# CSSE 220---Object-Oriented Software Development

## Exam 1 -- Parts 2 and 3, September 24, 2021

**Allowed Resources on Part 2**. Open book, open notes, and computer. Limited network access. You may use the network only to access your own files, the course Moodle and Piazza sites (but obviously do not post on Piazza except to instructors) and the course web pages, the textbook’s site, Oracle’s Java website (API), and Logan Library’s online books. You may only use a search engine (like Google) to search within Oracle’s Java website - all others uses or accessing websites other than those mentioned above are not allowed.

**Instructions.** You must disable Microsoft Lync, IM, email, and other such communication programs before beginning part 2 of the exam. Any communication with anyone other than the instructor or a TA during the exam may result in a failing grade for the course.

You must actually get these problems working on your computer. Almost all of the credit for the problems will be for code that actually works. If you get every part working, comments are not required. If you do not get a method to work, comments may help me to understand enough so that you can earn (possibly a small amount of) partial credit.

Submit all modified files via Moodle.

Problem Descriptions

**Part 2: Small Problems (21 points)**

Implement the code for the three functions (7 points each) in SmallProblems.java. Instructions are included in the comments of each function. Unit tests are included in SmallProblemsTest.java.

**Part : Map and 2D Array Problems (20 points)**

Implement the code for the two methods in MapAnd2DArray.java – Instructions are included in the comments of each function. Each method in this part is worth 10 points