Automata Theory: Assignment 9

Due date: December 2 (Thursday)

If you submit the assignment by 12:30pm on November 30, then (1) you will earn 2 bonus points toward your grade for this assignment (not toward the final grade for the course) and (2) it will be graded by December 2.

Problem 1 (6 points)
Construct deterministic PDAs for the following languages:

(a) $\{a^n b a^n : \ n \geq 0\}$
(b) $\{a^n b^m c^{n+m} : \ n \geq 0, m \geq 0\}$

Problem 2 (4 points)
Construct a nondeterministic PDA for the following language on the alphabet $\Sigma = \{a, b\}$:

$$\{w : \ w = w^R\}$$