CSCI 6600/7350   Homework 6 (Due midnight, Wednesday, Nov 25th)
Submit the PDF file to Dropbox on D2L.

1. The Apriori algorithm makes use of prior knowledge of subset support property. Given frequent itemset l, s is a subset of l and s' is a subset of s.
    a. Show that the confidence of the rule "s' ➔ (l-s') " cannot be larger than the confidence of the rule "s ➔ (1-s) ".
    b. Show that the confidence of the rule "(1-s) ➔s " must be smaller than the confidence of the rule "(l-s')➔s' ".

2. Given the following transaction database, apply Apriori algorithm to derive from the database:
    (a) all frequent itemsets, and
    (b) all strong association rules
    that has the min_support_count = 2, and the min_confidence 70%.
Show all intermediate steps (C_k, L_k, Join steps, …) as done in class.

TID	Items bought
T100	{K, A, D, B}
T200	{D, A, C, E, B}
T300	{C, A, B, E}
T400	{B, A, D}