**CSI 403 – Project #1 – Sorting**

Goal:

* Establish your development and release environment to be used for class projects.
* Implement any one sorting algorithm which is represented in the Cormen text.

Problem:

* Provide a RESTful service which accepts a POST of a list of integers in JSON format and returns the list as a JSON object in sorted order.
* Any sort algorithm mentioned in the class textbook may be used. 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 }

* The output JSON must also include the name of the algorithm and the amount of time taken to execute the sort, in 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.