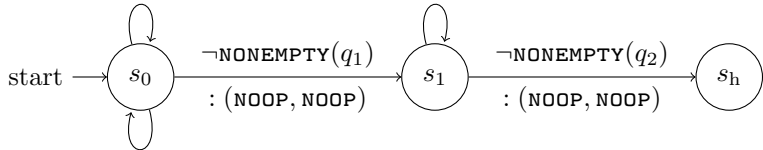


$\text{NONEMPTY}(q_1) \wedge \text{TOP}(q_1)$
: (POP, PUSH₁)

$\text{NONEMPTY}(q_2)$
: (PUSH₁, POP)



$\text{NONEMPTY}(q_1) \wedge \neg \text{TOP}(q_1)$
: (POP, NOOP)