COS 350 Spring 2018 Class Exercise $15 \quad 2$ questions; 1 pgs. 2018-04-03

Today Single-source shortest paths, continued. $\S \S 24 . *$
Next class All-pairs shortest paths. §§ 25.*
Reminders Newsgroup. Homework.

1. List the members of your group below. Underline your name.
2. Solve the following system of difference equations by mapping it to a shortest-paths problem.

$$
\begin{align*}
& x_{1}-x_{2} \leq 5  \tag{1}\\
& x_{1}-x_{3} \leq-2  \tag{2}\\
& x_{2}-x_{3} \leq-1  \tag{3}\\
& x_{3}-x_{4} \leq 4  \tag{4}\\
& x_{3}-x_{5} \leq 7  \tag{5}\\
& x_{4}-x_{2} \leq-3  \tag{6}\\
& x_{4}-x_{6} \leq 3  \tag{7}\\
& x_{5}-x_{6} \leq-2  \tag{8}\\
& x_{6}-x_{1} \leq-12  \tag{9}\\
& x_{6}-x_{3} \leq-2 \tag{10}
\end{align*}
$$

