

CS 197C: Quiz 2

Due: In Spark, September 16, 2011

Note: These quizzes are designed to be quick reminders of what you learned in class. You should not need to discuss this with your classmates. The lecture notes should be enough to help you finish. Therefore, please complete and turn in your quiz into Spark by yourself.

For the following problems, please refrain from simply writing the code out and compiling it to obtain the answer. The purpose of the exercise is to give you practice in analyzing code; if you just run it, you're only cheating yourself out of the practice.

1. What is the difference between *static* and *dynamic* linking?
2. Describe the major difference between C and C++ strings.
3. How many bytes do each of the following two data structures consume? (You should provide 2 numbers - one for `myUnion` and one for `myStruct`)

<pre>union myUnion { char[10] name; short id; int[5] weights; };</pre>	<pre>struct myStruct { char[40] address; long sqft; int id; };</pre>
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4. How is the following expression evaluated? Please list the sequence in which the subexpressions are evaluated.

```
(x < y ? -1 : (x == y ? 0 : 1) );
```

5. What is *multiple inclusion* and how do you guard against it?
6. Name and *briefly* describe 4 popular components of the C-library.
7. What code would you place in a header file vs. a source code file?
8. What is the difference between the following two statements?

Statement 1. `if(n > 2) {if (n < 6) cout<< "OK" ; } else cout<< "NG";`

Statement 2. `if (n > 2) { if (n < 6) cout<< "OK" ; else cout<< "NG"; }`

9. What is the largest difference between C and C++?
10. Please quickly describe the programming environment you plan to use (or are already using — this is to make sure you've thought about it).