## **CS121 Midterm Exam Study Guide**

## **Lecture 01: Software Engineering Principles**

while loop & logic; constant define; cout format; software engineering life-cycle.

# **Lecture 02: Data Design and Implementation**

public and private functions in a class; big O order of a 2D array; member function of a class; struct data and location.

### **Lecture 03: Unsorted List**

implementing a class as a linked structure; destructors vs. memory leaking.

#### **Lecture 04: Sorted List**

for loop in a linked list; dynamically allocated array-based sorted list; purpose of the parameterized constructor in the dynamically allocated array-based sorted list; object define; domain object.

## **Lecture 05: Stack and Queue**

array-based stack; queue derivation.

### **Lecture 06: List Plus**

stack of a char type; array-of-records linked list implementation; the purpose of function Initialize in the array-of-records implementation; pointer and data operation in a linked list.