For each of the languages below, give a pda that will accept it. Clearly indicate whether the pda accepts by final state or by empty stack.

1. \( L = \{a^n b^m c^k \mid n + k = m\} \)
2. \( L = \{a^{2n} b^n \mid n \geq 1\} \)
3. \( L = \{w \mid \text{number of a’s in } w = \text{number of b’s in } w\} \)
4. \( L = \{a^n b^m \mid n \neq m\} \)
5. \( L = \{w_1 c a^n b^n w_2 \mid w_1, w_2 \in \{a, b\}^*, \text{length}(w_1) = \text{length}(w_2)\} \)
6. \( L = \{a^n b^m c^k \mid n = m \text{ or } m = k\} \)