Homework Assignment #3
Due: October 19, 2010 at 4:00 p.m.

1. If L is a language, define $\hat{L}$ to be the language $\{x : x \in L \text{ and } x^R \in L\}$.

    (a) Let $L_1 = \{100, 011, 010, 001, 110\}$. What is $\hat{L}_1$?

    (b) Give an example of a language L_2 for which $L_2 = \hat{L}_2$.

    (c) Show that for every regular language L, $\hat{L}$ is also regular.