1. Find CFG for following languages
   (with $n \geq 0$, $m \geq 0$ and $k \geq 0$)

   a) $L = \{a^n b^m c^k \ne k = n+m\}$

   b) $L_2 = \{a^n b^m c^k \mid k = |n-m|\}$

2. Construct a PDA with two states, one initial
   and one final state

   $$L_3 = \{a^m b^n c^{2(m+n)} : m, n \in \mathbb{N}\}$$

3. Based on your knowledge on C language,
   write formal definition for the following

   a) for statement

   b) variable declaration
      (assume only for int, char, float).

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