

Homework 2

Assessment overview

Total points: 5/100
Score: 5%

Question

Value: 5
History: 5
Awarded points: 5/5

Report an error in this question

Previous question

Next question

Attached files

No attached files
Attach a file
Attach text

HW2.1. Bitwise Operations

C provides bitwise commands for AND(&), OR(|), XOR(^), and NOT(~).
Let x be a single-bit input (i.e. can be either 0 or 1). Fill in the following blanks with either 0, 1, x, or ~x. Putting x means that x is the output (no change), and ~x means that the opposite of x is the output.
Tip: Review AND, OR, XOR logic. What is the corresponding output for different input combinations using these logic?

Q1.1:

x&1 =

?

Q1.2:

x&0 =

?

Q1.3:

x | 1 =

?

Q1.4:

x | 0 =

?

Q1.5:

x^1 =

?

Q1.6:

x^0 =

?

Based on your responses above, which operation would be useful for:

- Q2.1: turning bits ON (i.e. setting bits to 1)?

☐ (a) &

☐ (b) |

☐ (c) ^
- Q2.2: turning bits OFF (i.e. setting bits to 0)?

☐ (a) &

☐ (b) |

☐ (c) ^
- Q2.3: flipping bits (i.e. changing bits from 0 to 1 or from 1 to 0)?

☐ (a) &

☐ (b) |

☐ (c) ^

Save & Grade 20 attempts left

Save only

Additional attempts available with new variants