

# CSC 445: SPRING 2024: Introduction to Algorithms

## Questionnaire

1. Name:\_\_\_\_\_ Where are you from?\_\_\_\_\_
2. When do you expect to graduate from the UA?\_\_\_\_\_ What is your major?\_\_\_\_\_
3. What 400-level or higher CS courses have you taken so far?\_\_\_\_\_
4. What other courses are you taking this semester? \_\_\_\_\_
5. When did you take CS345 and who was the instructor? \_\_\_\_\_
6. On the scale 1-5, where 1 is “never heard of” and 5 is “I know it well”, how well do you know:
  - (a) Asymptotic notation \_\_\_\_\_
  - (b) Recurrence relations \_\_\_\_\_
  - (c) SelectionSort, InsertionSort, BubbleSort \_\_\_\_\_
  - (d) MergeSort \_\_\_\_\_
  - (e) HeapSort \_\_\_\_\_
  - (f) Linked Lists, Stacks, and Queues \_\_\_\_\_
  - (g) BFS, DFS \_\_\_\_\_
  - (h) MST \_\_\_\_\_
  - (i) SSSP \_\_\_\_\_
7. What programming languages do you consider yourself:
  - (a) an expert in? (can implement quicksort in 5 minutes) \_\_\_\_\_
  - (b) pretty good at? (can implement quicksort in 5 hours) \_\_\_\_\_
  - (c) familiar with? (can implement quicksort in 5 days) \_\_\_\_\_
8. What is the best CS course you’ve taken? \_\_\_\_\_ Why? \_\_\_\_\_
9. What is the worst CS course you’ve taken? \_\_\_\_\_ Why? \_\_\_\_\_
10. What is a book that you recently enjoyed reading (not a textbook)? \_\_\_\_\_
11. What do you plan to do after you graduate from the UA (e.g., work in CS, work in IT, go to grad school)?  
\_\_\_\_\_
12. Tell me something interesting about yourself (e.g., I play the bass, I ran a marathon, ...) \_\_\_\_\_  
\_\_\_\_\_
13. Anything else you would like me to know (e.g., I am afraid there’s going to be too much work in this class, I heard 20% of the students taking this class fail, ...)? \_\_\_\_\_  
\_\_\_\_\_
14. Prof. X had 20 coins on a bedside table, 8 of them heads and the rest tails. In the middle of the night he just dreamed of a way to divide the 20 coins into two groups so that each of the groups has exactly the same number of heads. Without turning on the lights he followed the steps of his algorithm. Pretty pleased with himself he went back to sleep only to wake up the next morning with all memories of his algorithm gone. On visual inspection, he was able to verify that both piles had the same number of heads. Help him reconstruct the algorithm.

**Please, return to Stephen within 7 days.**