

Question no.1

Vi editor

Use your vi editor to create a file called ridinghood.txt.

Once upon a time, there was a dear little girl who was loved by everyone who looked at her, but most of all by her grandmother, and there was nothing that she would not have given to the child. Once she gave her a little cap of red velvet, which suited her so well that she would never wear anything else. So, she was always called Little Red Riding Hood.

One day her mother said to her, "Come, Little Red Riding Hood, here is a piece of cake and a bottle of wine. Take them to your grandmother, she is ill and weak, and they will do her good. Set out before it gets hot, and when you are going, walk nicely and quietly and do not run off the path, or you may fall and break the bottle, and then your grandmother will get nothing. And when you go into her room, don't forget to say, good-morning, and don't peep into every corner before you do it."

⇒ To create the file can use the command touch or vi itself.

```
[19706@ip-172-26-2-101:~$ vi ridinghood.txt
[19706@ip-172-26-2-101:~$ ls
A      D      bank_report    col2_cut      file3   file9      now
B      Dir1   biglist       col_combined  file4    hw        report
B1     Dir2   c            dir2         file5   linux.txt  report.sort
B2     Dir3   col1         example      file6   ls.help    ridinghood.txt
C      a      col1_cut     file1        file7   myfile.txt save
C1     b      col2         file2        file8   new       story
19706@ip-172-26-2-101:~$ ]
```

- What are the 2 modes in vi?
  - ⇒ There are two modes they are:
    - i) Command mode: In this mode, we can use keyword commands to navigate the file, edit text, and perform other operations. Some examples are:
      - a)'h', 'k', 'j', and 'l': it helps to move the cursor left, up, down, and right respectively.
      - b)'yy': to copy the line to the clipboard. after pressing double y we will be able to copy the line.

```
● ● ●  yunishabasnet — ssh 19706@52.43.162.83 -p 1022 — 80x24
Once upon a time, there was a dear little girl who was
loved by everyone who looked at her, but most of all
by her grandmother, and there was nothing that she
would not have given to the child. Once she gave her
a little cap of red velvet, which suited her so well that
she would never wear anything else. So, she was
always called Little Red Riding Hood.
One day her mother said to her, "Come, Little Red
Riding Hood, here is a piece of cake and a bottle of
wine. Take them to your grandmother, she is ill and
weak, and they will do her good. Set out before it gets
hot, and when you are going, walk nicely and quietly
and do not run off the path, or you may fall and break
the bottle, and then your grandmother will get nothing.
And when you go into her room, don't forget to say,
good-morning, and don't peep into every corner
before you do it."
~
~
~
~
~
y      15,1      All
```

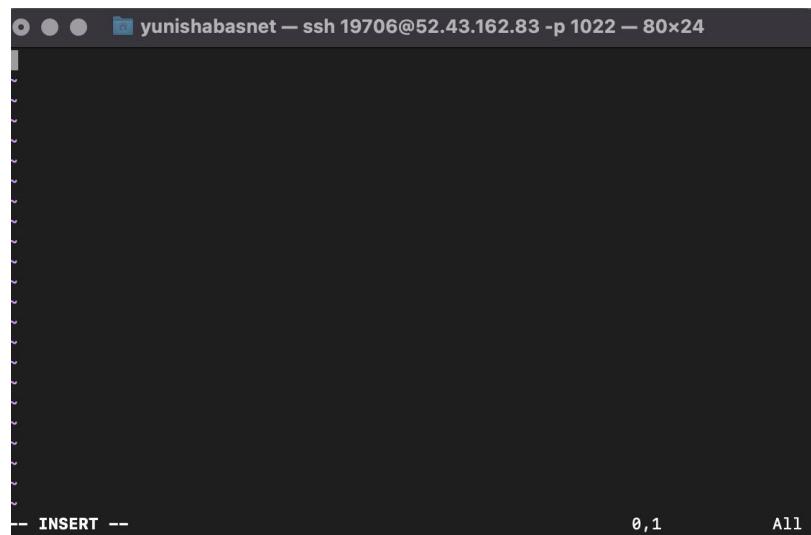
While you press one y it will note the command as shown in the above diagram.

After pressing double yy and pasting it at the last line.

```
● ● ●  yunishabasnet — ssh 19706@52.43.162.83 -p 1022 — 80x24
Once upon a time, there was a dear little girl who was
loved by everyone who looked at her, but most of all
by her grandmother, and there was nothing that she
would not have given to the child. Once she gave her
a little cap of red velvet, which suited her so well that
she would never wear anything else. So, she was
always called Little Red Riding Hood.
One day her mother said to her, "Come, Little Red
Riding Hood, here is a piece of cake and a bottle of
wine. Take them to your grandmother, she is ill and
weak, and they will do her good. Set out before it gets
hot, and when you are going, walk nicely and quietly
and do not run off the path, or you may fall and break
the bottle, and then your grandmother will get nothing.
And when you go into her room, don't forget to say,
good-morning, and don't peep into every corner
before you do it."
And when you go into her room, don't forget to say,
~
~
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~
y      18,1      All
```

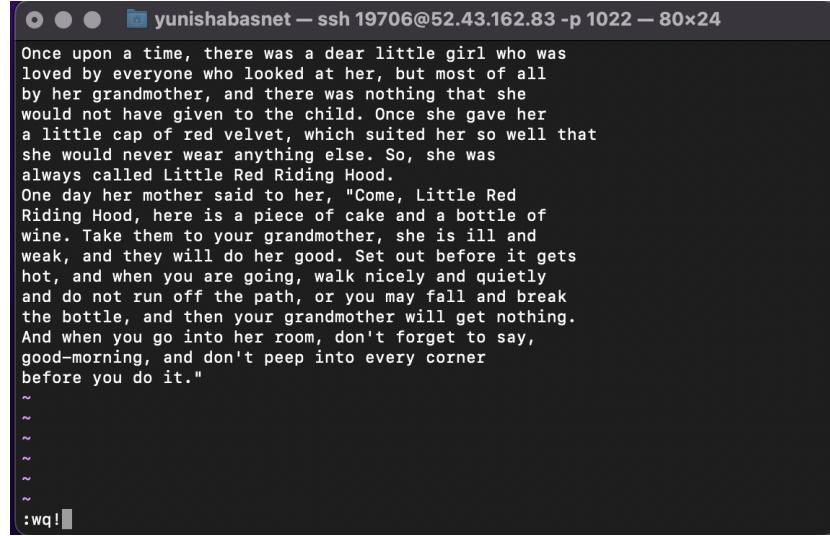
- ii) Insert mode: When we want to insert the text in the file we need to switch it to insert mode. For that, we need to press ‘i’ key in the command mode. To save the text we need to go back into the command mode and save it.

Insert mode:



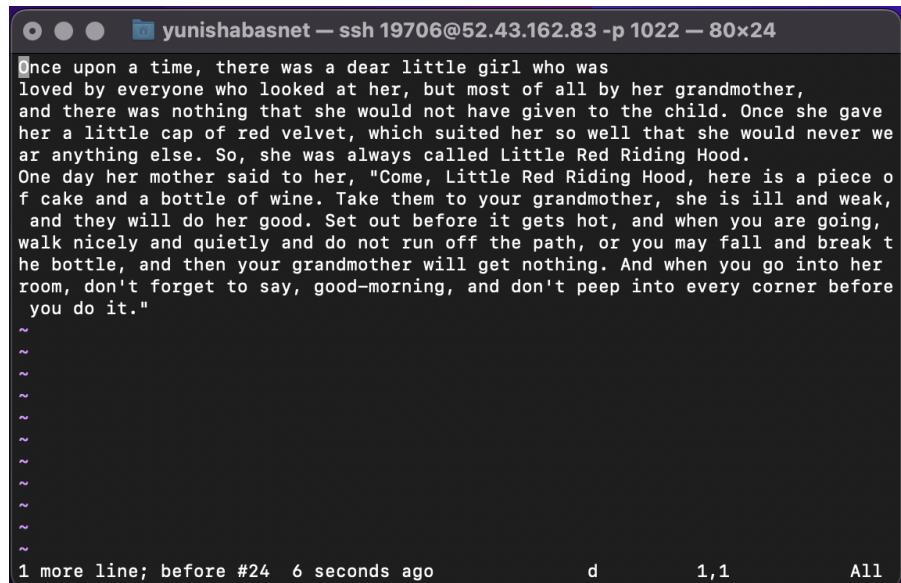
A screenshot of a terminal window titled "yunishabasnet — ssh 19706@52.43.162.83 -p 1022 — 80x24". The terminal is in black-on-white mode. On the left side, there is a vertical scroll bar with small blue dots. At the bottom of the screen, the status bar displays "-- INSERT --" on the left, "0,1" in the center, and "All" on the right. The main body of the terminal is entirely blank, indicating no text has been entered or displayed.

Saving it.



Once upon a time, there was a dear little girl who was loved by everyone who looked at her, but most of all by her grandmother, and there was nothing that she would not have given to the child. Once she gave her a little cap of red velvet, which suited her so well that she would never wear anything else. So, she was always called Little Red Riding Hood.  
One day her mother said to her, "Come, Little Red Riding Hood, here is a piece of cake and a bottle of wine. Take them to your grandmother, she is ill and weak, and they will do her good. Set out before it gets hot, and when you are going, walk nicely and quietly and do not run off the path, or you may fall and break the bottle, and then your grandmother will get nothing. And when you go into her room, don't forget to say, good-morning, and don't peep into every corner before you do it."  
~  
~  
~  
~  
~  
~  
~  
:wq!

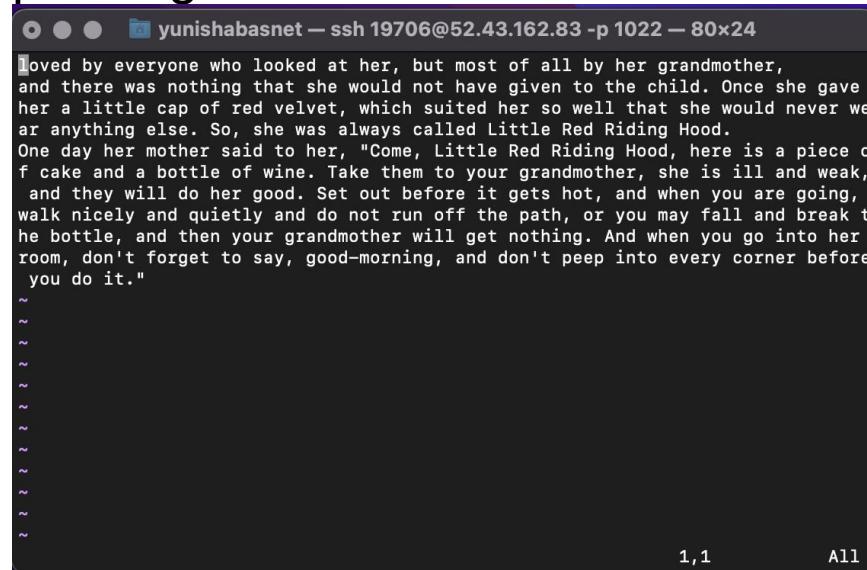
- How do you delete a whole line in vi? How about deleting a word?  
⇒ We can use the command “dd” to delete the whole line.



Once upon a time, there was a dear little girl who was loved by everyone who looked at her, but most of all by her grandmother, and there was nothing that she would not have given to the child. Once she gave her a little cap of red velvet, which suited her so well that she would never we ar anything else. So, she was always called Little Red Riding Hood.  
One day her mother said to her, "Come, Little Red Riding Hood, here is a piece o f cake and a bottle of wine. Take them to your grandmother, she is ill and weak, and they will do her good. Set out before it gets hot, and when you are going, walk nicely and quietly and do not run off the path, or you may fall and break t he bottle, and then your grandmother will get nothing. And when you go into her room, don't forget to say, good-morning, and don't peep into every corner before you do it."  
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~  
~  
~  
1 more line; before #24 6 seconds ago d 1,1 All

In the above figure, as shown on the right-hand side below, there is the word “d”. If I press one-word d, the command will

execute, and the line where the cursor is pointing will be deleted.

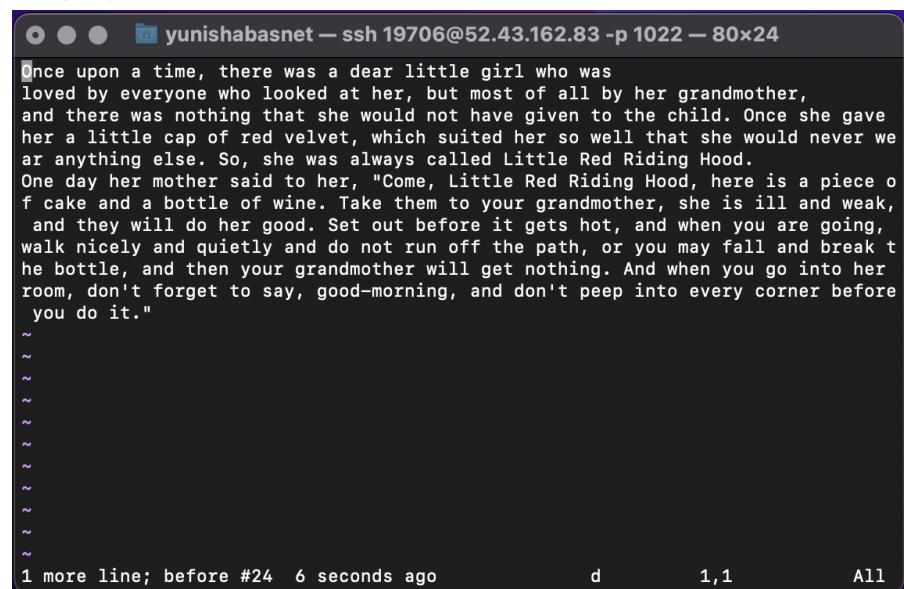


The screenshot shows a terminal window with the title bar "yunishabasnet — ssh 19706@52.43.162.83 - p 1022 — 80x24". The text displayed is the start of the Little Red Riding Hood story, with the first few lines visible:

```
Loved by everyone who looked at her, but most of all by her grandmother,  
and there was nothing that she would not have given to the child. Once she gave  
her a little cap of red velvet, which suited her so well that she would never we  
ar anything else. So, she was always called Little Red Riding Hood.  
One day her mother said to her, "Come, Little Red Riding Hood, here is a piece o  
f cake and a bottle of wine. Take them to your grandmother, she is ill and weak,  
and they will do her good. Set out before it gets hot, and when you are going,  
walk nicely and quietly and do not run off the path, or you may fall and break t  
he bottle, and then your grandmother will get nothing. And when you go into her  
room, don't forget to say, good-morning, and don't peep into every corner before  
you do it."  
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~  
~
```

At the bottom right of the terminal window, the coordinates "1,1" and "All" are visible.

⇒ We can use the command “dw” to delete the word.



The screenshot shows the same terminal window after the word "Loved" has been deleted using the "dw" command. The text now starts with "oved by everyone who looked at her, but most of all by her grandmother," and the cursor is positioned at the beginning of the word "oved".

```
oved by everyone who looked at her, but most of all by her grandmother,  
and there was nothing that she would not have given to the child. Once she gave  
her a little cap of red velvet, which suited her so well that she would never we  
ar anything else. So, she was always called Little Red Riding Hood.  
One day her mother said to her, "Come, Little Red Riding Hood, here is a piece o  
f cake and a bottle of wine. Take them to your grandmother, she is ill and weak,  
and they will do her good. Set out before it gets hot, and when you are going,  
walk nicely and quietly and do not run off the path, or you may fall and break t  
he bottle, and then your grandmother will get nothing. And when you go into her  
room, don't forget to say, good-morning, and don't peep into every corner before  
you do it."  
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~
```

At the bottom left, it says "1 more line; before #24 6 seconds ago". At the bottom right, the coordinates "d" and "1,1" are visible.

In the above figure, as shown on the right-hand side below, there is the word “d”. If I press one-word w, the command will

execute, and the word where the cursor is pointing will be deleted.

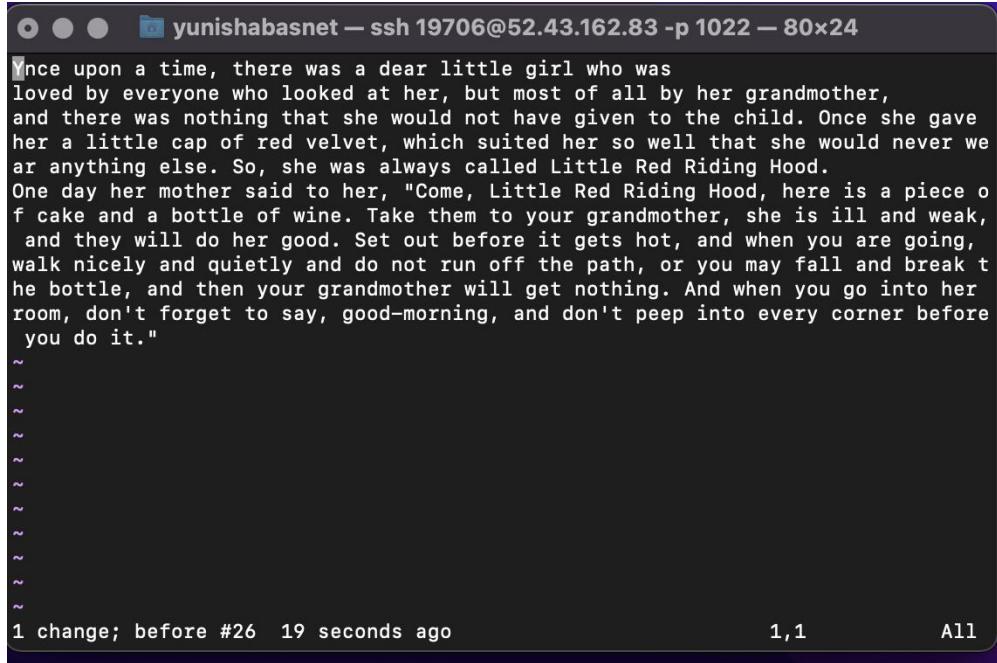
```
● ● ● yunishabasnet — ssh 19706@52.43.162.83 -p 1022 — 80x24
Upon a time, there was a dear little girl who was
loved by everyone who looked at her, but most of all by her grandmother,
and there was nothing that she would not have given to the child. Once she gave
her a little cap of red velvet, which suited her so well that she would never we
ar anything else. So, she was always called Little Red Riding Hood.
One day her mother said to her, "Come, Little Red Riding Hood, here is a piece o
f cake and a bottle of wine. Take them to your grandmother, she is ill and weak,
and they will do her good. Set out before it gets hot, and when you are going,
walk nicely and quietly and do not run off the path, or you may fall and break t
he bottle, and then your grandmother will get nothing. And when you go into her
room, don't forget to say, good-morning, and don't peep into every corner before
you do it."
~
~
~
~
~
~
~
~
~
1 more line; before #25 24 seconds ago          1,1          All
```

- How do you replace a character?  
⇒ To replace the character, we can use the command “r”.

```
● ● ● yunishabasnet — ssh 19706@52.43.162.83 -p 1022 — 80x24
Once upon a time, there was a dear little girl who was
loved by everyone who looked at her, but most of all by her grandmother,
and there was nothing that she would not have given to the child. Once she gave
her a little cap of red velvet, which suited her so well that she would never we
ar anything else. So, she was always called Little Red Riding Hood.
One day her mother said to her, "Come, Little Red Riding Hood, here is a piece o
f cake and a bottle of wine. Take them to your grandmother, she is ill and weak,
and they will do her good. Set out before it gets hot, and when you are going,
walk nicely and quietly and do not run off the path, or you may fall and break t
he bottle, and then your grandmother will get nothing. And when you go into her
room, don't forget to say, good-morning, and don't peep into every corner before
you do it."
~
~
~
~
~
~
~
~
1 change; before #26 19 seconds ago          r          1,1          All
```

In the above figure, as shown on the right-hand side below, there is the word “r”. If I give

any letter it will replace the character with that letter.



A screenshot of a terminal window titled "yunishabasnet — ssh 19706@52.43.162.83 -p 1022 — 80x24". The terminal shows a portion of the "Little Red Riding Hood" story in "vi" mode. The text reads:

```
Ynce upon a time, there was a dear little girl who was
loved by everyone who looked at her, but most of all by her grandmother,
and there was nothing that she would not have given to the child. Once she gave
her a little cap of red velvet, which suited her so well that she would never we
ar anything else. So, she was always called Little Red Riding Hood.
One day her mother said to her, "Come, Little Red Riding Hood, here is a piece o
f cake and a bottle of wine. Take them to your grandmother, she is ill and weak,
and they will do her good. Set out before it gets hot, and when you are going,
walk nicely and quietly and do not run off the path, or you may fall and break t
he bottle, and then your grandmother will get nothing. And when you go into her
room, don't forget to say, good-morning, and don't peep into every corner before
you do it."
~
```

The bottom status bar of the terminal indicates "1 change; before #26 19 seconds ago" and shows the current position as "1,1" with "All" selected.

- How do you insert a character?
  - ⇒ To insert a character, we can use commands like :
    - 1.i: Inserts text before the current cursor position.  
Before inserting:

```
● ● ● yunishabasnet — ssh 19706@52.43.162.83 -p 1022 — 80x24
Once upon a time, there was a dear little girl who was
loved by everyone who looked at her, but most of all by her grandmother,
and there was nothing that she would not have given to the child. Once she gave
her a little cap of red velvet, which suited her so well that she would never we
ar anything else. So, she was always called Little Red Riding Hood.
One day her mother said to her, "Come, Little Red Riding Hood, here is a piece o
f cake and a bottle of wine. Take them to your grandmother, she is ill and weak,
and they will do her good. Set out before it gets hot, and when you are going,
walk nicely and quietly and do not run off the path, or you may fall and break t
he bottle, and then your grandmother will get nothing. And when you go into her
room, don't forget to say, good-morning, and don't peep into every corner before
you do it."
~
~
~
~
~
~
~
~
4,1          All
```

After inserting:

```
● ● ● yunishabasnet — ssh 19706@52.43.162.83 -p 1022 — 80x24
Once upon a time, there was a dear little girl who was
loved by everyone who looked at her, but most of all by her grandmother,
and there was nothing that she would not have given to the child. Once she gave
her a little cap of red velvet, which suited her so well that she would never we
ar anything else. So, she was always called Little Red Riding Hood.
One day her mother said to her, "Come, Little Red Riding Hood, here is a piece o
f cake and a bottle of wine. Take them to your grandmother, she is ill and weak,
and they will do her good. Set out before it gets hot, and when you are going,
walk nicely and quietly and do not run off the path, or you may fall and break t
he bottle, and then your grandmother will get nothing. And when you go into her
room, don't forget to say, good-morning, and don't peep into every corner before
you do it."
~
~
~
~
~
~
~
~
4,1          All
-- INSERT --
```

2.a: Appends text after the current cursor position.

Before inserting:

```
● ● ● yunishabasnet — ssh 19706@52.43.162.83 -p 1022 — 80x24
Once upon a time, there was a dear little girl who was
loved by everyone who looked at her, but most of all by her grandmother,
and there was nothing that she would not have given to the child. Once she gave
her a little cap of red velvet, which suited her so well that she would never we
ar anything else. So, she was always called Little Red Riding Hood.
One day her mother said to her, "Come, Little Red Riding Hood, here is a piece o
f cake and a bottle of wine. Take them to your grandmother, she is ill and weak,
and they will do her good. Set out before it gets hot, and when you are going,
walk nicely and quietly and do not run off the path, or you may fall and break t
he bottle, and then your grandmother will get nothing. And when you go into her
room, don't forget to say, good-morning, and don't peep into every corner before
you do it."
~
~
~
~
~
~
~
~
4,1          All
```

After inserting:

```
● ● ● yunishabasnet — ssh 19706@52.43.162.83 -p 1022 — 80x24
Once upon a time, there was a dear little girl who was
loved by everyone who looked at her, but most of all by her grandmother,
and there was nothing that she would not have given to the child. Once she gave
her a little cap of red velvet, which suited her so well that she would never we
ar anything else. So, she was always called Little Red Riding Hood.
One day her mother said to her, "Come, Little Red Riding Hood, here is a piece o
f cake and a bottle of wine. Take them to your grandmother, she is ill and weak,
and they will do her good. Set out before it gets hot, and when you are going,
walk nicely and quietly and do not run off the path, or you may fall and break t
he bottle, and then your grandmother will get nothing. And when you go into her
room, don't forget to say, good-morning, and don't peep into every corner before
you do it."
~
~
~
~
~
~
~
~
4,2          All
-- INSERT --
```

3.I: Inserts text at the beginning of the current line.

Before inserting:

```
● ● ●  yunishabasnet — ssh 19706@52.43.162.83 -p 1022 — 80x24
Once upon a time, there was a dear little girl who was
loved by everyone who looked at her, but most of all by her grandmother,
and there was nothing that she would not have given to the child. Once she gave
her a little cap of red velvet, which suited her so well that she would never we
ar anything else. So, she was always called Little Red Riding Hood.
One day her mother said to her, "Come, Little Red Riding Hood, here is a piece o
f cake and a bottle of wine. Take them to your grandmother, she is ill and weak,
and they will do her good. Set out before it gets hot, and when you are going,
walk nicely and quietly and do not run off the path, or you may fall and break t
he bottle, and then your grandmother will get nothing. And when you go into her
room, don't forget to say, good-morning, and don't peep into every corner before
you do it."
~
~
~
~
~
~
~
~
~
~
~
4,25          All
```

## After inserting:

```
● ● ●  yunishabasnet — ssh 19706@52.43.162.83 -p 1022 — 80x24
Once upon a time, there was a dear little girl who was
loved by everyone who looked at her, but most of all by her grandmother,
and there was nothing that she would not have given to the child. Once she gave
her a little cap of red velvet, which suited her so well that she would never we
ar anything else. So, she was always called Little Red Riding Hood.
One day her mother said to her, "Come, Little Red Riding Hood, here is a piece o
f cake and a bottle of wine. Take them to your grandmother, she is ill and weak,
and they will do her good. Set out before it gets hot, and when you are going,
walk nicely and quietly and do not run off the path, or you may fall and break t
he bottle, and then your grandmother will get nothing. And when you go into her
room, don't forget to say, good-morning, and don't peep into every corner before
you do it."
~
~
~
~
~
~
~
~
~
~
4,1          All
```

## 4.A: Appends text at the end of the current line.

## Before inserting:

```
● ● ●  yunishabasnet — ssh 19706@52.43.162.83 -p 1022 — 80x24
Once upon a time, there was a dear little girl who was
loved by everyone who looked at her, but most of all by her grandmother,
and there was nothing that she would not have given to the child. Once she gave
her a little cap of red velvet, which suited her so well that she would never we
ar anything else. So, she was always called Little Red Riding Hood.
One day her mother said to her, "Come, Little Red Riding Hood, here is a piece o
f cake and a bottle of wine. Take them to your grandmother, she is ill and weak,
and they will do her good. Set out before it gets hot, and when you are going,
walk nicely and quietly and do not run off the path, or you may fall and break t
he bottle, and then your grandmother will get nothing. And when you go into her
room, don't forget to say, good-morning, and don't peep into every corner before
you do it."
~
~
~
~
~
~
~
~
~
~
~
1,1          All
```

## After inserting:

```
● ● ●  yunishabasnet — ssh 19706@52.43.162.83 -p 1022 — 80x24
Once upon a time, there was a dear little girl who was █
loved by everyone who looked at her, but most of all by her grandmother,
and there was nothing that she would not have given to the child. Once she gave
her a little cap of red velvet, which suited her so well that she would never we
ar anything else. So, she was always called Little Red Riding Hood.
One day her mother said to her, "Come, Little Red Riding Hood, here is a piece o
f cake and a bottle of wine. Take them to your grandmother, she is ill and weak,
and they will do her good. Set out before it gets hot, and when you are going,
walk nicely and quietly and do not run off the path, or you may fall and break t
he bottle, and then your grandmother will get nothing. And when you go into her
room, don't forget to say, good-morning, and don't peep into every corner before
you do it."
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~
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~
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~
~
-- INSERT --          1,56          All
```

## Question no.2

Do the same thing using another editor such as emacs or xedit or pico or nano

- Are there different modes in the new editor?  
⇒ The modes are:  
Command and insert mode.

In command mode, we can use various commands to perform operations such as opening and saving files, searching for text, and navigating through the file.

In edit mode, we can insert, delete, and modify text in the file. To enter edit mode, simply start typing when the cursor is in the text area of the screen.

We can switch between command mode and edit mode by pressing the Esc key. When we are in command mode, we will see a list of available commands at the bottom of the screen. We can enter a command by typing the command name followed by any required arguments, and then press Enter.

Some of the commands are:

- i. Ctrl-G: Display the help menu, which shows all available commands.

- ii. Ctrl-O: Save the current file.
- iii. Ctrl-X: Exit Nano.
- iv. Ctrl-K: Delete the current line.
- v. Alt-D: Delete the current word.

A screenshot of a terminal window titled "yunishabasnet — ssh 19706@52.43.162.83 -p 1022 — 80x24". The title bar also shows "GNU nano 4.8", "new", and "Modified". The main area of the terminal is black, indicating an empty buffer. At the bottom, there is a command-line interface with various keyboard shortcuts:

```
^G Get Help  ^O Write Out  ^W Where Is  ^K Cut Text  ^J Justify  ^C Cur Pos
^X Exit      ^R Read File  ^\ Replace   ^U Paste Text^T To Spell  ^_ Go To Line
```

A screenshot of a terminal window titled "yunishabasnet — ssh 19706@52.43.162.83 -p 1022 — 80x24". The title bar also shows "GNU nano 4.8", "new", and "Modified". The main area of the terminal contains a list of words, each preceded by a small arrow symbol (^) and followed by a space. The list includes: apple, buck, cAt, dog, elephant, fish, goAt, hen, ice-cream, jug, kAte, lion, man, nose, ovAl, pen, sAt, tunk, umbrella, vest, wAtch. Below the list, a message "[ Read 20 lines ]" is displayed. At the bottom, there is a command-line interface with various keyboard shortcuts:

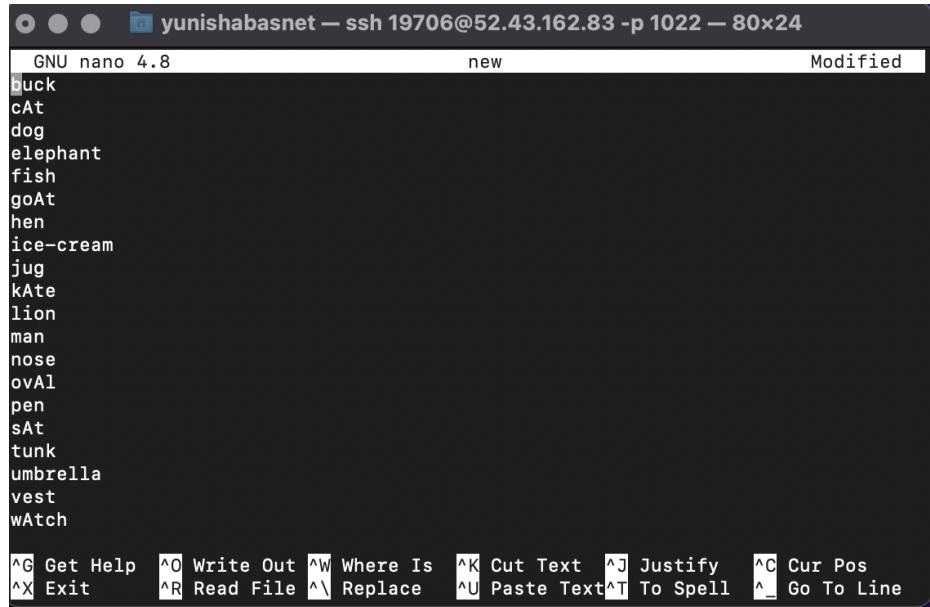
```
[ Read 20 lines ]
^G Get Help  ^O Write Out  ^W Where Is  ^K Cut Text  ^J Justify  ^C Cur Pos
^X Exit      ^R Read File  ^\ Replace   ^U Paste Text^T To Spell  ^_ Go To Line
```

- How do you delete a whole line here? How about deleting a word?  
 ⇒ To delete a whole line in Nano, we can use the “Ctrl-K” command.



```
GNU nano 4.8 new
apple
buck
cAt
dog
elephant
fish
goAt
hen
ice-cream
jug
kAte
lion
man
nose
ovAl
pen
sAt
tunk
umbrella
vest
[ Read 22 lines ]
^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify ^C Cur Pos
^X Exit ^R Read File ^\ Replace ^U Paste Text ^T To Spell ^_ Go To Line
```

We can place the cursor anywhere on the line we want to delete and press Ctrl-K. The entire line will be deleted.

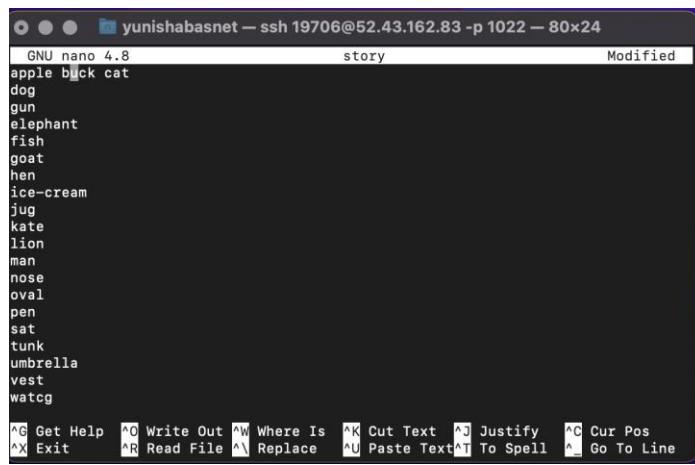


GNU nano 4.8 new Modified

```
buck
cAt
dog
elephant
fish
goAt
hen
ice-cream
jug
kAte
lion
man
nose
ovAl
pen
sAt
tunk
umbrella
vest
wAtch
```

^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify ^C Cur Pos  
^X Exit ^R Read File ^\ Replace ^U Paste Text ^T To Spell ^\_ Go To Line

- ⇒ To delete a word we can use the Option + Delete key combination. First, move the cursor to the beginning of the word you want to delete, and then press both the Option and Delete keys at the same time. This will delete the entire word to the left of the cursor.



GNU nano 4.8 story Modified

```
apple black cat
dog
gun
elephant
fish
goat
hen
ice-cream
jug
kate
lion
man
nose
oval
pen
sat
tunk
umbrella
vest
watcg
```

^G Get Help ^O Write Out ^W Where Is ^K Cut Text ^J Justify ^C Cur Pos  
^X Exit ^R Read File ^\ Replace ^U Paste Text ^T To Spell ^\_ Go To Line

```
GNU nano 4.8                                         story                                         Modified
apple|cat
dog
gun
elephant
fish
goat
hen
ice-cream
jug
kate
lion
man
nose
oval
pen
sat
tunk
umbrella
vest
watcg

^G Get Help  ^O Write Out  ^W Where Is  ^K Cut Text  ^J Justify  ^C Cur Pos
^X Exit      ^R Read File  ^\ Replace   ^U Paste Text  ^T To Spell  ^_ Go To Line
```

- How do you replace a character?
  - ⇒ We need to move the cursor to the character we want to replace and press **Ctrl-\** to enter the replace mode. Type the new character we want to replace it with and press Enter to replace the character and exit the replace mode.

```
● ● ● yunishabasnet — ssh 19706@52.43.162.83 -p 1022 — 80x24
GNU nano 4.8                               new
apple buck cAt
dog
elephant
fish
goAt
hen
ice-cream
jug
kAte
lion
man
nose
oVAl
pen
sAt
tunk
umbrella
vest
wAtch

Search (to replace): a
^G Get Help      M-C Case Sens      M-B Backwards      ^P Older
^C Cancel        M-R Regexp        ^R No Replace      ^N Newer
```

```
● ● ● yunishabasnet — ssh 19706@52.43.162.83 -p 1022 — 80x24
GNU nano 4.8                               new
apple buck cAt
dog
elephant
fish
goAt
hen
ice-cream
jug
kAte
lion
man
nose
oVAl
pen
sAt
tunk
umbrella
vest
wAtch

Replace with: y
^G Get Help      ^P Older
^C Cancel        ^N Newer
```



A screenshot of the GNU nano 4.8 text editor. The window title is "yunishabasnet — ssh 19706@52.43.162.83 -p 1022 — 80x24". The status bar at the top shows "new" and "Modified". The main text area contains a list of words: apple, buck, cyt, dog, elephnyt, fish, goyt, hen, ice-creym, jug, kyte, lion, myn, nose, ovyl, pen, syt, tunk, umbrelly, vest, wytch. Below the text area, a message "[ Replaced 11 occurrences ]" is displayed. At the bottom, there is a menu bar with the following options: ^G Get Help, ^O Write Out, ^W Where Is, ^K Cut Text, ^J Justify, ^C Cur Pos, ^X Exit, ^R Read File, ^\ Replace, ^U Paste Text, ^T To Spell, ^\_ Go To Line.

- How do you insert a character?

⇒ To insert a character in Nano, move the cursor to the location where we want to insert the character and start typing. The character will be inserted at the cursor position, pushing any existing characters to the right. If we want to insert a character at the beginning of a line, move the cursor to the start of the line and start typing. If we want to insert a character in the middle of a line, move the cursor to the desired location and start typing.

## Before inserting:

```
● ● ●  yunishabasnet — ssh 19706@52.43.162.83 -p 1022 — 80x24
GNU nano 4.8                               new                               Modified
apple buck cyt
dog
elephant
fish
goyt
hen
ice-creym
jug
kyte
lion
myn
nose
ovyl
pen
syt
tunk
umbrella
vest
wytch

[ Replaced 11 occurrences ]
^G Get Help  ^O Write Out  ^W Where Is  ^K Cut Text  ^J Justify  ^C Cur Pos
^X Exit      ^R Read File  ^\ Replace   ^U Paste Text^T To Spell  ^_ Go To Line
```

## After inserting

```
● ● ●  yunishabasnet — ssh 19706@52.43.162.83 -p 1022 — 80x24
GNU nano 4.8                               new                               Modified
apple buck cyt
dog
elephant
fish
goyt
ssss hen
ice-creym
jug
kyte
lion
myn
nose
ovyl
pen
syt
tunk
umbrella
vest
wytch

[ Replaced 11 occurrences ]
^G Get Help  ^O Write Out  ^W Where Is  ^K Cut Text  ^J Justify  ^C Cur Pos
^X Exit      ^R Read File  ^\ Replace   ^U Paste Text^T To Spell  ^_ Go To Line
```

Question no.3

## Use the grep command (or egrep or fgrep) to

- grep out all lines with one or One
  - ⇒ to grep out all lines with "one" or "One" using the grep command, we can use the following syntax:  
grep -i "one" story

```
[19706@ip-172-26-2-101:~$ cat story
One day, Tom and Tim went to the top of the tower.
They saw a big T-shaped cloud in the sky.
Tom said, 'That's so cool!' and Tim agreed, saying, 'One of the best things I've seen.'
They spent the rest of the day exploring the town and trying to find an eight-lettered word to describe the scenery.
They saw many beautiful things, but none of the words seemed quite right. Eventually, they gave up and went home.
As they were leaving, they saw an old sign that said 'TOWER' in big, bold letters.
Tom and Tim smiled at each other, knowing that they had found their word after all."
[19706@ip-172-26-2-101:~$ grep -i "one" story
One day, Tom and Tim went to the top of the tower.
Tom said, 'That's so cool!' and Tim agreed, saying, 'One of the best things I've seen.'
They saw many beautiful things, but none of the words seemed quite right. Eventually, they gave up and went home.
[19706@ip-172-26-2-101:~$ ]
```

- grep out all WORDS starting with the letter t or T
  - ⇒ To grep out all words starting with the letter "t" or "T" using the grep command, we can use the following syntax:  
grep -i "\<[tT][a-z]\*\>" story

```
[19706@ip-172-26-2-101:~$ cat story
One day, Tom and Tim went to the top of the tower.
They saw a big T-shaped cloud in the sky.
Tom said, 'That's so cool!' and Tim agreed, saying, 'One of the best things I've seen.'
They spent the rest of the day exploring the town and trying to find an eight-lettered word to describe the scenery.
They saw many beautiful things, but none of the words seemed quite right. Eventually, they gave up and went home.
As they were leaving, they saw an old sign that said 'TOWER' in big, bold letters.
Tom and Tim smiled at each other, knowing that they had found their word after all."
[19706@ip-172-26-2-101:~$ grep -i "\<[tT][a-z]*\>" story
One day, Tom and Tim went to the top of the tower.
Tom said, 'That's so cool!' and Tim agreed, saying, 'One of the best things I've seen.'
They spent the rest of the day exploring the town and trying to find an eight-lettered word to describe the scenery.
They saw many beautiful things, but none of the words seemed quite right. Eventually, they gave up and went home.
As they were leaving, they saw an old sign that said 'TOWER' in big, bold letters.
Tom and Tim smiled at each other, knowing that they had found their word after all."
[19706@ip-172-26-2-101:~$ ]
```

- grep out all 8-lettered words

⇒ To grep out all 8-lettered words using the grep command, we can use the following syntax:

```
grep -E -i "\<[:alpha:]{8}\>" story
```

```
[19706@ip-172-26-2-101:~$ cat story
One day, Tom and Tim went to the top of the tower.
They saw a big T-shaped cloud in the sky.
Tom said, 'That's so cool!' and Tim agreed, saying, 'One of the best things I've seen.'
They spent the rest of the day exploring the town and trying to find an eight-lettered word to describe the scenery.
They saw many beautiful things, but none of the words seemed quite right. Eventually, they gave up and went home.
As they were leaving, they saw an old sign that said 'TOWER' in big, bold letters.
Tom and Tim smiled at each other, knowing that they had found their word after all."
[19706@ip-172-26-2-101:~$ grep -E -i "\<[:alpha:]{8}\>" story
They spent the rest of the day exploring the town and trying to find an eight-lettered word to describe the scenery.
19706@ip-172-26-2-101:~$ ]
```

- grep out all lines with words with first letter being uppercase. For example, Little

⇒ To grep out all lines with words that have their first letter capitalized using the grep command, we can use the following syntax:

```
grep -E "\<[:upper:][[:alpha:]]*\>" story
```

```
[19706@ip-172-26-2-101:~$ cat story
One day, Tom and Tim went to the top of the tower.
They saw a big T-shaped cloud in the sky.
Tom said, 'That's so cool!' and Tim agreed, saying, 'One of the best things I've seen.'
They spent the rest of the day exploring the town and trying to find an eight-lettered word to describe the scenery.
They saw many beautiful things, but none of the words seemed quite right. Eventually, they gave up and went home.
As they were leaving, they saw an old sign that said 'TOWER' in big, bold letters.
Tom and Tim smiled at each other, knowing that they had found their word after all."
[19706@ip-172-26-2-101:~$ grep -E "\<[:upper:][[:alpha:]]*\>" story
One day, Tom and Tim went to the top of the tower.
They saw a big T-shaped cloud in the sky.
Tom said, 'That's so cool!' and Tim agreed, saying, 'One of the best things I've seen.'
They spent the rest of the day exploring the town and trying to find an eight-lettered word to describe the scenery.
They saw many beautiful things, but none of the words seemed quite right. Eventually, they gave up and went home.
As they were leaving, they saw an old sign that said 'TOWER' in big, bold letters.
Tom and Tim smiled at each other, knowing that they had found their word after all."
19706@ip-172-26-2-101:~$ ]
```

## Question no.4

Go to this website and finish all the steps in Tutorial Six. This tutorial talks about these commands: du, df, gzip etc

⇒ Answer:

a) Quota: It is used to display disk usage and limits for a user or group on a file system.

```
19706@ip-172-26-2-101:~$ quota -v 19706
Command 'quota' not found, but can be installed with:
apt install quota
Please ask your administrator.

19706@ip-172-26-2-101:~$ 
```

b) df: It reports on the space left on the file system

```
19706@ip-172-26-2-101:~$ df
Filesystem      1K-blocks    Used Available Use% Mounted on
/dev/root        40593612  2960512   37616716   8% /
devtmpfs          496940       0   496940   0% /dev
tmpfs            501052       0   501052   0% /dev/shm
tmpfs            100212     864   99348   1% /run
tmpfs             5120       0    5120   0% /run/lock
tmpfs            501052       0   501052   0% /sys/fs/cgroup
/dev/loop3         28800    28800       0 100% /snap/amazon-ssm-agent/2012
/dev/loop5        119552   119552       0 100% /snap/core/14447
/dev/loop6         64896    64896       0 100% /snap/core20/1778
/dev/loop7        25088    25088       0 100% /snap/amazon-ssm-agent/6312
/dev/loop8        147712   147712       0 100% /snap/lxd/24323
/dev/loop0         56960    56960       0 100% /snap/core18/2679
/dev/loop1         64896    64896       0 100% /snap/core20/1822
/dev/loop9        119680   119680       0 100% /snap/core/14784
/dev/loop10        56960    56960       0 100% /snap/core18/2697
/dev/loop4        145792   145792       0 100% /snap/lxd/24483
19706@ip-172-26-2-101:~$ 
```

c) du: It outputs the number of kilobytes used by each subdirectory.

```
[19706@ip-172-26-2-101:~$ du
4          ./B
4          ./C1
4          ./B2
4          ./cache
4          ./dir2
4          ./A
8          ./local/share/nano
12         ./local/share
16         ./local
4          ./C
4          ./Dir3
4          ./Dir2
4          ./B1
4          ./Dir1
4          ./D/ABCD
8          ./D
840        .
19706@ip-172-26-2-101:~$ ]
```

d) Gzip: It reduces the size of a file, thus freeing valuable disk space

```
[19706@ip-172-26-2-101:~$ ls -l hw
-rw-r--r-- 1 19706 cs230 236 Feb 19 10:32 hw
[19706@ip-172-26-2-101:~$ gzip hw
[19706@ip-172-26-2-101:~$ ls -l hw.gz
-rw-r--r-- 1 19706 cs230 171 Feb 19 10:32 hw.gz
19706@ip-172-26-2-101:~$ ]
```

## e) zcat: It will read gzipped files without needing to uncompress them first.

```
19706@ip-172-26-2-101:~$ zcat story.gz
One day, Tom and Tim went to the top of the tower.
They saw a big T-shaped cloud in the sky.
Tom said, 'That's so cool!' and Tim agreed, saying, 'One of the best things I've seen.'
They spent the rest of the day exploring the town and trying to find an eight-lettered word to
describe the scenery.
They saw many beautiful things, but none of the words seemed quite right. Eventually, they gave up and went home.
As they were leaving, they saw an old sign that said 'TOWER' in big, bold letters.
Tom and Tim smiled at each other, knowing that they had found their word after all."
19706@ip-172-26-2-101:~$
```

## f) File: It classifies the named files according to the type of data they contain, for example, ASCII (text), pictures, compressed data, etc.

```
19706@ip-172-26-2-101:~$ file *
A: directory
B: directory
B1: directory
B2: directory
C: directory
C1: directory
D: directory
Dir1: directory
Dir2: directory
Dir3: directory
a: empty
b: empty
bank_report: ASCII text
biglist: ASCII text
c: empty
col1: ASCII text, with very long lines
col1_cut: ASCII text, with very long lines
col2: ASCII text, with very long lines
col2_cut: ASCII text, with very long lines
col_combined: ASCII text, with very long lines
dir2: directory
example: ASCII text
file4: empty
file5: empty
file6: empty
file7: empty
file8: empty
file9: empty
hw.gz: gzip compressed data, was "hw", last modified: Sun Feb 19 18:32:53 2023, from
       Unix, original size modulo 2^32 236
linux.txt: ASCII text
ls.help: UTF-8 Unicode text
myfile.txt: ASCII text
new: ASCII text
now: ASCII text
report: ASCII text
report.sort: ASCII text
ridinghood.txt: ASCII text, with very long lines
story.gz: gzip compressed data, was "story", last modified: Sat Feb 25 00:37:14 2023, f
       rom Unix, original size modulo 2^32 581
19706@ip-172-26-2-101:~$
```

g) Diff: This command compares the contents of two files and displays the differences.

```
[19706@ip-172-26-2-101:~$ diff new now
1,20c1,9
< apple buck cAt
< dog
< elephant
< fish
< goAt
< hen
< ice-cream
< jug
< kAte
< lion
< man
< nose
< ovAl
< pen
< sAt
< tunk
< umbrella
< vest
< wAtch
<
-----
>      January 2015
> Su Mo Tu We Th Fr Sa
>           1  2  3
> 4 5 6 7 8 9 10
> 11 12 13 14 15 16 17
> 18 19 20 21 22 23 24
> 25 26 27 28 29 30 31
>
> Sun Jan 29 16:24:05 PST 2023
19706@ip-172-26-2-101:~$ ]
```

h) Find: It searches through the directories for files and directories with a given name, date, size, or any other attribute you care to specify.

```
19706@ip-172-26-2-101:~$ find . -name "*example*"
./example
19706@ip-172-26-2-101:~$ ]
```

i) History: it shows the ordered list of all the commands that you have entered. Each command is given a number according to the order in it was entered.

```
[19706@ip-172-26-2-101:~$ history
 83 chown 19706 file` 
 84 chown 19706 file1
 85 ls -l file1
 86 clear
 87 echo -e "col1 col2 r1\ncol5 col6 r2\ncol3 col4 r3 " >> new.txt
 88 cat new.txt
 89 echo -e "Hello\nlinux\nProgrammers paradise" >> linux.txt
 90 cat linux.txt
 91 cut -f1 -d' ' new.txt
 92 cut -f3 -d' ' new.txt
 93 paste hello new.txt
 94 paste -s hello new.txt
 95 clear
 96 chmod a+rwx file1
 97 stat file1
 98 chmod a-rwx file1
 99 stat file1
100 chmod u+rwx file1
101 stat file1
102 chmod -R 644 ~/chmod_dir
103 mkdir chmod_dir
104 chmod -R 644 ~/chmod_dir
105 stat chmod_dir
106 mkdir dir2
107 chown root:staff -R ~/dir2
108 chown --from=webminal:webminal root:staff -R ~/dir2
109 chgrp root file1
110 clear
111 ls -l file1
112 chgrp root file1
113 clear
114 ls -l file1
115 chgrp root file1
116 chgrp -hR root dir2
117 clear
118 PS1='\u@\h \W \s '
119 u
120 clear
121 PS1= ' \u@\h \W \s '
122 clear
123 PS1='\W [\u@\h]$ '
124 clear
125 ls list*
126 ls list *
127 ls * list
128 ls ? list
129 clear
130 ls ?list
131 ls ? list
132 ls ? list
133 clear
134 ls ? list
135 clear
136 ks
137 clear
138 ls
139 ls ?xample
140 ls ?ew
141 clear
142 ls ?ew
143 ls
144 touch -o
```