Midterm Exam Review

- The exam is made up of short answer, writing pseudocode, and simulation, analysis, and synthesis of structures and algorithms.
- The exam will cover chapter 4 through 8
- Understand any programming assignments and be able explain what you did and replicate any algorithms using pseudocode.
- Understand homework questions. Speculate on how those questions could be modified and how that would affect your response.
- Be able to replicate and build on any of the exercises we did in class.
- This course looks at different basic data structures, i.e. abstract data types
  - Know the ADTs we’ve covered. Emphasis will be on the ones covered in class.
  - Know the different implementations for an ADT and how those implementations impact the complexity of the ADT’s operations primarily with respect to time, but with respect to space as well. For example, the sequence ADT atRank is $O(1)$ for an array implementation and $O(n)$ for a list implementation. Also, insertAtRank is $O(n)$ for both, but for different reasons.
  - Each data structure, has pros and cons that inform the selection of an appropriate data structure for different situations.
- EXAMFUN (Revisit this exercise, and/or ask about it during the review)
- Some questions will require you to synthesize what you have learned in a way not covered in class.