

Algorithm 1: LF coloring

R: **if** $c(u) \neq \min \{d \geq 1 \mid (\forall v \in N_{\geq}(u))(c(v) \neq d)\}$
 then $c(u) = \min \{d \geq 1 \mid (\forall v \in N_{\geq}(u))(c(v) \neq d)\}$