

CSC373 Worksheet 2

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Source: [link](#)

1. **CLRS 16.1-2:** Suppose that instead of always selecting the first activity to finish, we instead select the last activity to start that is compatible with all previously selected activities. Describe how this approach is a greedy algorithm, and prove that it yields an optimal solution.
2. **CLRS 16.1-5:** Consider a modification to the activity-selection problem in which each activity a_i has, in addition to a start and finish time, a value v_i . The objective is no longer to maximize the number of activities scheduled, but instead to maximize the total value of the activities scheduled. That is, we wish to choose a set A of compatible activities such that $\sum_{a_k \in A} v_k$ is maximized. Give a polynomial-time algorithm for this problem.