

process.c

```
1  /*
2  Soham M. Desai
3  Cmdr. Schenk
4  11/6/24
5  Process
6  */
7
8  // Some libraries
9  #include <stdio.h>
10 #include <stdlib.h>
11 #include <ctype.h>
12
13
14 // Entry point
15 int main(int argc, char *argv[]) {
16
17     // Set vars
18     char target_char = argv[1][0], *file_name;
19     int word_count = 0, hit_target = 0, inside_word = 0, ch;
20
21     // Check for correct number of arguments
22     if (argc != 3) {
23         printf("Usage: ./process [letter] [filename]\n");
24         return 1;
25     }
26
27     // Check if the first argument is a single alphabetic character
28     if (argv[1][1] != '\0' || !isalpha(argv[1][0])) {
29         printf("Usage: ./process [letter] [filename]\n");
30         return 1;
31     }
32
33     // Get target character and file name into vars
34     target_char = argv[1][0];
35     file_name = argv[2];
36
37     // Open the file, check if it does not exist and if so send error
38     FILE *file = fopen(file_name, "r");
39     if (file == NULL) {
40         perror("Error opening file");
41         return 1;
42     }
43
44     // fgetc(file) gets the character and stores to ch.
45     // While runs till we are at end of file
46     while ((ch = fgetc(file)) != EOF) {
47
48         // If it is our target, get it in
```

```
49     if (ch == target_char) {
50         hit_target++;
51     }
52
53     // Check if it is a " " or punctuation
54     if (isspace(ch) || ispunct(ch)) {
55         if (inside_word) {
56             word_count++;
57             inside_word = 0;
58         }
59     }
60
61     // We're inside a word
62     else {
63         inside_word = 1;
64     }
65 }
66
67 // Close
68 fclose(file);
69
70 // Provide with info
71 printf("There are %d words in this file, and the letter '%c' occurs %d times.\n",
word_count, target_char, hit_target);
72
73 // Exit with 0
74 return 0;
75 }
76
```