ECS 30   vi Tutorial

For this tutorial you will first create and edit a file. The following conventions will be used:
Instructions will be in: this normal typeface.
Things which you will type will be in: **this bold typeface.**
Things which will appear on the UNIX screen will be in: *this italics typeface*.

Part 1: Creating and Editing a Poem

1) Starting vi
   You start vi by typing vi [filename] at the command prompt. The filename is optional. Type: **vi**

2) Text Entry Mode
   When you start vi, you are in Command Mode. To enter text in the vi buffer you must change to Text Entry Mode
   (also called Insert Mode). You change to Text Entry mode by pressing one of three keys: 1) i = text is inserted in
   front of the cursor; 2) a = text is added after the cursor; and 3) R = text is replaced starting with the character under
   the cursor. Press **a** and enter the following poem:
   I always remember standing in the rains,
   On a cold and damp september,
   Brown Autumn leaves were falling softly to the ground,
   Like the dreams of a life they slide away.

3) Command Mode
   Command Mode is used for all vi operations other than text entry. To change to Command Mode press the **ESC**
   key. If you are unsure whether you are in Command Mode, you may always press the ESC key again without any
   harm other than an annoying beep.

4) Cursor Movement
   To move around in your file you can use the following keys: k = up one line; j = down one line; l = right one
   character; h = left one character; w = move forward one word; ^ = start of line; $ = end of line; Ctrl-f = down one
   screen; Ctrl-b = up one screen; and the cursor keys work as expected. You may also move to a specific line number
   by typing ":nn" where nn is the line number to which you wish to move.
   Move to the fourth line by typing **:4**
   Now position the cursor at the beginning of the line enter Text Entry Mode by pressing **i**
   Type in the word **Just** and then press **ESC** to return to Command Mode.

5) Deleting Text
   There are four ways to delete items in the vi buffer: 1) x = delete the character under the cursor; 2) dw = deletes
   from the cursor to the end of the word under the cursor; 3) [number]dd = delete the line under the cursor, or if you
   precede dd with a number it will delete that many lines starting with the line under the cursor; and 4) :<range>d =
   deletes the lines indicated in the range. We will describe the syntax of ranges shortly.
   Now delete the word "always" from the first line by:
           1) typing **:1** to move to the first line
           2) typing **w** to move forward one word;
           3) typing **dw** to delete the word "always".
   Now move the cursor over the "s" in "rains" on the first line and delete the "s" by typing **x**.
   While in command mode you will occasionally need to indicate a range of line numbers. There are two special
   symbols used in the range syntax: 1) $ = end of file; and 2) **.** = current line, inclusive. Ranges are indicated by typing
   first the beginning line number (or special symbol), second a comma, and finally the ending line number (or special
   symbol). For example, 3,5 is line numbers 3,4, and 5. 4,$ is from line 4 to the end of the file. **.** , 9 is from the
   current line to line number 9. There two commands to toggle the display of line numbers: 1) :set number, and 2) :set
   nonumber.
   Type **:set number** to display line numbers.
   To give you a few useless lines to delete do the following:
           1) move to line 3 by typing **:3**;
           2) change to Text Entry Mode by pressing **i**;

3) type each of the following letters followed by the enter key a b c d e f g h i j k. When done your screen should look like the following:

   1 *I remember standing in the rain,*
   2 *On a cold and damp september,*
   3 *a*
   4 *b*
   5 *c*
   6 *d*
   7 *e*
   8 *f*
   9 *g*
  10 *h*
  11 *i*
  12 *j*
  13 *k*
  14 *Brown Autumn leaves were falling softly to the ground,*
  15 *Just Like the dreams of a life they slide away.*
  16

Now move the cursor to line #4 and delete lines 4 and 5 by typing **2dd**

Now delete the new lines 6 through 8 by typing **:6,8d**

Now move to the line #6 which has an "i" on it and delete it and the next two lines by typing **:.,8d**

Move to the last useless line, line #5 which has an "e" on it and delete it and the two lines above it by typing **:3,.d**

You buffer should now just contain the original four lines of the poem. You can eliminate the display of line numbers by typing **:set nonumber**

6) Replacing Text

There are two main ways to replace text: 1) r = replace the character under the cursor; 2) R = enter text mode in overwrite mode.

Position the cursor over the "s" in "september" on the second line and type **r**, and then **S** to capitalize the month.

Position the cursor over "s" in "standing" on the first line and type **R**, then **walking**, and finally press the **ESC** key. Then type **x** to delete the extra "g".

Continue and replace "damp" with "dark", "slide" with "slip", and the "L" of "like" by "l". Here is the final version of the poem.

I remember walking in the rain,
On a cold and dark September,
Brown Autumn leaves were falling softly to the ground,
Just like the dreams of a life they slip away.

7) Pasting Text

There are three operations involved in pasting text: 1) **:<range>y** which yanks lines into the paste buffer; 2) :pu which inserts the contents of the paste buffer after the current line; and 3) :nnpu which inserts the contents of the paste buffer after line nn.

To copy the first two lines into the paste buffer and then paste them after the third line type **:1,2y** to yank the first two lines into the paste buffer.

Next type **:3pu** to paste them after line 3. The poem should now look like this:

I remember walking in the rain,
On a cold and dark September,
Brown Autumn leaves were falling softly to the ground,
I remember walking in the rain,
On a cold and dark September,
Just like the dreams of a life they slip away.

To restore the poem type **:4,5d** to delete lines 4 and 5.

8) Searching

To search for a pattern in vi you simply type /pattern. To find the next match press n. To find the previous match press N.

Position the cursor on the first line by typing **:1**.

Now search for the pattern "he" in the poem by typing **/he**

This should take you to the "h" in "the" on the first line.

Press **n**

The cursor should now be over the "h" in "the" on the third line.

Press **n** once more and the cursor should be over the "h" in the "the" on the last line.

Press **N** and the cursor should be back over the "h" of the "the" on the third line.

9) Search/Replace

To search and replace an old pattern with a new pattern you can type either 1) :<range>s/old_pattern/new_pattern/ to replace the first occurrence of old_pattern with new_pattern; or 2) :<range>s/old_pattern/new_pattern/g   to replace every occurrence of old_pattern with new_pattern.

To replace every occurrence of the substring "re" by "XXX" type **:1,$s/re/XXX/g**

The resulting poem is

I XXXmember walking in the rain,
On a cold and dark September,
Brown Autumn leaves weXXX falling softly to the ground,
Just like the dXXXams of a life they slip away.

To revert to the original type **:1,$s/XXX/re/g**

10) Adding your Name(s)

Create a new, empty line at the top of poem, and then insert the name(s) of the people doing this tutorial on the new first line.

11) Saving/Loading Files

There are two ways to use the :w command to write the buffer out to a file: 1) type :w <filename> to write the buffer to a file named filename; and 2) type :w   to write the buffer to the current filename. Save your buffer in a file called rain.txt by typing **:w rain.txt**

12) Quitting vi

There are four methods of quitting vi: 1) :q = quit vi if the work has been saved since its last change; 2) :q! = quit vi and discard unsaved work; 3) :wq = save the buffer and then quit vi; and 4) ZZ = save the buffer and then quit vi (note that this method doesn't need the preceding colon). Since you have just saved your buffer type **:q** to quit vi.

13) Handin rain.txt

Use the handin utility to submit rain.txt to the tutorial directory of the cs30 account.