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1 #include <string.h>
2 #include <stdio.h>
3 #include <stdint.h>
4
5 int8_t is_ascii(char s[]) {
6     for(int i = 0; s[i] != 0; i += 1) {
7         if(s[i] < 0 || s[i] > 127) {
8             return 0;
9         }
10    }
11    return 1;
12 }
13
14 // Assuming c is the start byte of a utf8 code point,
15 // return the number of bytes for that code point
16 uint8_t width_from_start_byte(char c) {
17     if((c & 0b10000000) == 0) { return 1; }
18     if((c & 0b11000000) == 0b11000000) { return 2; }
19     if((c & 0b11100000) == 0b11100000) { return 3; }
20     if((c & 0b11110000) == 0b11110000) { return 4; }
21     return 0;
22 }
23
24 // Count the number of _code points_ in the string
25 int32_t utf8_len(char s[]) {
26
27
28
29
30
31
32
33
34
35
36
37
38 }
39
40 int main() {
41     char input[100];
42     fgets(input, 100, stdin);
43     printf("%s\n", input);
44     printf("Is ASCII: %d\n", is_ascii(input));
45     printf("Width of first byte: %d\n", width_from_start_byte(input[0]));
46
47
48 }

```

```

$ gcc utf8analyzer.c -o utf8analyzer
$ ./utf8analyzer
éclaire
éclaire

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Is ASCII: 0
Width of first byte: 2

```