Today Fundamentals of algorithm analysis; dynamic programming. §§ 2.*, 3.*, 15.\{2,3\}.
Next class Dynamic programming. §§ 15.4,15.5.

1. List the members of your group below. Underline your name.

2. Prove or disprove: If \( f(n) = \Theta(g(n)) \), \( g(n) = \Omega(h(n)) \), and \( h(n) = \omega(q(n)) \) then \( f(n) = \Omega(q(n)) \).

3. Provide pseudocode for selection sort, using the textbook’s style.

\footnote{Throughout this course, section numbers such as these will, by default, refer to the textbook: Thomas H. Cormen, Charles E. Leiserson, Ronald L. Rivest, and Clifford Stein. Introduction to Algorithms. MIT Press, 3rd edition, 2009.}
4. Sketch the proof of correctness of the pseudocode in Question 3 using loop invariants.

5. Analyze the running time of the pseudocode of Question 3 following the method used in the textbook’s analysis of insertion sort.