```asm
1:  .data
2:  message1: .asciiz "Insert an positive integer number: "
3:  message2: .asciiz "Factorial = "
4:
5:  .text
6:  # Print user message
7:  li $v0, 4
8:  la $a0, message1
9:  syscall
10:
11:     # Read input number
12:     li $v0, 5
13:     syscall
14:     move $s1, $v0
15:
16:     # Print result message
17:     li $v0, 4
18:     la $a0, message2
19:     syscall
20:
21:     # Run function
22:     move $a0, $s1
23:     jal factorial
24:
25:     # Print result
26:     move $a0, $v0
27:     li $v0, 1
28:     syscall
29:
30:     # End program
31:     li $v0, 10
32:     syscall
33:
34:     # Function instructions
35:     factorial:
36:         addi $s0, $zero, 1
37:         while:
38:             bgt $a0, 1, is_valid
39:                 j end_while
40:             is_valid:
41:             mul $s0, $s0, $a0
42:             subi $a0, $a0, 1
43:             j while
44:         end_while:
45:         move $v0, $s0
46:         jr $ra
```