Greg Timmons
CSC 505 – HW3 – Question 3

This is easy to show with a counter example -- The example below will not output an optimal solution with an earliest start first heuristic. This is because greedy algorithms can only be guaranteed to produce globally optimal solutions if it is able to produce a locally optimal solution at every sub step. Since the algorithm does not give a locally optimal solution after the first selection, the algorithm is not guaranteed to return a globally optimal solution and fails.

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p1:  [ - - - - - - - - - - - - - - - - - - ]     [ - - - - - - - - - - ]
p2:          [ - - ]        [ - - ]    [ - - ]     [ - - - - - - - - - - ]
p3:    [ - ] [ - ] [ - ] [ - ] [ - ] [ - ] [ - ]     [ - - - - - - - - - - ]
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