The program reads zero or more characters from standard input. When the end of the input stream is found, the program displays the character count.

```
.global main
.main:
    push {lr}
    mov r4, #0          @ Initialize character count
    loop: bl getchar    @ Read one character (returned in r0)
    cmp r0, #-1        @ Compare return value to EOF
    beq end            @ When EOF found, exit loop
    add r4, r4, #1      @ Increment character count
    b loop             @ Jump to top of loop
    end: ldr r0, =fmt   @ First arg -- address of format string
                     @ Second arg -- character count
                     @ Print the number of characters
    pop {lr}
    bx lr

fmt: .asciz "\nCharacters = %d\n"
```

Here is a simple test on two lines.

```
^D
Characters = 36
```

```
<4 lemon:~/Examples > a.out < example17.s
Characters = 1026
```

```
<5 lemon:~/Examples > wc -c example17.s
1026 example17.s
```