CS 206 Testing and Verification Techniques in Software Engineering
Winter 2009

Homework 2

Hardcopy due at the beginning of class, Monday, February 2, 2009. The use of LaTeX is required.

1. (100pts)
   Carefully read the book section and the foils covering the W-method. Then, write a detailed pseudocode for the entire W-method.

   Your main procedure should take in input a Finite State Machine $M = (X, Y, Q, q_0, \delta, O)$ and it should generate in output a minimal set of tests $T \subset X^+$ that tests against the classes of errors discussed in class: operation errors, transfer errors, extra-state errors, and missing-state errors. It should simply reflect the algorithm described in class by example.

   `http://www.cs.ucr.edu/~ciardo/teaching/CS246/CS246dds.pdf` shows example of the level of detail I expect to see in your pseudocode.

2. (50pts)
   Then, discuss the complexity of your algorithm and possible efficiency improvements (you might want to present the pseudocode for these improvements as well, if it makes their discussion simpler).