

## Lesson 2 File transfer and editing

### Assignment:

1. Read and work through *Unix Primer Plus* Chapter 5.
2. Work through the vi and editor modules in learn program. Note that the learn program on our system will give you the following error message:

***open: No such option -'set all' gives all option values.***

Ignore this message. It will not affect the working of the tutorial.

3. Compose and edit a file in the vi editor using all of the commands discussed in this class.
4. File transfer:

A. Mac Users: Use Netscape or Fetch to transfer a file from your Mac to cuccfa and from cuccfa to your Mac.

B. PC Users: Use Netscape or WS-FTP to transfer a file from your PC to cuccfa and from cuccfa to your PC.

### Summary of Commands:

Note: In this document different fonts have different meanings:

Times is used to explain commands.

Courier is used to indicate commands and command options.

*Courier italics are used to indicate command parameters, for example, filenames.*

**Courier bold is used to indicate commands that are not displayed.**

***Courier bold italics are used to indicate computer-generated output.***

Helvetica is used to indicate menu items.

### Netscape users:

To upload or download a text file from your mac to cuccfa using Netscape:  
<ftp://username@cuccfa.ccc.columbia.edu/>

### Mac users:

To upload a text file from your mac to cuccfa using Fetch:

1. Edit in word.
2. Save as **text only with line breaks**.
3. Open Fetch and establish a connection.
4. Double click to appropriate directory on cuccfa.
5. Double click **put** .
6. Double click to appropriate directory on Mac.
7. Double click on file that you wish to send.
8. In response to menu that appears, under **Format, Select Text**, Then click **OK**.

To download a text file from cuccfa to your mac using Fetch:

1. Open Fetch and establish a connection.
2. Double click to appropriate directory on cuccfa.
3. Double click **get**.
4. Scroll to appropriate directory on Mac.
5. Click **Save**.

### PC users:

File transfer using WS-FTP is similar to Fetch.

### Unix commands:

<code>pico a103.seq</code>	edits a103.seq with pico.
<code>pico command:</code>	
<code>^O</code>	saves file.
<code>^X</code>	exits pico and saves file.
<code>vi a103.seq</code>	edits a103.seq with vi. vi is case sensitive just like unix.
<code>ex editor module in vi commands:</code>	
<code>:</code>	enters ex editor mode.
<code>:esc</code>	returns to vi mode.
<code>:ls/a103/a103 ../</code>	on line 1, substitutes "a103" with "a103..".
<code>:w</code>	writes to file changes made since last write.
<code>:q</code>	quits vi.
<code>:wq</code>	writes to file changes made since last write and then quits.
<code>:q!</code>	quits without writing changes since the last write.
<code>:w newfilename</code>	writes to a new file.
<code>vi bdna.pdb</code>	edits bdna.pdb with vi.
<code>:3</code>	makes line 3 the active line.
<code>:\$</code>	makes the last line the active line.
<code>:num</code>	tells line # of current line.
<code>:3p</code>	displays (prints) line 3.
<code>:3,10p</code>	displays (prints) lines 3 through 10.
<code>:23s/H41 /HN41/</code>	on line 23 substitutes "H41 " with "HN41".
<code>:u</code>	undo previous command.
<code>:.s/H41 /HN41/</code>	on the current line, substitutes "H41 " with "HN41".
<code>:.s/H41/HN41/</code>	on current line, substitutes "H41 " with "HN41" and moves remainder of line one space to the right.
<code>:1,28s/A /a /</code>	on lines 1-28 substitutes "A " with "a ".
<code>:1,758s/H41 /HN41/</code>	on lines 1-758, substitutes "H41 " with "HN41 ".
<code>:1,\$s/H41 /HN41/</code>	on lines 1-last line, substitutes "H41 " with "HN41".
<code>:g/H41 /s//HN41/</code>	globally (on every line) wherever "H41 " occurs, substitutes with "HN41".
<code>:g/A /s//a /</code>	globally (on every line) wherever "A " occurs substitutes "a ". Only works for first occurrence of "A " on line.
<code>:g/A /s//a /g</code>	globally (on every line) wherever "A " occurs substitutes "a ", throughout the line.
<code>:g/C /s/H2' /H2*/</code>	on every line in which the text "C " occurs (all cytosine atoms) substitutes "H2' " with "H2* ".
<code>:.d</code>	deletes the current line.
<code>:1,10d</code>	deletes lines 1-10.
<code>:/H41/d</code>	deletes the next line containing 'H41'.
<code>:g/H41/d</code>	deletes all lines containing 'H41'.

```
vi tygerhead
  :.r tyger
  :1,5m$
  :$-4,$t0
```

edits tygerhead with vi.  
reads in the file named "tyger" at the current line.  
takes lines 1-5 and moves them to the last line.  
takes from 4 lines before the last line and  
copies (transmits) them to the line before the  
first line.

```
vi prologue
```

edits a new file called "prologue" with the vi editor.

```
vi commands:
```

there are two modes in vi, a command mode, in which commands are entered, and an insert mode, in which text is inserted.

```
a
esc
```

appends text after the cursor.  
terminates the appending of text.  
for example, typing :  
**a** This was a golden age, a time of high  
adventure...but nobody thought so.**esc**  
will put the following text into the editor:  
This was a golden age, a time of high  
adventure...but nobody thought so.

```
i
```

inserts text at the cursor, where the "i" is  
typed.  
for example, placing the cursor right after  
"adventure" in the above example and typing:  
**i**, of rich living and hard dying **esc**  
will yield:

```
o
```

This was a golden age, a time of high  
adventure, of rich living and hard  
dying...but nobody thought so.  
(lower case "o")  
starts new line after line cursor is on.  
for example, when the cursor is anywhere on  
the last line of the above text, and you type:  
**o** This was an era of extremes, a  
fascinating century of freaks, ... but  
nobody loved it.**esc**  
this will yield:  
This was a golden age, a time of high  
adventure, of rich living and hard  
dying...but nobody thought so.  
This was an era of extremes, a  
fascinating century of freaks, ... but  
nobody loved it.

<b>O</b>	(upper case "O") inserts the text before the line the cursor is on for example, in the above text, inserting the cursor on the line beginning "this was an era" and typing: <b>O</b> This was a future of fortune and robbery, pillege and plundar... but nobody admitted it. <b>esc</b> will yield: This was a golden age, a time of high adventure, of rich living and hard dying...but nobody thought so. This was a future of fortune and robbery, pillege and plundar... but nobody admitted it. This was an era of extremes, a fascinating century of freaks, ... but nobody loved it.
<b>x</b>	deletes the character immediately beneath the cursor.
<b>r</b>	replaces the character immediately beneath the cursor.
<b>5x</b>	deletes 5 characters starting with the cursor.
<b>R</b>	replaces text starting with the character beneath the cursor until 'esc' is typed.
<b>G</b>	puts the cursor on the last line.
<b>1G</b>	puts the cursor on the first line.
<b>5G</b>	puts the cursor on the fifth line.
<b>dd</b>	deletes the current line.
<b>5dd</b>	deletes 5 lines beginning with the current line.
<b>^f</b>	scrolls through the text forward a page at a time.
<b>^b</b>	scrolls through the text backwards a page at a time.
<b>^</b>	moves the cursor to the beginning of the current line ("^", not control key).
<b>\$</b>	moves the cursor to the end of the current line.
<b>/H41</b>	searches the text for the next occurrence of 'H41'.
<b>n</b>	searches the text for the next occurrence of 'H41' (following the command '/H41').
<b>N</b>	searches the text for the previous occurrence of 'H41' (following the command '/H41').
<b>?H41</b>	searches the text for the previous occurrence of 'H41'.
<b>n</b>	searches the text for the previous occurrence of 'H41' (following the command '?H41').
<b>N</b>	searches the text for the next occurrence of 'H41' (following the command '?H41').