Algorithm – Eventual Leader Detection Ω

Algorithm 1 Monarchical Eventual Leader Detection

Implements:

      EventualLeaderDetector, **instance** Ω.

Uses:

      EventuallyPerfectFailureDetector, **instance** $\Diamond P$.

1: **upon event** $\langle$ *Init* $\rangle$ **do**
2:      *suspected* $:= \emptyset$
3:      *leader* $:= \bot$
4: **upon event** $\langle$ $\Diamond P$, *Suspect* $\mid p$ $\rangle$ **do**
5:      *suspected* $:=$ *suspected* $\cup \{p\}$
6: **upon event** $\langle$ $\Diamond P$, *Restore* $\mid p$ $\rangle$ **do**
7:      *suspected* $:=$ *suspected* $\setminus \{p\}$
8: **upon event** $\langle$ *leader* $\neq$ MAXRANK($\Pi \setminus$ *suspected*) $\rangle$ **do**
9:      *leader* $:=$ MAXRANK($\Pi \setminus$ *suspected*)
10:      **trigger** $\langle$ Ω, *Trust* $\mid$ *leader* $\rangle$