```
1| #include "../include/bit_counter.h"
 2
 3
   int bit_counter(void) {
 4
        int counter = 0;
 5
        int n_new = 0;
 6
        int n_old = 1;
 7
        while (1)
 8
 9
            n_new = 2 * n_old;
10
            counter++;
            if (n_new == n_old)
11
12
13
                counter--;
14
                return counter;
15
16
            n\_old = n\_new;
17
        }
18 }
```