

CS5000: Assignment 4
Due: Sept. 26, 2008 by 11:59pm

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Problem 1: 1 point

Let us call a CFG G *hybrid* iff it contains both left-linear and right-linear productions. Prove or disprove: If G is hybrid, $L(G)$ is regular.

Problem 2: 1 point

Give a stack machine for $\{a^n cb^n | n \geq 0\}$.

Problem 3: 1 point

Convert the following grammar into CNF.

S \rightarrow ABC
C \rightarrow BaB|c
B \rightarrow b|bb
A \rightarrow a

Problem 2: 1 point

Prove or disprove: $\{xx | x \in \{a, b\}^*\}$ is regular.