Due Date: 06-20-2019 (Th), BEFORE the class begins

This assignment covers textbook Chapter 8 and Chapter1~7.

1. Sorting Algorithm Property (25 points)
Exercise 8.3-2, textbook p200

2. Counting Sort, Radix Sort, Bucket Sort (30 points)
Illustrate the execution of each of the following sorting methods on the given input:

(1) COUNTING-SORT (show as in Figure 8.2): A = <6, 0, 2, 6, 0, 8>

(2) RADIX-SORT (show as in Figure 8.3): English words: PAT, CAT, CART (*right-justify this word* so that T is compared first), FAT, FIX. Padded with white space when needed.

(3) BUCKET-SORT (show as in Figure 8.4): A = < 0.67. 0.82, 0.12, 0.46, 0.88, 0.61>

3. **Counting Sort, Radix Sort** (25 points)
(1) (20 points) Exercise 8.3-4, textbook, p200
(2) (5 points) What is the running time if we use Counting Sort? Justify your answer.

4. **Sorting** (20 points)
Exercise 8.4-2, textbook p204

Algorithms -- COMP.4040 Honor Statement
(Courtesy of Prof. Tom Costello and Karen Daniels with modifications)

Must be attached to each submission

Academic achievement is ordinarily evaluated on the basis of work that a student produces independently. Infringement of this Code of Honor entails penalties ranging from reprimand to suspension, dismissal or expulsion from the University.

Your name on any exercise is regarded as assurance and certification that what you are submitting for that exercise is the result of your own thoughts and study. Where collaboration is authorized, you should state very clearly which parts of any assignment were performed with collaboration and name your collaborators.

In writing examinations and quizzes, you are expected and required to respond entirely on the basis of your own memory and capacity, without any assistance whatsoever except such as what is specifically authorized by the instructor.

I certify that the work submitted with this assignment is mine and was generated in a manner consistent with this document, the course academic policy on the course website on Blackboard, and the UMass Lowell academic code.

Date: _____

Name (please print): _____

Signature: _____