CS 197C: Quiz 5

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. Explain the purpose of *templates* in C++. What is the Java version of templates?

2. Explain the difference between the `vector` and `list` classes in the STL, and describe when you should use one over the other.

3. What C++ constructs (i.e. primitives, classes, functions, etc.) can you write as a template?

4. What is the difference between a `set` and a `multiset` in the STL?

5. What is the requirement of any data that you intend to use as a key for the `map` class?