Automata and formal languages
Exercise

Answer the following questions

1. **Construct a DFA that accepts the language generated by the grammar**

$$\begin{aligned} S &\longrightarrow abA, \\ A &\longrightarrow baB, \\ B &\longrightarrow aA|bb \end{aligned}$$

2. **Construct right- and left-linear grammars for the language:**

$$L = \{a^n b^m : n \geq 2, m \geq 3\}$$

3. **Construct right- and left-linear grammars for the language generated by the following regular expression:**

$$r = (aab^*ab)^*$$

4. **Construct a context-free grammar for the language:**

$$\{a^i b^j c^k : i \neq j \text{ or } j \neq k\}$$

that is the language of strings of a's followed by b's followed by c's, such that there are either a different number of a's and b's or a different number of b's and c's, or both.

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