1. The Missouri Department of Transportation has decided to plant wildflowers alongside Interstate 64 between St. Louis and Kansas City. MODOT has bid out the job and received $n$ proposals. Say that St. Louis is at mile 0 of the interstate, while Kansas City is at mile $D$. Proposal $p_i$ offers to plant flowers over a (fixed) interval $[s_i, e_i]$ of the highway, $0 \leq s_i \leq e_i \leq D$, for a fee of $c_i$ dollars ($c_i \geq 0$ of course).

For political reasons, MODOT cannot accept only part of a proposal, so the endpoints $s_i$ and $e_i$ of each proposal are fixed. However, it can accept two proposals that overlap, since that simply results in some parts of the highway having more flowers.

Give a polynomial-time algorithm to choose a subset of the proposals sufficient to plant flowers along the entire route from St. Louis to Kansas City, while minimizing the total cost.

2. *Kleinberg & Tardos* Chapter 6, question 16

3. *Kleinberg & Tardos* Chapter 4, question 14