

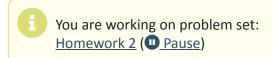




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bits to flip >





Language/Type: C bitwise operators bit

manipulation

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2018/02/03)

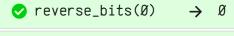
Write a function named **reverse_bits** that reverses the order of the bits in a 1-byte value of type unsigned char. A common programming question in job interviews is, "reverse the letters (or words) in a string." But for a systems programming interview, you might get the question, "reverse the bits in a byte." For example, the call of reverse_bits(187) should return 221. Your solution does not have to be in-place, and can use variables to hold temporary variables.

```
1 // reverse_bits by Brandon Kmiec. Submitted for CSC152 September 15, 2024
2 // function to reverse the order of bits in a 1-byte value of type unsigned char
3
4 unsigned char reverse_bits(unsigned char num) {
5
       unsigned char ret = \emptyset;
6
7
       for(int i = \emptyset; i < 8; i++) {
8
           if((num & (1 << i)) > Ø) {
9
               ret = ret | (1 << (7 - i));
           } // end if
100
       } // end for
11
12
13
       return ret:
14 } // end reverse_bits
```

Function: Write a C function as described, not a complete program.



⊘ You passed 6 of 6 tests.



 \oslash reverse_bits(42) \rightarrow 84

 \checkmark reverse_bits(187) \rightarrow 221

 \checkmark reverse_bits(35) \rightarrow 196

 \checkmark reverse_bits(218) \rightarrow 91

 \oslash reverse_bits(255) \rightarrow 255

Testing began at 2024/09/14 19:16 (PDT) and ran for 411 ms.



Need help?

Stuck on an exercise? Contact your TA or instructor.

If something seems wrong with our site, please contact us.

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