

Name _____

CS-321 Prerequisite Assessment

Assigned: Tuesday 7 September 2004

Due: Friday 10 September 2004, beginning of class (handwritten or hardcopy)

The purpose of this assessment is to help you and the professor better understand your recall of material from previous classes (CS-183 and CS-285 in particular). This assignment will not be graded for correctness, however, completing it in a workman like manner (even if some of your answers are wrong) will count as your first quiz grade. You should develop your own answers to this assessment, although discussing the problems with others or consulting your notes and books from earlier classes is encouraged.

1. Class Implementation

Design and implement a simple C++ class for creating, adding, and outputting complex numbers. Implement your class and a short test program using a compiler of your choice. It is not necessary to input complex numbers directly from the console or perform any operations not mentioned above, but your class should be structured so that these may be easily added later. Your data members may either be public, protected, or private, but you should *explain* your choice of protection level.

2. Data Structures

Describe in some detail the differences between the vector, list and map (tree) data structures. In your discussion provide a situation or application in which each of the structures would be clearly favored over the others.