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Verification

Problem 1: LTL to GNBA [5 Points]

Consider the LTL formula $\varphi = \Box \diamondsuit p$.

- a) Convert φ into an equivalent formula ψ containing only $p, true, \neg, \land, \mathcal{U}$. [1 Point]
- b) Give the elementary sets wrt. $closure(\psi)$. [1 Point]
- c) Construct the GNBA \mathcal{G}_{ψ} using the algorithm given in the lecture. [3 Points]

Problem 2: LTL to NBA [2 Points]

Prove that there is an LTL formula φ over $AP = \{p\}$ such that no NBA \mathcal{A} with only a *single* accepting state satisfies $\mathcal{L}(\mathcal{A}) = Words(\varphi)$.