CS5800: Algorithms
Summer 2021
Mid-Term
Due – 7/09/2021 @ 3:59pm Pacific Time

(All problem and page numbers refer to our course textbook, *Algorithms, 4th Ed.)*

1. *Throwing eggs from a building:* Problem 1.4.24, page 211
    - All code for this problem should be written by you.

2. *Nonrecursive quicksort:* Problem 2.3.20, page 306
    - All code for this problem should be written by you.

3. *Min/max priority queue:* Problem 2.4.29, page 332
    - All code for this problem should be written by you.

4. *Optimal storage:* Problem 3.3.29, page 451
    - You may use the authors' code, `RedBlackBST`, as a starting point.
    - All modifications must be written by you.
    - Annotate all code, yours and theirs.

5. *Delete for linear probing:* Problem 3.4.17, page 482
    - In addition to showing the result of running delete() to delete C from the table on page 469
        - Explain what the delete() code on page 471 is doing in English.
        - Annotate all code.

DELIVERABLE: Please submit via Canvas. Each question's answer should be a separate Java file. Please submit as a single zip file. **All solutions should be compliable and runnable Java code. Please annotate each line of code describing what it does.**