

Homework 3: C/C++

CS 200 • 10 Points Total
Due Wednesday, February 22, 2017

Assignment

Name the C/C++ bitwise operator used for the following operations. (1 pt each)

1. Test bits with a mask. & (AND)
2. Set bits with a mask. | (OR)
3. Multiply by a power of 2. << (Left Shift)
4. Toggle bits with a mask. ^ (XOR)
5. Toggle all bits. ~ (Bitwise NOT)

Examine the following C/C++ code fragment. For the numbered lines, report the contents of the variables and/or indicate if the code would cause an error or warning. (1 pt each line)

```
int num = 42; // stored at memory location 0x957AB17C
int v;
int w;
int *x;
int y;
int z;
```

6. v = #	v =	<u>0x957AB17C</u>	error?	<u>N</u>	warning?	<u>N</u>
7. w = *v;	w =	<u>42</u>	error?	<u>N</u>	warning?	<u>Y</u>
8. x = &num	x =	<u>0x957AB17C</u>	error?	<u>N</u>	warning?	<u>N</u>
9. y = *(int *)v;	y =	<u>42</u>	error?	<u>N</u>	warning?	<u>N</u>
10. z = *x;	z =	<u>42</u>	error?	<u>N</u>	warning?	<u>N</u>