Problem 1. Draw a NPDA for the following language:

\[ L_1 = \{vww^R : w \in \{a, b\}^*, v \in \{b\}^*\} \]

Problem 2. Draw a NPDA for the following language:

\[ L_2 = \{a^{n+m}b^n c^m : n, m \geq 0\} \]

Problem 3. Draw a NPDA for the following language:

\[ L_3 = \{wv : w \in \{a, b\}^*, v \in \{c, d\}^*, |v| \neq 3|w|\} \]