——— MODULE simpleprogram ————

EXTENDS Integers Variables i, pc

$$Init \stackrel{\Delta}{=} (pc = "start") \land (i = 0)$$

$$\begin{array}{ll} Pick \, \stackrel{\Delta}{=} \, \, \wedge \, pc = \, \text{``start''} \\ \wedge \, i' \in 0 \ldots 1000 \end{array}$$

$$\wedge pc' = \text{``middle''}$$

$$\begin{array}{ccc} Add1 \, \stackrel{\triangle}{=} \, \, \wedge \, pc = \text{ ``middle''} \\ \wedge \, i' = i+1 \end{array}$$

$$\wedge i' = i + 1$$

$$\land \textit{pc'} = \text{``done''}$$

$$Next \triangleq Pick \lor Add1$$