

Beginning C Programming for Engineers

In-class exercise, lesson 6

Name: _____

Write a program that will:

1. Read in an integer x .
2. Read in a second integer y .
3. Create a result. Bits 8–10 of the result are the three least significant bits of y . The remaining bits of the result are the original corresponding bits of x .
4. Print the result.

To illustrate what we want to do, x will have the following sequence of bits:

...	x_{11}	x_{10}	x_9	x_8	x_7	x_6	x_5	x_4	x_3	x_2	x_1	x_0
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and y will have this sequence of bits:

...	y_{11}	y_{10}	y_9	y_8	y_7	y_6	y_5	y_4	y_3	y_2	y_1	y_0
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We want to create a result with this sequence of bits:

...	x_{11}	y_2	y_1	y_0	x_7	x_6	x_5	x_4	x_3	x_2	x_1	x_0
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How would you create the “hole” in x ? How do you mask the bits of y ? How do you move the masked bits of y ? How do you combine the results?