Component-Level Programming
Exam #1 **Take Home**

1. Create a design for a Chinese-Checkers game. The game can have from one to six players. Player 1 is a human, players 2-6 can be either human or computer. Your design must include the following: An object-oriented model of the board, a list of properties and their function, a list of methods and their function, a list of events and their function, and a description of the drawing routine. Be thorough. DO NOT write the code for this, or any other design in this test.
2. Design a cache control that maintains a sorted list. When a new item is added to the list, it is sorted into its proper position. When an item is extracted from the list, it is always the smallest item. It must be possible to peek at an element of the list without removing it. Provide a detailed description of the Add, Extract, and Peek functions. These functions can be implemented as properties or as methods.
3. Design a control to model a book. You must be able to open and close the book, and turn pages. When opening the book, it should be possible to open it to any selected page. Supply the same information as for problem 1.
4. Redesign the Queue control designed in class to use methods rather than properties. Supply the same information as for problem 2.