**CSI 403 – Spring 2018 – Project #1 – Sorting**

Goal:

* Establish your development and release environment to be used for class projects.
* Implement any one sorting algorithm (e.g. one from the Cormen text).

Problem:

* Provide a RESTful service which accepts a POST of an array of integers in JSON format and returns the numbers as a JSON object in sorted order.
* Any sort algorithm may be used, but you must supply the source code for the sorting algorithm.

Example input: { “inList” : [ 5, 35, 1, 272, 12, 0, -2, 12 ] }

Example output: { “outList” : [ -2, 0, 1, 5, 12, 12, 35, 272 ],

“algorithm” : “quicksort”,

“timeMS” : 52 }

* (Warning about cutting and pasting from this document: quotation marks in Word documents such as this are often stylized and not “real” quotes… your JSON should be ASCII.)
* The output JSON must also include the name of the algorithm and the amount of time taken to execute the sort, in milliseconds. (Depending on your code and the input list, you may find that the sort is so quick it appears to take 0 milliseconds.)
* Erroneous input (e.g. malformed JSON) should be handled gracefully with an error message.

Example error: { “message” : “Malformed JSON” }

Notes:

* You may use any implementation language – Java, Python, C#, Node, or any other you choose.
* Your solution must be service-oriented and available as an HTTP endpoint. (See separate class document for examples.)

Deliverables:

Submit to the Blackboard by the due date:

* An HTTP URL to your solution which must remain up and running 24/7 until grading is complete. Graders will invoke your RESTful service with a tool such as curl or Postman at a time of their choosing.
* A ZIP file containing your source code.