edX **CornellX: ENGRI1210x The Computing Technology Inside Your Smartphone**

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INPUT AND OUTPUT IN C
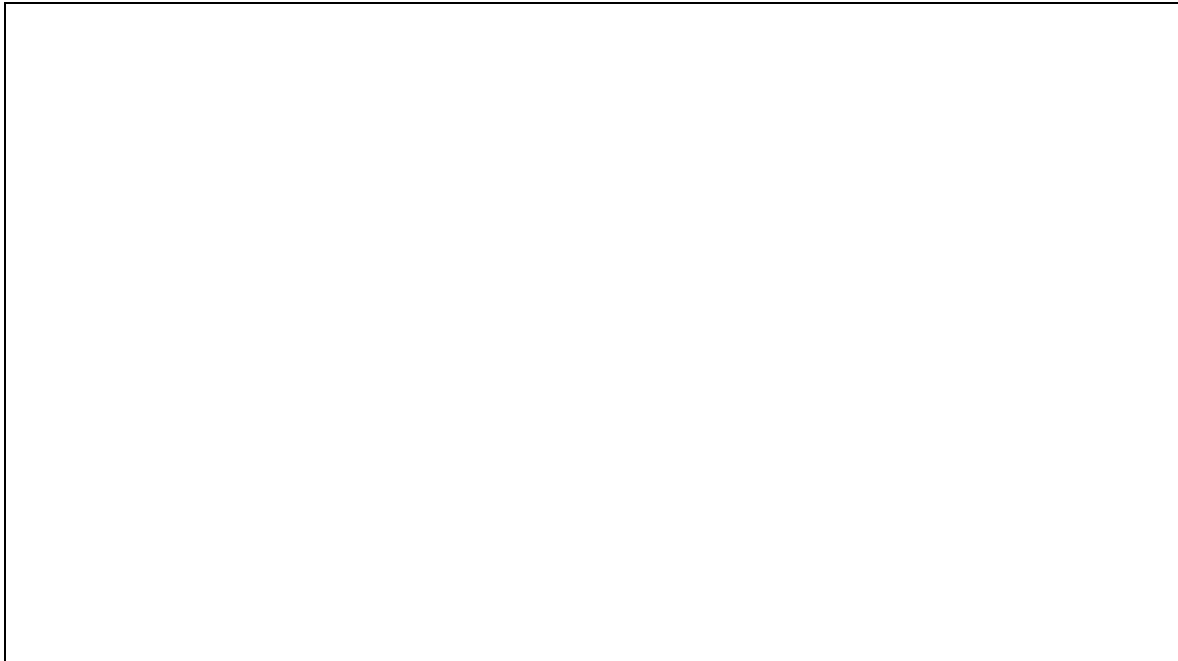
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1. CHECK YOUR UNDERSTANDING (1/1 point)

Consider the following lines of C code:

```
scanf("%x %c", &number, &character);
```

```
cprintf("%c %d", number, character);
```

The input from standard input on an LC-3 machine (the keyboard) is:

30 0

What would the user see on the standard output (the display)?

- ○ 0 0
- ○ 0 30
- ○ 30 0
- ● 0 48 ✔

EXPLANATION

The first input, 30, will be interpreted as a hex number (due to "%x") and will be stored as the binary equivalent value (0000000000110000 for LC-3). The second input, 0, will be interpreted as a character (due to "%c") and will be stored as its ASCII representation, which in hex is 30. Thus, this second input will also be stored as binary 0000000000110000.

The `printf` statement will print the variable `number` as a character. Since `number` is stored as hex 0030, it will be printed as 0. The variable `character` will be printed as 48, the decimal equivalent of 0000000000110000.

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