タイトル
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The editor ef

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1. Introduction

Ef is a text editor which is useful for beginners who work on our computer system SDC-68K\(^1\) with Unix\(^2\) as operating system. In the development of ef, we used the programming language C, and hence, ef can be used to other Unix system with a little modification. The main feature are as follows:

(a) Ef is a screen-oriented editor and has three modes called text-, scratchpad- and command-mode respectively.
(b) This looks like the BASIC editor or Wordmaster\(^3\) and becomes the main editing tool for beginners.
(c) With a little modification, we can develop the editor like this for MS-DOS\(^4\) or CP/M\(^5\), because the language C is supported on these systems.

Generally there are two useful editors ed and vi in Unix, but it seems that there is no editor like the BASIC one. This is the main motive to develop ef. The name ef is an abbreviation of “elementary filer”, and the source program is a set of many small modules which are written by using the language C.

The references \[1\] and \[2\] are very useful for our work, because \[1\] explains Wordmaster, CP/M and other editors, and \[2\] the general method to construct an editor. The reference \[3\] is a useful book on the general theory of editors.

2. Text-mode

When ef is first started, it becomes in the text-mode. Thus, typing a letter from keyboard, then same letter is appeared in the screen of terminal and entered to the buffer. The size\(^6\) of buffer is 80 (characters/line) \(\times\) 900 (lines) and the set

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** Nippon Computer Systems Corporation, Tokyo, Japan.
\(^1\) This is the Production by Software Development Co. Ltd.
\(^2\) Unix is the trademark of AT & T and developed by Bell Laboratories.
\(^3\) Wordmaster is the trade mark of Micropro Inc, Co.
\(^4\) MS-DOS is the mark of Microsoft Inc.
\(^5\) CP/M is the trade mark of Digital Research Inc.
\(^6\) This size is variable and can be set easily in the source program of ef.
of data in this buffer is stored into a temporary file if the buffer is filled.

The Unix command "stty -icanon eof 'a'" is used to input a character typed. And there are twenty-six commands in the text-mode. These are obtained by typing letters with control-key. For example, B with control-key means inserting of one-line over the cursor. These commands are divided as follows:

1) twelve to move the cursor,
2) four to scroll the screen,
3) six to delete a letter, a word, or a line etc,
4) two to insert a space or an empty line,
5) two to enter into the scratchpad-mode or the insert-mode.

And there exist three other commands which are given by Delete-, Escape-, and Newline-key with the ordinary meaning. That is, Delete-key works for deleting a letter in the left-side of the cursor, Escape-key for changing to the command-mode, and Newline-key for entering the next line.

3. Scratchpad-mode

We use this mode for block-editing, that is, we can set or reset the mark on any single-line, insert or erase a block, and so on. Here, the block is an assembly of lines from the marked-line to the line indicated by cursor.

There are nine commands obtained by typing suitable letters and the assembly of these commands is into two groups:

1) set and reset of a mark,
2) copy and transport between the block and the special buffer.

For example, m means to mark a line indicated by cursor, r to reset a mark, 1 to copy a block to the special buffer with the size of 80 (characters/line) × 100 (lines).

4. Command-mode

There are fourteen commands of which the general form is represented by an alphabetical small letter, unsigned, signed number, or the letter "#".

These are divided as follows:

1) to move the cursor,
2) to insert or find a given character class,
3) to complete editing, quit or return to the screen-mode.

Thus, ef is easier and more elementary than vi, but has not so many commands as ed or vi. There are a few points to be improved in our ef as follows.

1) The command for "undo" does not exist.
2) We do not use "termcap" in the source program of ef, and hence, using
another terminal, it needs to change a part for control commands.

3) In ed or vi, the letter "!'" means "temporary escape", but ef has no such command.

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References