

lab10

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1 // EE231002 Lab10. Word Processing
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4
5 #include <stdio.h>           // Standard input and output library
6 #include <string.h>         // Declared strlen()
7
8 #define PN 1000             // Max num of char for a paragraph
9 #define PW 80               // Page width for the three title lines
10 #define LN 52              // Num of lines for output buffer
11 #define CW 38              // Column width
12
13 int main(void)              // Called at program startup
14 {
15     int i, j;               // Indices for looping
16     char para[PN + 1];      // Input paragraph read in as single string
17     char outBuffer[LN + 1][CW + 1]; // For breaking the paragraph into lines
18     char *copied;           // Pos of char been copied into outBuffer
19     int line;               // Num of lines the paragraph broken into
20
21     for (i = 0; i < 3; i++) { // There are three title lines
22         for (j = 0; j < PW && (para[j] = getchar()) != '\n'; j++) ; // Read in
23         while (j <= PW)
24             para[j++] = '\0'; // Fill all the rest with NULL
25         for (j = (PW - strlen(para)) / 2; j > 0; j--)
26             putchar(' '); // Make title be printed at the center
27         puts(para); // Print title out
28     }
29     while ((para[0] = getchar()) != EOF) { // Test against EOF to stop program
30         if (para[0] == '\n') { // If this line in the file has no content
31             putchar('\n'); // Print new line
32         } else { // Else, read the paragraph into para
33             for (i = 1; i <= PN && (para[i] = getchar()) != '\n'; i++) ; // Read
34             while (++i <= PN)
35                 para[i] = '\0'; // Fill all the rest with NULL
36             copied = para; // Re-point
37             for (line = 0; line < LN && *copied != '\0' // To break para
38                 && *copied != '\n'; line++) {
39                 for (i = 0; i <= CW && copied + i <= para + PN; i++)
40                     outBuffer[line][i] = *(copied + i); // Copy part of para
41                 for ( ; i >= 0 && outBuffer[line][i] != ' ' // Find last space
42                     && outBuffer[line][i] != '\n'; i-- ) ;
43                 outBuffer[line][i] = '\0'; // Replace the space with NULL
44                 copied += ++i; // Update pos of copied char
45             }
46             outBuffer[line][0] = '\0'; // Mark the ending of paragraph
47             line = (line + 1) / 2; // For printing two-column format
48             for (i = 0; i < line; i++) { // To print each line out
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49         for (j = CW - strlen(outBuffer[i]); j > 0; j--)
50             putchar(' ');           // Make left column right-aligned
51         printf(outBuffer[i]);       // Print left column out
52         printf("%s", outBuffer[i]); // Print left column out
53         printf(" | ");              // Print vertical line between
54         puts(outBuffer[i + line]);  // Print right column out
55     }
56 }
57 return 0;                          // Normal program termination
58 }
```

[Return] is provided.

[Coding] lab10.c spelling errors: Pos(1), pos(1)

Score: 90