CpSc 3500 — Goddard

In-class Practice 15: PDAs

A PDA is by definition nondeterministic. Give:

(a) a language that is accepted by a (nondeterministic) pushdown automaton but not by a deterministic one.

Many answers e.g. Binary palindromes

(b) a language that is accepted by a deterministic pushdown automaton but not by a finite automaton.

Many answers e.g. 0^n1^n

(c) a language that is accepted by a (nondeterministic) pushdown automaton but whose complement is not.

Many answers e.g. The complement of $0^n1^n2^n$

(d) a language that is accepted by a deterministic pushdown automaton but whose complement is not.

Does not exist.