

```
1: // $Id: catbyline.c,v 1.5 2014-01-28 17:59:24-08 - - $
2:
3: //
4: // NAME
5: //     catbyline - example of simple cat to display files
6: //
7: // SYNOPSIS
8: //     catbyline [filename...]
9: //
10: // DESCRIPTION
11: //     Uses fgets to read lines from files and prints to stdout.
12: //     If no filenames are specified, reads stdin.
13: //     Does not consider whether input buffer is too short.
14: //
15:
16: #include <errno.h>
17: #include <libgen.h>
18: #include <stdio.h>
19: #include <stdlib.h>
20: #include <string.h>
21:
22: char *program_name = NULL;
23: int exit_status = EXIT_SUCCESS;
24: #define STDIN_NAME "-"
25:
26: void catbyline (FILE *input, char *filename) {
27:     char buffer[1024];
28:     printf ("FILE %s:\n", filename);
29:     for (int linenr = 1;; ++linenr) {
30:         char *buf = fgets (buffer, sizeof buffer, input);
31:         if (buf == NULL) break;
32:         printf ("%6d: %s", linenr, buf);
33:     }
34: }
35:
```

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36:
37: int main (int argc, char **argv) {
38:     program_name = basename (argv[0]);
39:     if (argc == 1) {
40:         catbyline (stdin, STDIN_NAME);
41:     }else {
42:         for (int argi = 1; argi < argc; ++argi) {
43:             char *filename = argv[argi];
44:             if (strcmp (filename, STDIN_NAME) == 0) {
45:                 catbyline (stdin, STDIN_NAME);
46:             }else {
47:                 FILE *input = fopen (filename, "r");
48:                 if (input != NULL) {
49:                     catbyline (input, filename);
50:                     fclose (input);
51:                 }else {
52:                     exit_status = EXIT_FAILURE;
53:                     fflush (NULL);
54:                     fprintf (stderr, "%s: %s: %s\n", program_name,
55:                             filename, strerror (errno));
56:                     fflush (NULL);
57:                 }
58:             }
59:         }
60:     }
61:     return exit_status;
62: }
63:
64: //TEST// cal 9 1752 >cal.1752.09; cal 4 2013 >cal.2013.04
65: //TEST// catbyline cal.1752.09 cal.2013.04 >catbyline.out
66: //TEST// mkpspdf catbyline.ps catbyline.c* catbyline.out*
67:
```

[illegible]

```
1: FILE cal.1752.09:
2: 1:      September 1752
3: 2: Su Mo Tu We Th Fr Sa
4: 3:      1  2 14 15 16
5: 4: 17 18 19 20 21 22 23
6: 5: 24 25 26 27 28 29 30
7: 6:
8: 7:
9: 8:
10: FILE cal.2013.04:
11: 1:      April 2013
12: 2: Su Mo Tu We Th Fr Sa
13: 3:      1  2  3  4  5  6
14: 4:  7  8  9 10 11 12 13
15: 5: 14 15 16 17 18 19 20
16: 6: 21 22 23 24 25 26 27
17: 7: 28 29 30
18: 8:
```