Problem 1
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
Construct a nondeterministic PDA for the following language on the alphabet $\Sigma = \{a, b\}$:

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