CSC 212: Data Structures and Abstractions
University of Rhode Island

Laboratory #2

Objectives

We will be gaining:

insight into algorithm performance by coding a real world case study.

experience with C++ programming from pseudo code.

familiarity with the domjudge server - the mechanism to handle programming contests.

What to do

Point your browser to judge.cs.uri.edu. Click on the Team Interface link. Enter your username (the same as your uri e-mail username) and the password provided to you.

Go to the course website and follow the link on this week's lab to download the source code. If you are not familiar with GitHub, it is perfectly fine to cut and paste the source into your IDE.

The code found there should compile without error. In your browser, highlight the MaxsubArraySlow problem and submit this source code as a solution. Be sure to choose C++ as the language. You may need to refresh the page to see the result. It should be a success.

This is a platform we can use to score programs that you write.

Now, in order to solve the two remaining problems, you will need to modify the source code given to you. The problem sets given to your code will increase in size, and so more efficient code will be needed to solve the next two problems.

Problem specification

The maximum subarray problem is given as follows: given an array of integers, find the maximum contiguous sum in the array. It is not important to report the indices of the maximum, but it is important to find them. A good discussion can be found in your book in section 1.3 starting on page 29.