@Kali)-[~]
$ ls
data Desktop Documents Downloads Music Pictures Public Templates Videos
(kevin1@Kali)-[~]
$ cp /usr/share/doc/zstd/copyright ~
(kevin1@Kali)-[~]
$
```

The beginning command "`cp /usr/share/doc/zstd/copyright ~`" copies the file "copyright" to my home directory (~).

2. Perform a **long list** in your **home** directory using the correct command.



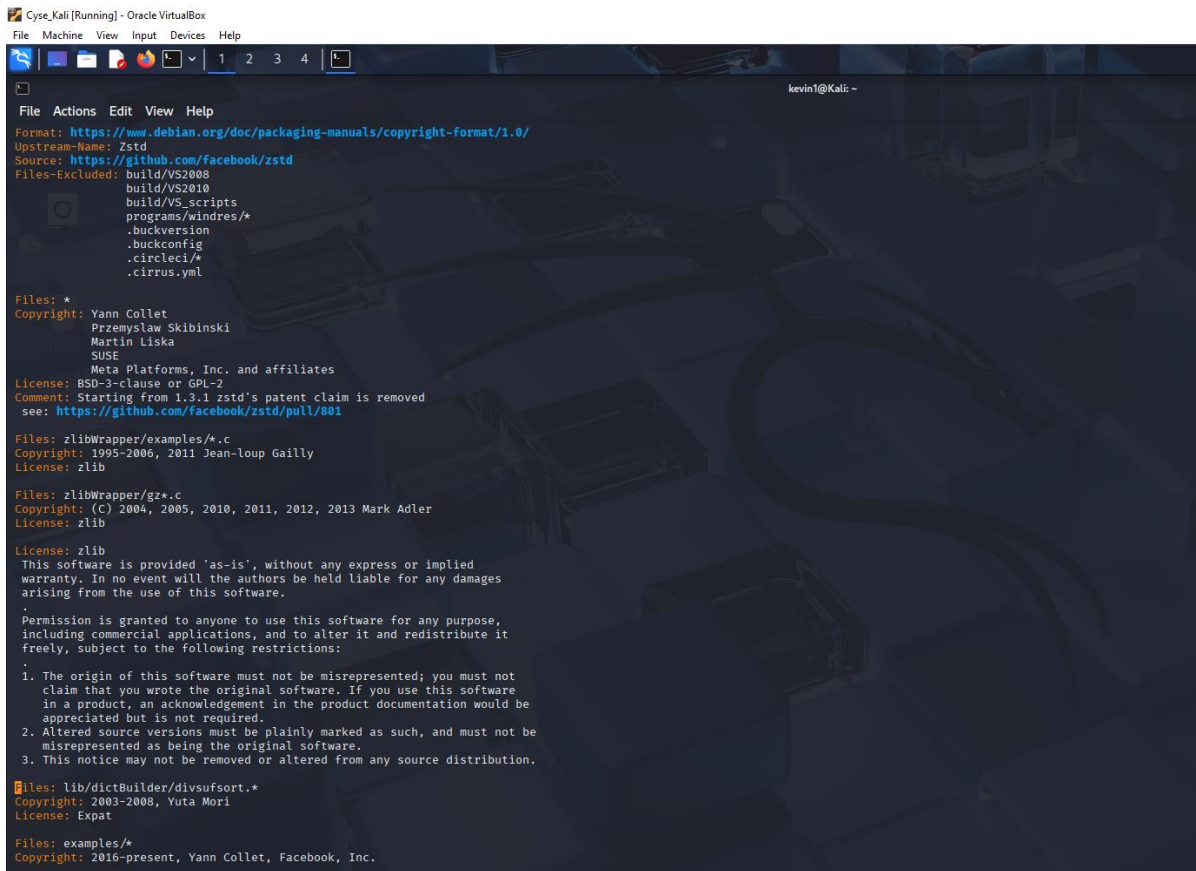
The screenshot shows a terminal window titled "Cyse_Kali [Running] - Oracle VM VirtualBox". The terminal prompt is "(kevin1@Kali)-[~]". The user has entered the command "ls -l", and the output is a long list of files and directories in the home directory:

```
(kevin1@Kali)-[~]
└─$ ls -l
copyright
data
Desktop
Documents
Downloads
Music
Pictures
Public
Templates
Videos

(kevin1@Kali)-[~]
└─$
```

The command "ls -l" performs a long list.

3. Open the file **copyright** in a vi-editor using **vi** command.



```
File Actions Edit View Help
Format: https://www.debian.org/doc/packaging-manuals/copyright-format/1.0/
Upstream-Name: Zstd
Source: https://github.com/facebook/zstd
Files-Excluded: build/VS2008
                build/VS2010
                build/VS_scripts
                programs/windres/*
                .buckversion
                .buckconfig
                .circleci/*
                .cirrus.yml

Files: *
Copyright: Yann Collet
          Przemyslaw Skibinski
          Martin Liska
          SUSE
          Meta Platforms, Inc. and affiliates
License: BSD-3-clause or GPL-2
Comment: Starting from 1.3.1 zstd's patent claim is removed
        see: https://github.com/facebook/zstd/pull/801

Files: zlibWrapper/examples/*.c
Copyright: 1995-2006, 2011 Jean-loup Gailly
License: zlib

Files: zlibWrapper/gz*.c
Copyright: (C) 2004, 2005, 2010, 2011, 2012, 2013 Mark Adler
License: zlib

License: zlib
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   appreciated but is not required.
2. Altered source versions must be plainly marked as such, and must not be
   misrepresented as being the original software.
3. This notice may not be removed or altered from any source distribution.

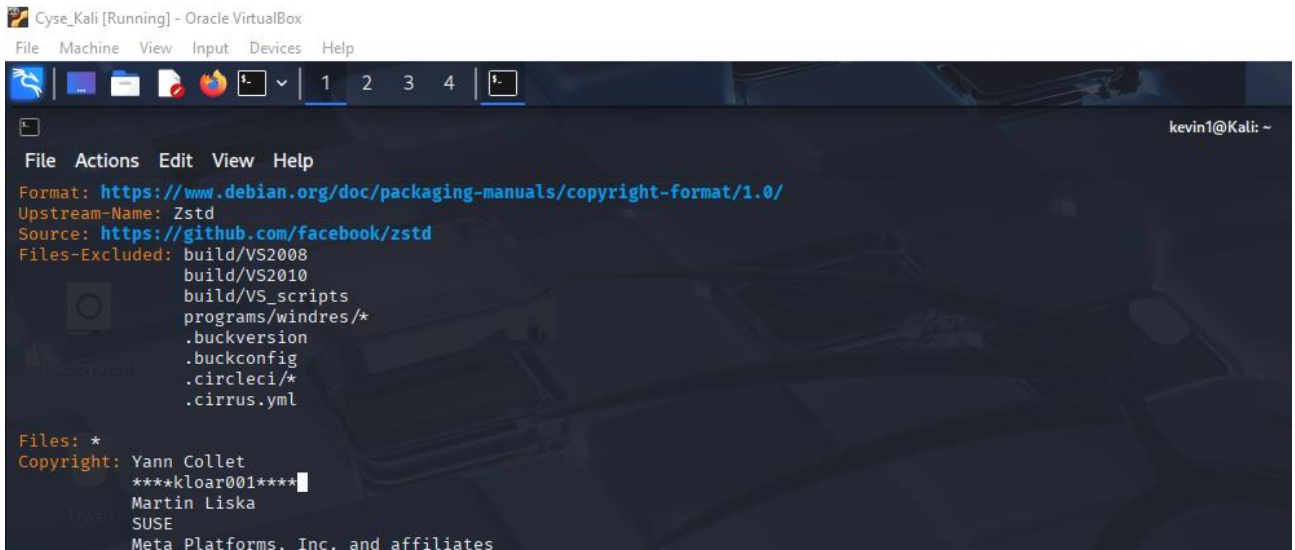
Files: lib/dictBuilder/divsufsort.*
Copyright: 2003-2008, Yuta Mori
License: Expat

Files: examples/*
Copyright: 2016-present, Yann Collet, Facebook, Inc.
```

After using the command "vi copyright", the following resulted in the file opening up.

4. Move to **line 15**, then **insert** your MIDAS ID **in the same line** with the following format:

******XXXX****** (replace XXXX with your own MIDAS name)



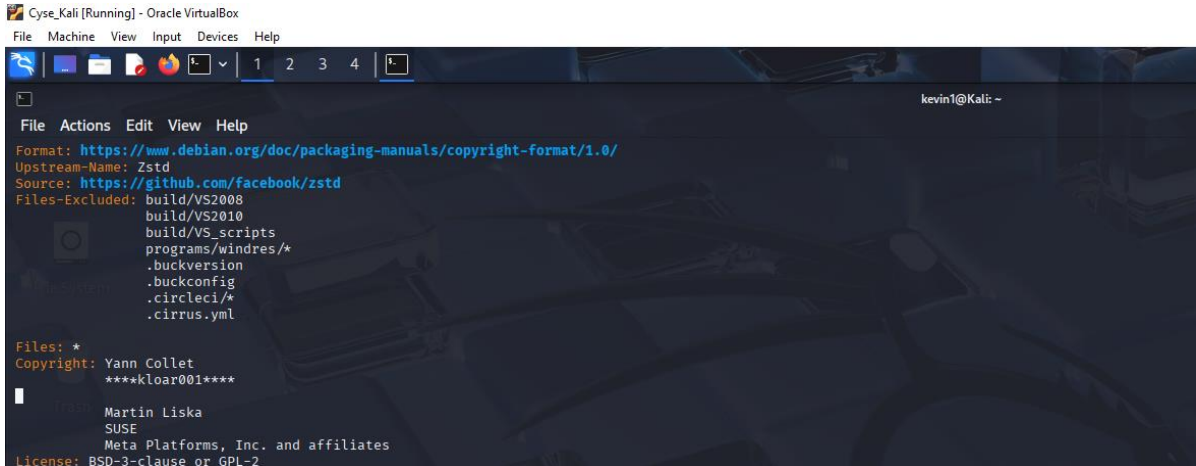
```
Cyse_Kali [Running] - Oracle VirtualBox
File Machine View Input Devices Help
Format: https://www.debian.org/doc/packaging-manuals/copyright-format/1.0/
Upstream-Name: Zstd
Source: https://github.com/facebook/zstd
Files-Excluded: build/VS2008
                build/VS2010
                build/VS_scripts
                programs/windres/*
                .buckversion
                .buckconfig
                .circleci/*
                .cirrus.yml
Files: *
Copyright: Yann Collet
          ****kloar001****
          Martin Liska
          SUSE
          Meta Platforms, Inc. and affiliates
```

To go into insert mode, selecting the "i" key allowed for me to type into the document.

Afterwards, I typed the following: **kloar001**.

5. Return to the command mode. Pressing **esc** will return to command mode.

6. Open a new line **below the current line** using correct command (please refer to slides with the list of commands used in vi editor).



```
Cyse_Kali [Running] - Oracle VirtualBox
File Machine View Input Devices Help
1 2 3 4 | F.
kevin1@Kali: ~
File Actions Edit View Help
Format: https://www.debian.org/doc/packaging-manuals/copyright-format/1.0/
Upstream-Name: Zstd
Source: https://github.com/facebook/zstd
Files-Excluded: build/VS2008
                build/VS2010
                build/VS_scripts
                programs/windres/*
                .buckversion
                .buckconfig
                .circleci/*
                .cirrus.yml

Files: *
Copyright: Yann Collet
          ****kloar001****

          Martin Liska
          SUSE
          Meta Platforms, Inc. and affiliates
License: BSD-3-Clause or GPL-2
```

To open a new line below the current line, selecting the "o" key created the new line.

7. Return to the command mode. Pressing esc will return to command mode.
8. Use command to Insert **“****XXXX ****”** five times.

```
Cyse_Kali [Running] - Oracle VirtualBox
File Machine View Input Devices Help
1 2 3 4
kevin1@Kali: ~
File Actions Edit View Help
Format: https://www.debian.org/doc/packaging-manuals/copyright-format/1.0/
Upstream-Name: Zstd
Source: https://github.com/facebook/zstd
Files-Excluded: build/VS2008
                build/VS2010
                build/VS_scripts
                programs/windres/*
                .buckversion
                .buckconfig
                .circleci/*
                .cirrus.yml

Files: *
Copyright: Yann Collet
          ****kloar001****
          ****kloar001****
          ****kloar001****
          ****kloar001****
          ****kloar001****
          ****kloar001****
          ****kloar001****
          ****kloar001****
          ****kloar001****

          Martin Liska
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          Meta Platforms, Inc. and affiliates
```

While being in command mode, I selected "yy" and "p" keys to copy and paste the text five times.

9. Use command to return the **top** of the file.

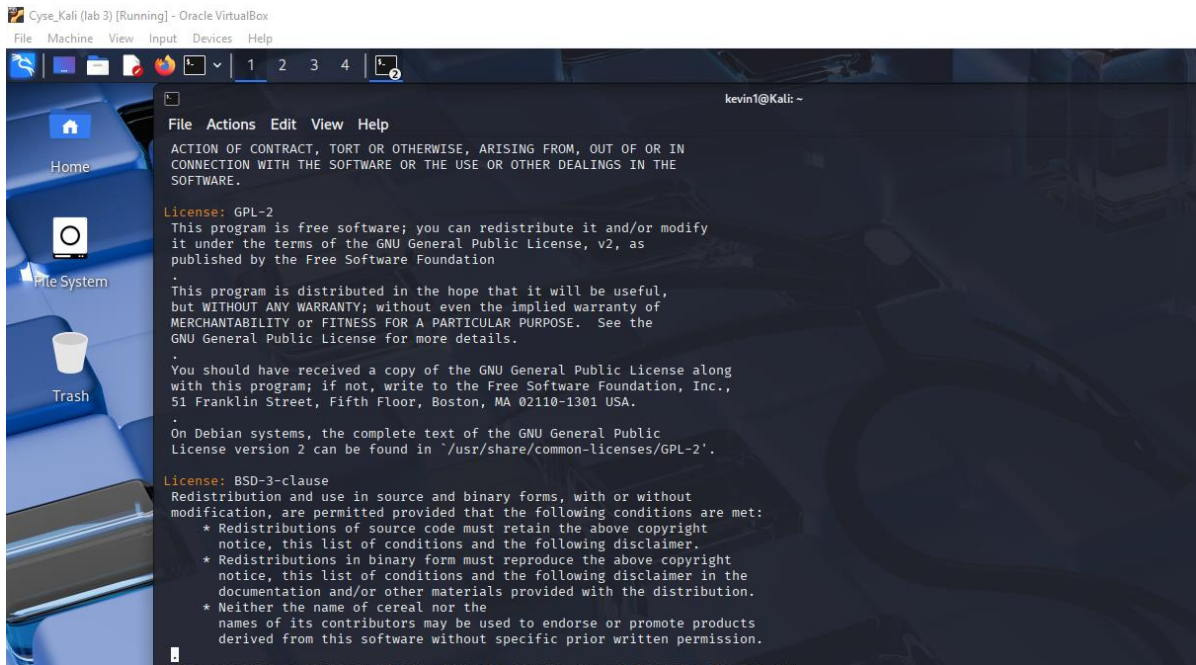
```
Cyse_Kali [Running] - Oracle VirtualBox
File Machine View Input Devices Help
1 2 3 4
kevin1@Kali: ~
File Actions Edit View Help
Format: https://www.debian.org/doc/packaging-manuals/copyright-format/1.0/
Upstream-Name: Zstd
Source: https://github.com/facebook/zstd
Files-Excluded: build/VS2008
                build/VS2010
                build/VS_scripts
                programs/windres/*
                .buckversion
                .buckconfig
                .circleci/*
                .cirrus.yml

Files: *
Copyright: Yann Collet
          ****kloar001****
          ****kloar001****
          ****kloar001****
          ****kloar001****
          ****kloar001****
          ****kloar001****
          ****kloar001****
          ****kloar001****
          ****kloar001****

          Martin Liska
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          Meta Platforms, Inc. and affiliates
License: BSD-3-clause or GPL-2
Comment: Starting from 1.3.1 zstd's patent claim is removed
```

To return to the top of the file, selecting "1G" will place the cursor at the top of the file.

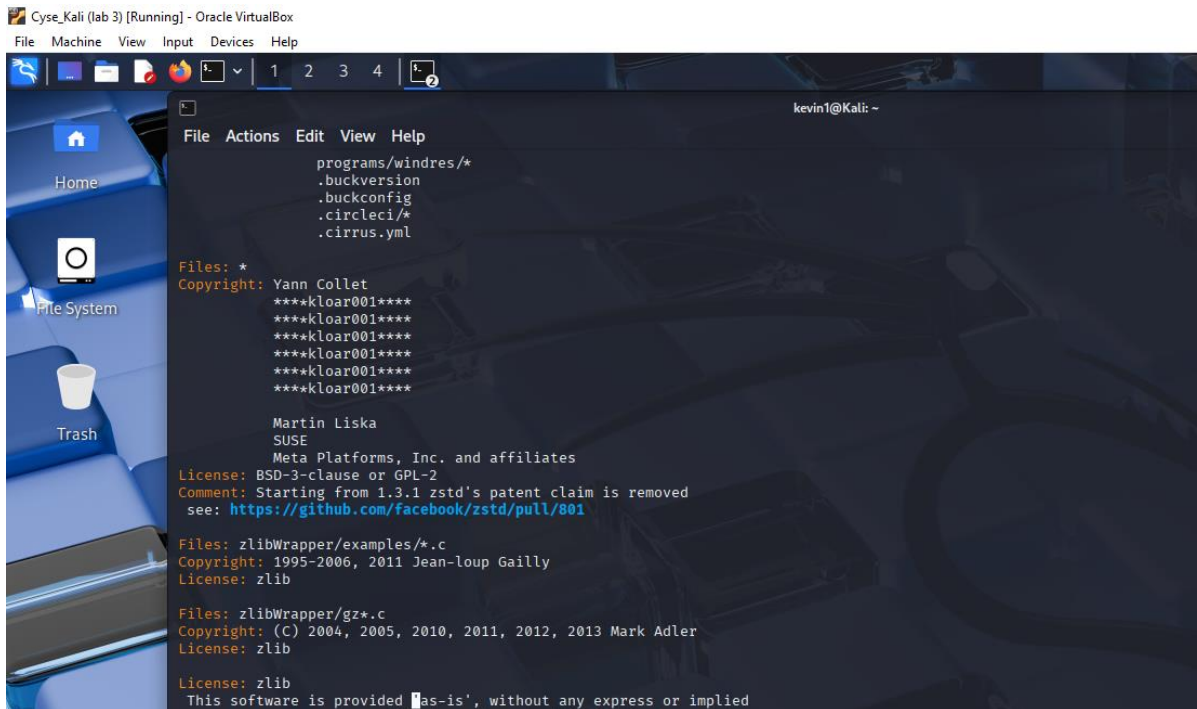
10. Move forward three sentences.



```
Cyse_Kali (lab 3) [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
kevin1@Kali: ~
File Actions Edit View Help
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CONNECTION WITH THE SOFTWARE OR THE USE OR OTHER DEALINGS IN THE
SOFTWARE.
License: GPL-2
This program is free software; you can redistribute it and/or modify
it under the terms of the GNU General Public License, v2, as
published by the Free Software Foundation
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This program is distributed in the hope that it will be useful,
but WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the
GNU General Public License for more details.
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You should have received a copy of the GNU General Public License
along with this program; if not, write to the Free Software Foundation, Inc.,
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA.
.
On Debian systems, the complete text of the GNU General Public
License version 2 can be found in '/usr/share/common-licenses/GPL-2'.
License: BSD-3-clause
Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:
* Redistributions of source code must retain the above copyright
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notice, this list of conditions and the following disclaimer in the
documentation and/or other materials provided with the distribution.
* Neither the name of cereal nor the
names of its contributors may be used to endorse or promote products
derived from this software without specific prior written permission.
```

To move forward three sentences, selecting the "3)" key places my cursor three sentences forward.

11. Move forward **four words**.



The screenshot shows a terminal window titled "Cyse_Kali (lab 3) [Running] - Oracle VirtualBox". The terminal displays the following content:

```
File Machine View Input Devices Help
1 2 3 4

kevin1@Kali: ~
File Actions Edit View Help
programs/windres/*
.buckversion
.buckconfig
.circleci/*
.cirrus.yml

Files: *
Copyright: Yann Collet
****kloar001****
****kloar001****
****kloar001****
****kloar001****
****kloar001****
****kloar001****

Martin Liska
SUSE
Meta Platforms, Inc. and affiliates
License: BSD-3-clause or GPL-2
Comment: Starting from 1.3.1 zstd's patent claim is removed
see: https://github.com/facebook/zstd/pull/801

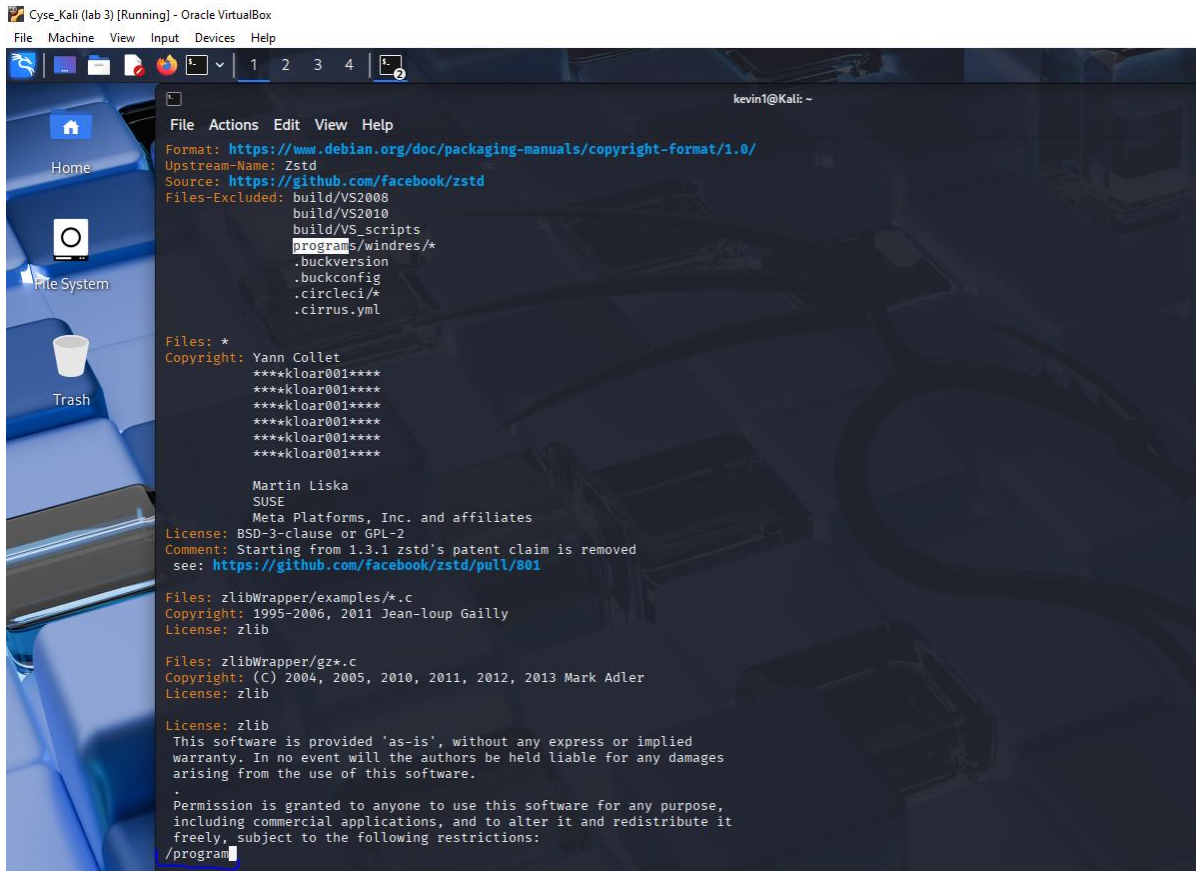
Files: zlibWrapper/examples/*.c
Copyright: 1995-2006, 2011 Jean-loup Gailly
License: zlib

Files: zlibWrapper/gz*.c
Copyright: (C) 2004, 2005, 2010, 2011, 2012, 2013 Mark Adler
License: zlib

License: zlib
This software is provided 'as-is', without any express or implied
```

To move forward four words, selecting the keys "4w" moves the cursor four words forward.

12. Search for the word **example** or any word existing in the document that you are using for lab



```
Cyse_Kali (lab 3) [Running] - Oracle VirtualBox
File Machine View Input Devices Help
1 2 3 4
kevin1@Kali: ~
File Actions Edit View Help
Format: https://www.debian.org/doc/packaging-manuals/copyright-format/1.0/
Upstream-Name: Zstd
Source: https://github.com/facebook/zstd
Files-Excluded: build/VS2008
                build/VS2010
                build/VS_scripts
                programs/windres/*
                .buckversion
                .buckconfig
                .circleci/*
                .cirrus.yml

Files: *
Copyright: Yann Collet
          ****kloar001****
          ****kloar001****
          ****kloar001****
          ****kloar001****
          ****kloar001****
          ****kloar001****

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Comment: Starting from 1.3.1 zstd's patent claim is removed
see: https://github.com/facebook/zstd/pull/801

Files: zlibWrapper/examples/*.c
Copyright: 1995-2006, 2011 Jean-loup Gailly
License: zlib

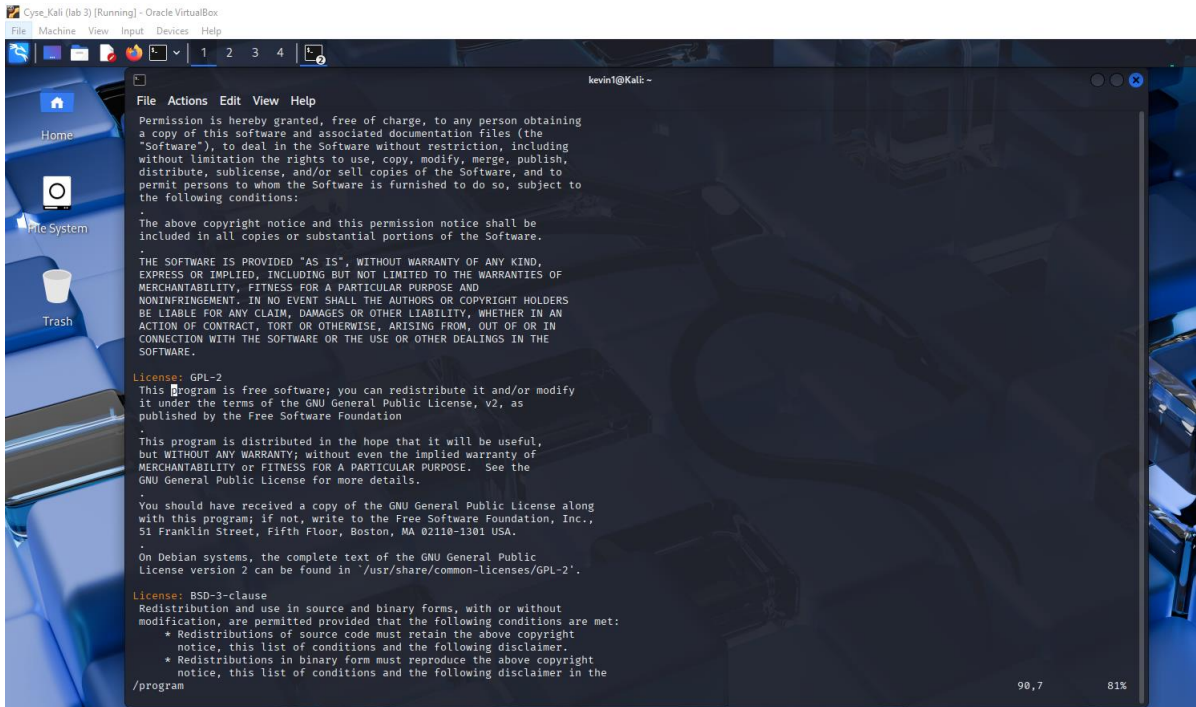
Files: zlibWrapper/gz*.c
Copyright: (C) 2004, 2005, 2010, 2011, 2012, 2013 Mark Adler
License: zlib

License: zlib
This software is provided 'as-is', without any express or implied
warranty. In no event will the authors be held liable for any damages
arising from the use of this software.

Permission is granted to anyone to use this software for any purpose,
including commercial applications, and to alter it and redistribute it
freely, subject to the following restrictions:
/program
```

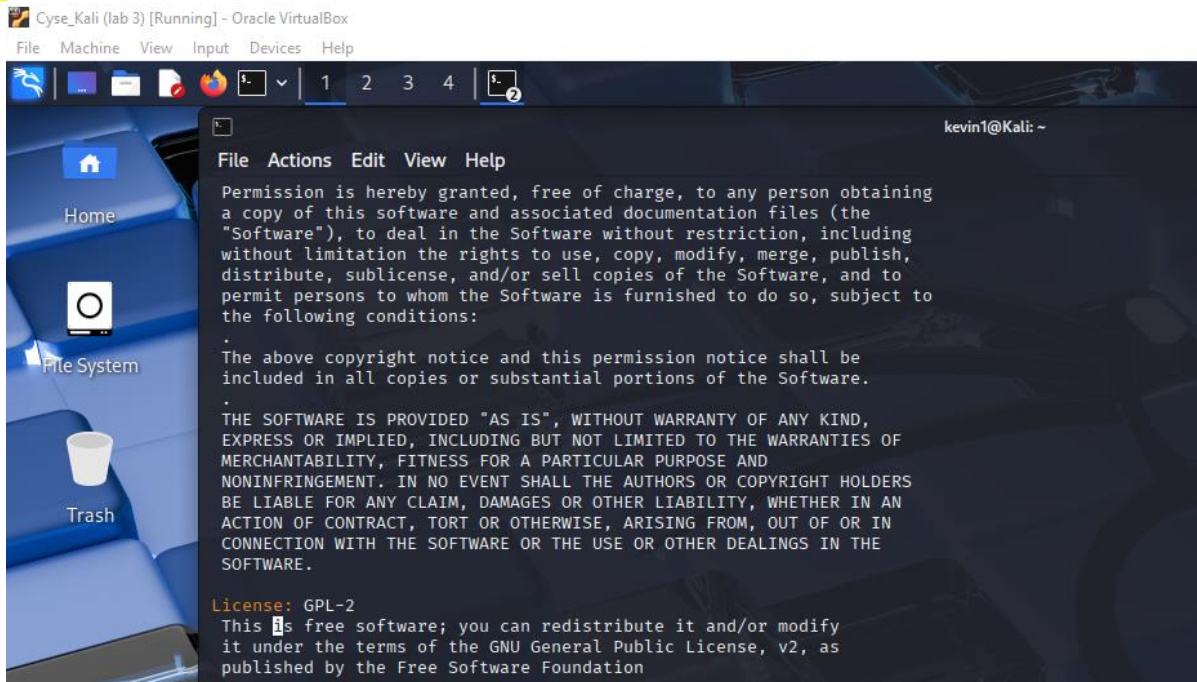
To search for specific words, typing the "/" and your word will search for the word in the document. In the example, I used "/program" to search.

13. Continue to the next occurrence of the search term **example**.



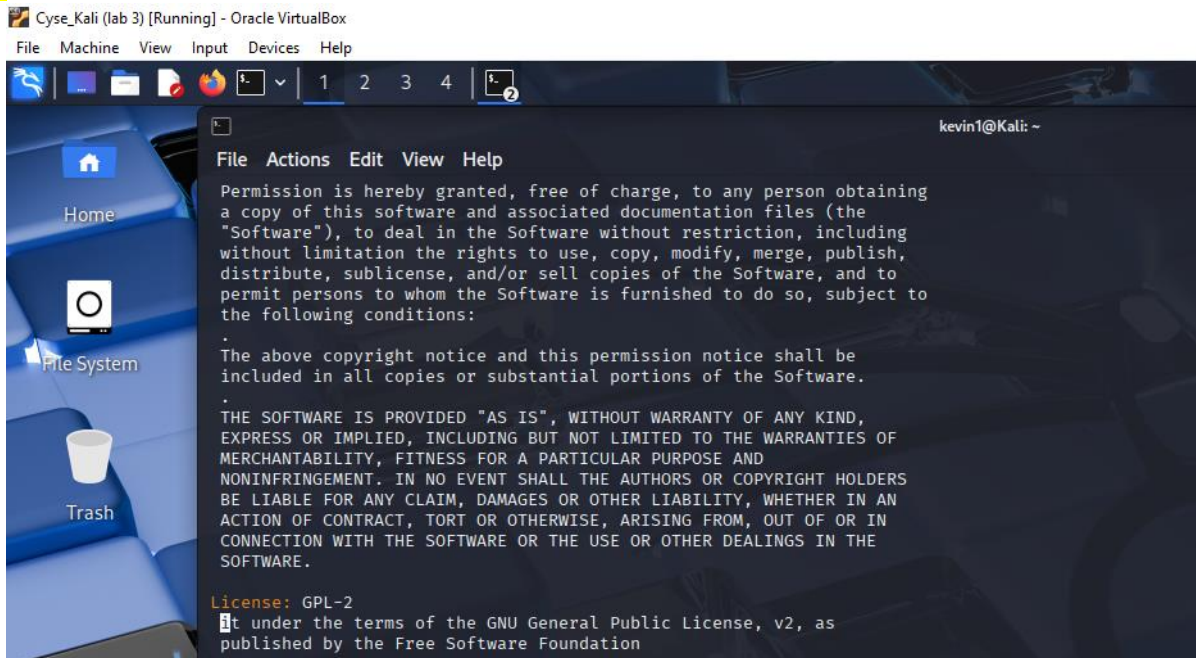
To look for another occurrence, selecting the "N" key finds the next occurrence.

14. Delete the current word, **example**.



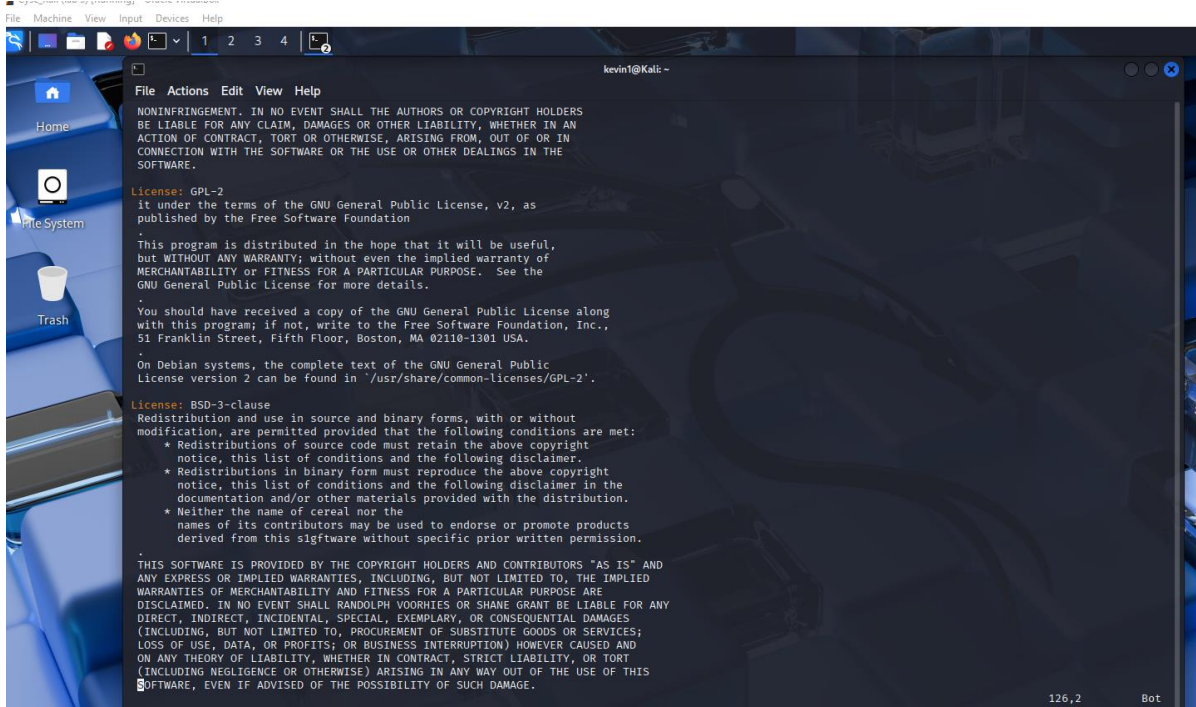
To delete the current word, selecting the keys "dw" deletes the word "program"

15. Delete the current line.



To delete the current line, selecting the keys "dd" will remove the entire line the cursor is placed in.

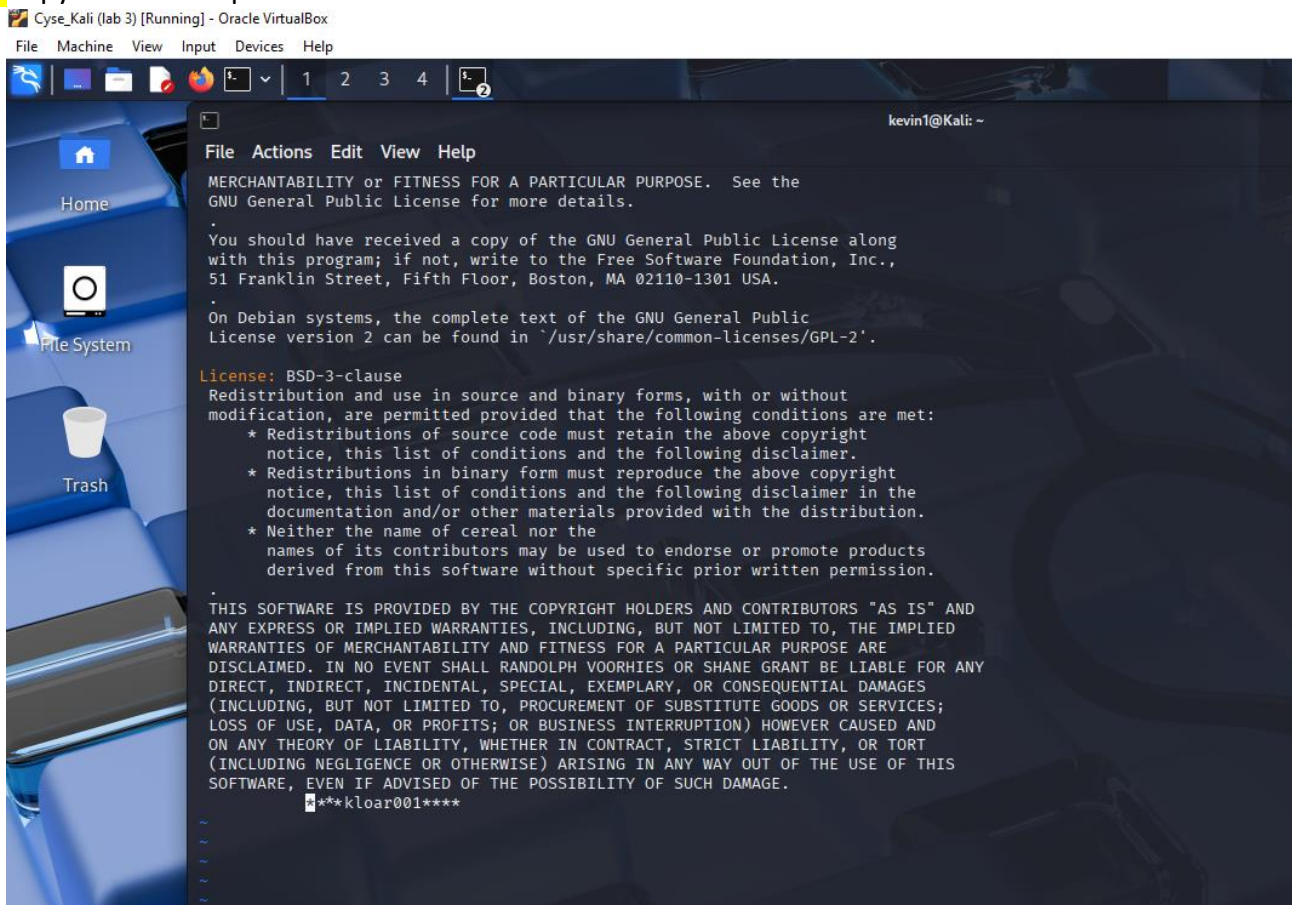
16. Use command to jump to the end of the file.



```
kevin1@kali: ~  
File Actions Edit View Help  
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BE LIABLE FOR ANY CLAIM, DAMAGES OR OTHER LIABILITY, WHETHER IN AN  
ACTION OF CONTRACT, TORT OR OTHERWISE, ARISING FROM, OUT OF OR IN  
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published by the Free Software Foundation  
  
This program is distributed in the hope that it will be useful,  
but WITHOUT ANY WARRANTY; without even the implied warranty of  
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the  
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You should have received a copy of the GNU General Public License along  
with this program; if not, write to the Free Software Foundation, Inc.,  
51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA.  
  
On Debian systems, the complete text of the GNU General Public  
License version 2 can be found in '/usr/share/common-licenses/GPL-2'.  
  
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ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT  
(INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS  
SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.  
  
126,2 Bot
```

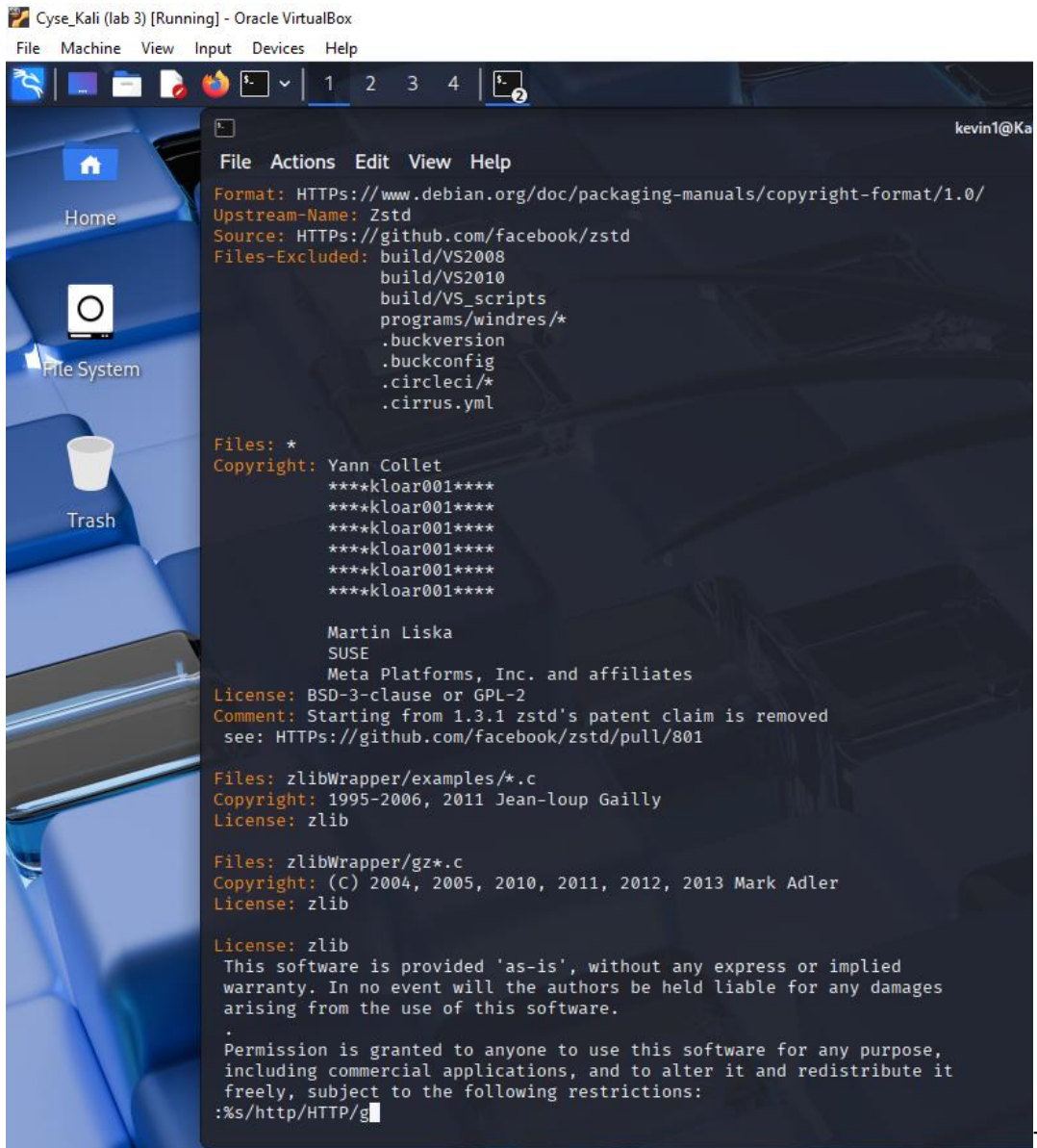
To jump to the end of the file, the "G" key is selected.

17. Copy line 16 and paste the text at the end of the document.



To copy from line 16 and placing the text at the end of the document, I selected the keys "yy, G, and p". This would copy the word, go towards the end of the document, and paste the word.

18. Replace all occurrences of **http** with **HTTP** throughout the document.



The screenshot shows a terminal window titled "Cyse_Kali (lab 3) [Running] - Oracle VirtualBox". The terminal displays the following text:

```
File Actions Edit View Help
Format: HTTPs://www.debian.org/doc/packaging-manuals/copyright-format/1.0/
Upstream-Name: Zstd
Source: HTTPs://github.com/facebook/zstd
Files-Excluded: build/VS2008
                 build/VS2010
                 build/VS_scripts
                 programs/windres/*
                 .buckversion
                 .buckconfig
                 .circleci/*
                 .cirrus.yml

Files: *
Copyright: Yann Collet
          ****kloar001****
          ****kloar001****
          ****kloar001****
          ****kloar001****
          ****kloar001****
          ****kloar001****

          Martin Liska
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          Meta Platforms, Inc. and affiliates
License: BSD-3-clause or GPL-2
Comment: Starting from 1.3.1 zstd's patent claim is removed
see: HTTPs://github.com/facebook/zstd/pull/801

Files: zlibWrapper/examples/*.c
Copyright: 1995-2006, 2011 Jean-loup Gailly
License: zlib

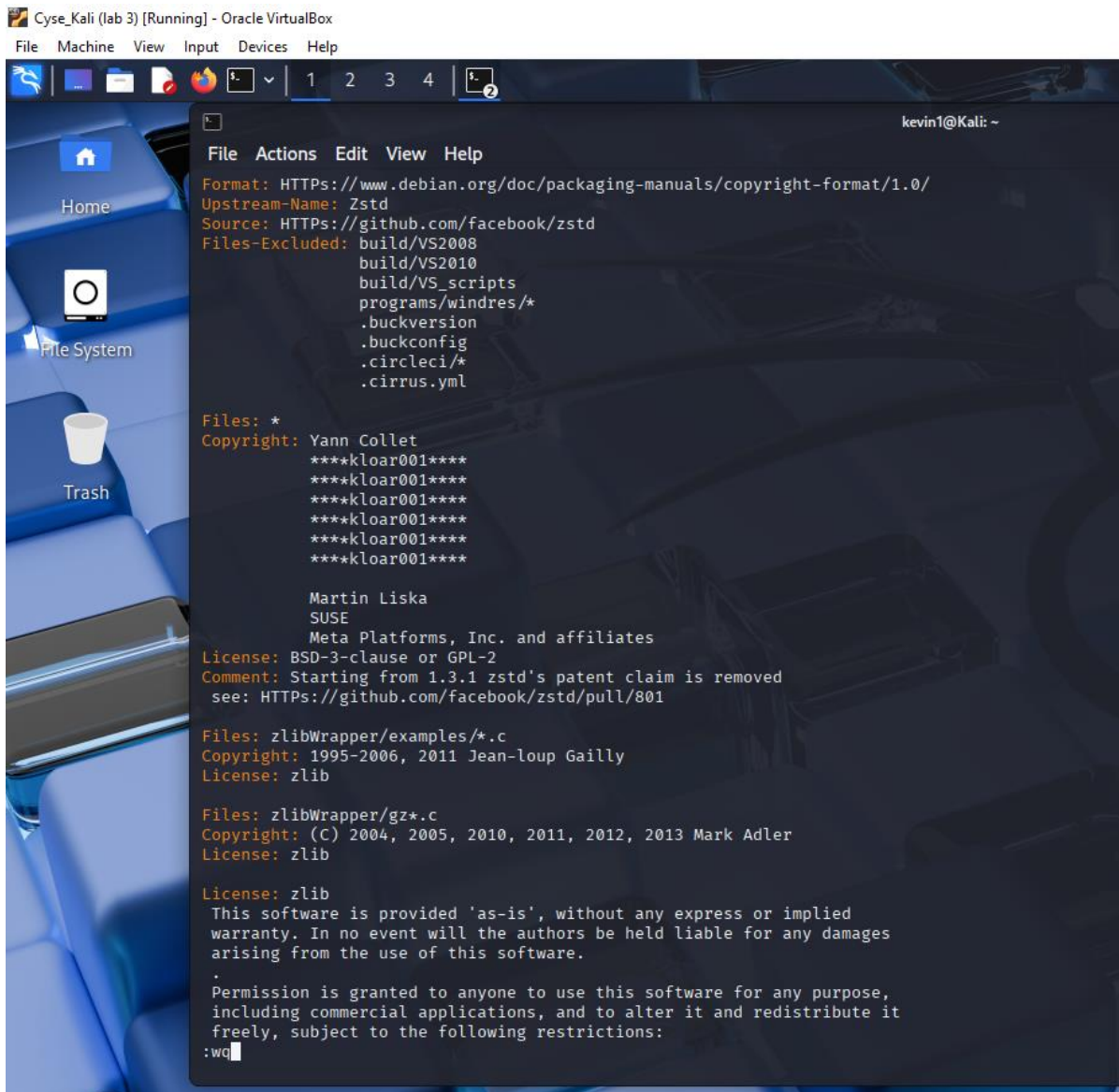
Files: zlibWrapper/gz*.c
Copyright: (C) 2004, 2005, 2010, 2011, 2012, 2013 Mark Adler
License: zlib

License: zlib
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including commercial applications, and to alter it and redistribute it
freely, subject to the following restrictions:
:%s/http/HTTP/g
```

replace all occurrences of http with HTTP throughout the document, the following
":%s/http/HTTP/g" is typed to replace with HTTP.

19. Save and quit the document.



```
Cyse_Kali (lab 3) [Running] - Oracle VirtualBox
File Machine View Input Devices Help
1 2 3 4 5
kevin1@Kali: ~
File Actions Edit View Help
Format: HTTPs://www.debian.org/doc/packaging-manuals/copyright-format/1.0/
Upstream-Name: Zstd
Source: HTTPs://github.com/facebook/zstd
Files-Excluded: build/VS2008
                build/VS2010
                build/VS_scripts
                programs/windres/*
                .buckversion
                .buckconfig
                .circleci/*
                .cirrus.yml

Files: *
Copyright: Yann Collet
          ****kloar001****
          ****kloar001****
          ****kloar001****
          ****kloar001****
          ****kloar001****
          ****kloar001****

          Martin Liska
          SUSE
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Comment: Starting from 1.3.1 zstd's patent claim is removed
        see: HTTPs://github.com/facebook/zstd/pull/801

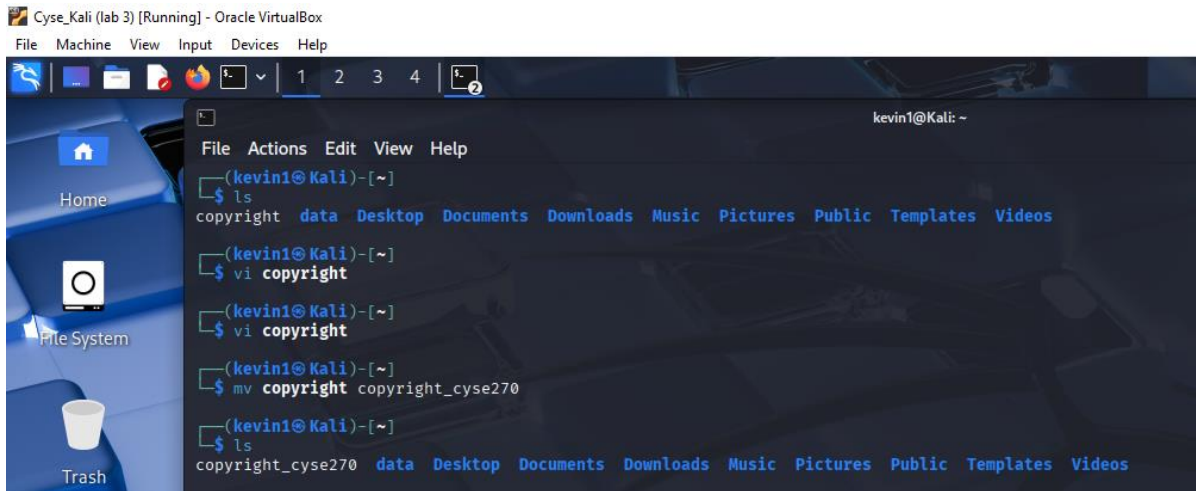
Files: zlibWrapper/examples/*.c
Copyright: 1995-2006, 2011 Jean-loup Gailly
License: zlib

Files: zlibWrapper/gz*.c
Copyright: (C) 2004, 2005, 2010, 2011, 2012, 2013 Mark Adler
License: zlib

License: zlib
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arising from the use of this software.
.
Permission is granted to anyone to use this software for any purpose,
including commercial applications, and to alter it and redistribute it
freely, subject to the following restrictions:
:wq
```

To save and quite the document, the following ":wq" is typed to save successfully.

20. Rename the file `copyright` to `copyright_cyse270`.



```
Cyse_Kali (lab 3) [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
1 2 3 4 5
kevin1@Kali: ~
File Actions Edit View Help
(kevin1@Kali)-[~]
$ ls
copyright data Desktop Documents Downloads Music Pictures Public Templates Videos
(kevin1@Kali)-[~]
$ vi copyright
(kevin1@Kali)-[~]
$ vi copyright
(kevin1@Kali)-[~]
$ mv copyright copyright_cyse270
(kevin1@Kali)-[~]
$ ls
copyright_cyse270 data Desktop Documents Downloads Music Pictures Public Templates Videos
```

To rename the file `copyright` to `copyright_cyse270`, the following "`mv copyright copyright_cyse270`" is typed to change the document name.

Reflection

In the third lab, I learned how to use the file editor "vim" to edit a document through the command line. There were some challenges at the time that took time to getting used to. There were instances I would forget to switch from "insert" to "command" mode and vice versa.