

Today: Approximation algorithms. §§ 35.*.

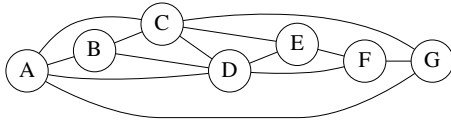
Next class: Approximation algorithms, contd.

Reminders: Portfolio presentations 2 2017-05-02. Use the class newsgroup.

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

2. Trace the action of APPROX-VERTEX-COVER (p. 1109 of the textbook) on the following graph. Use a check mark to depict selected edges and a cross mark to depict edges removed from consideration. Explicitly list the vertex cover.

Select applicable edges in lexicographic order of their sorted vertex-pairs: i.e., $\{a, b\} < \{c, d\}$ if $\min(a, b) < \min(c, d)$ or $\min(a, b) = \min(c, d)$ and $\max(a, b) < \max(c, d)$.



3. We wish to find the smallest set of names, from the list below, that covers all letters of the alphabet (a through z, ignoring case). Map this problem instance to an instance to *set cover*.

Swamy Tarquin Tex Umberto Vincenzo Vivek Wilmer Winston Wolfgang
Woody Xavier Xuejia Yvette Yvonne Zaphod Zoe Zok

4. Trace the execution of the textbook's GREEDY-SET-COVER algorithm (p. 1119) on the instance of Question 3.