

Automata Theory: Assignment 9

Due date: November 29 (Thursday)

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 $\Sigma = \{a, b\}$:

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