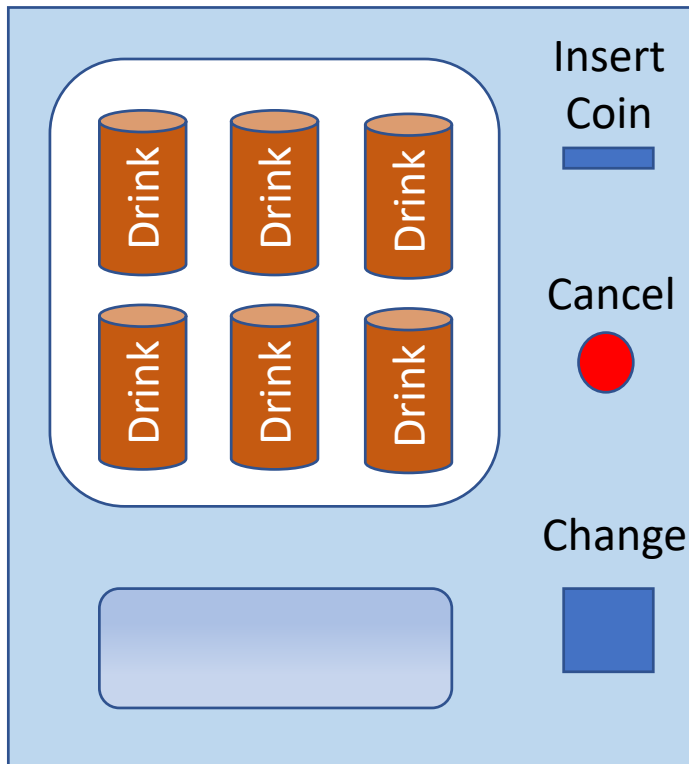
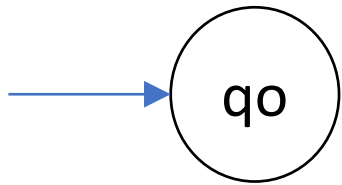


# Deterministic Finite Automata

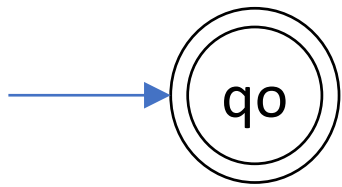
## Case Study : Vending machine

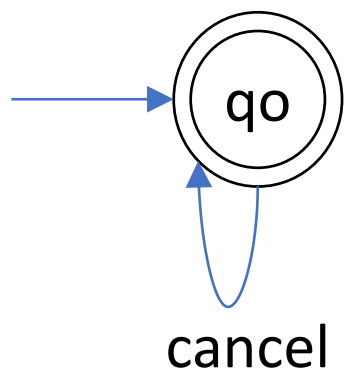


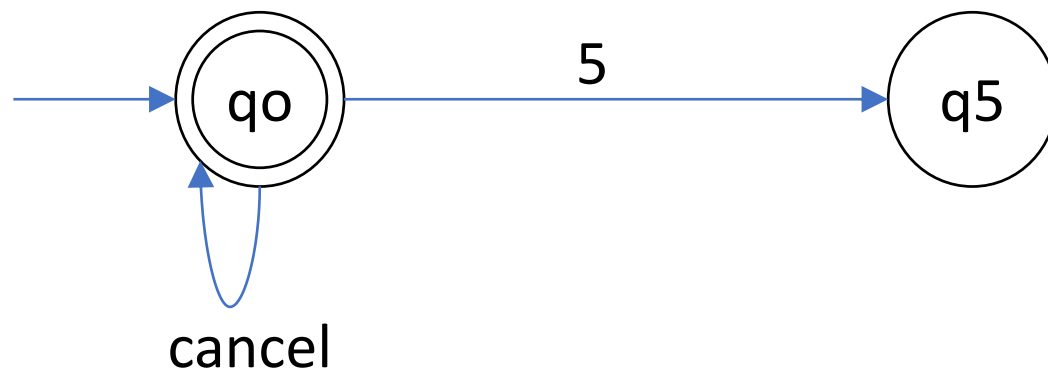
- Each can of a drink costs 15 Baht
- Machine accepts only 5 and 10 Baht coins.
- If the value of coins reaches 15 Baht, the machine will automatically deliver one can.
- If the value of coins exceeds 15 Baht, the machine will deliver one can and return change.
- User can press cancel to get the coins back before the operation completes.

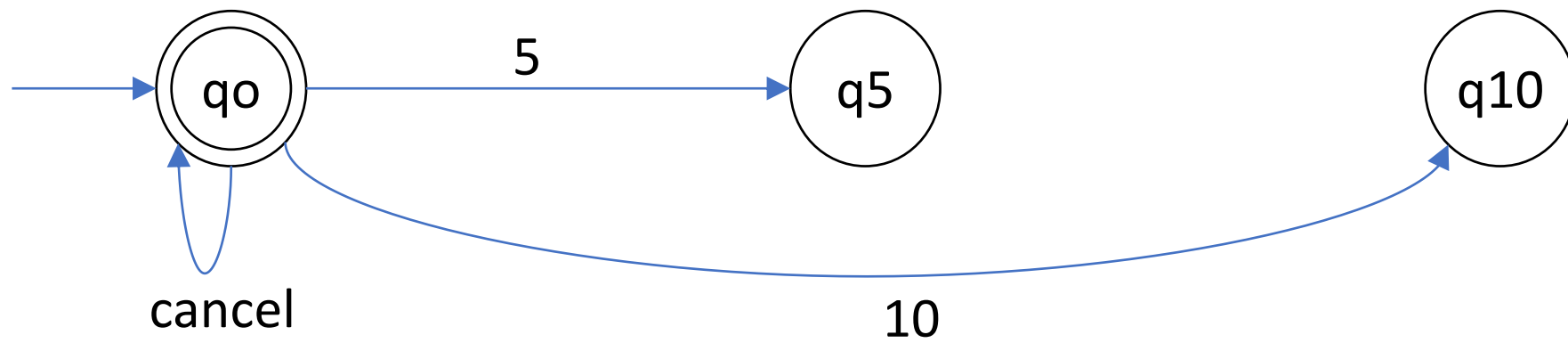


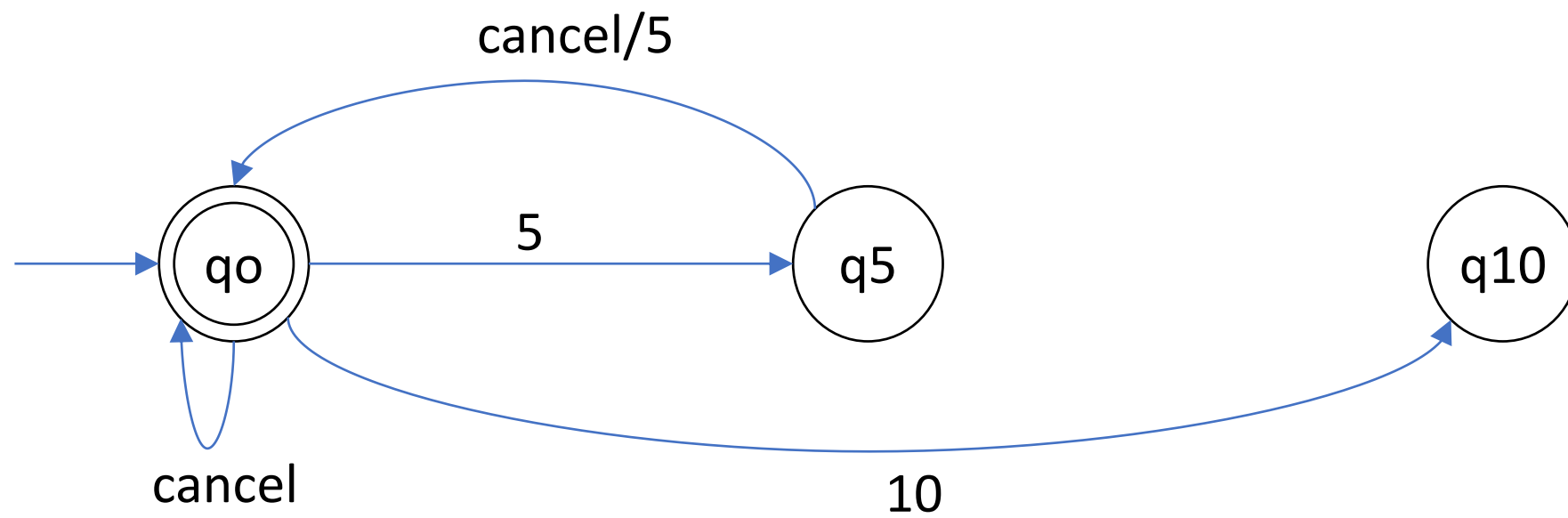
Can the initial state and the final state share the same state?

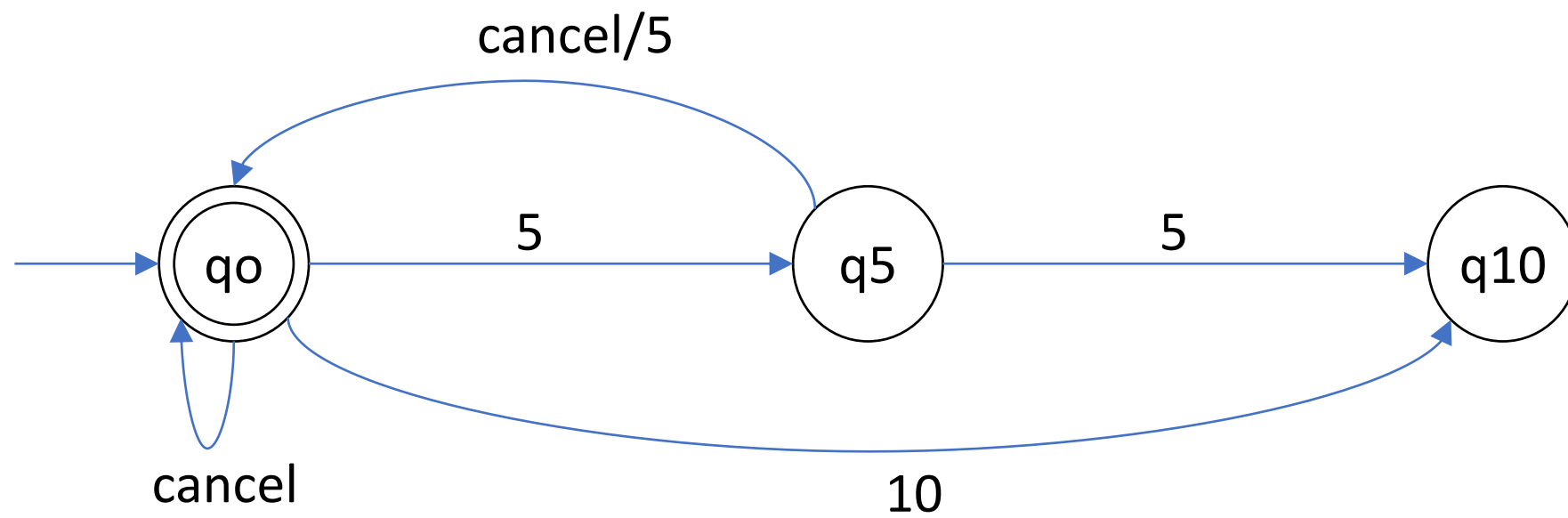




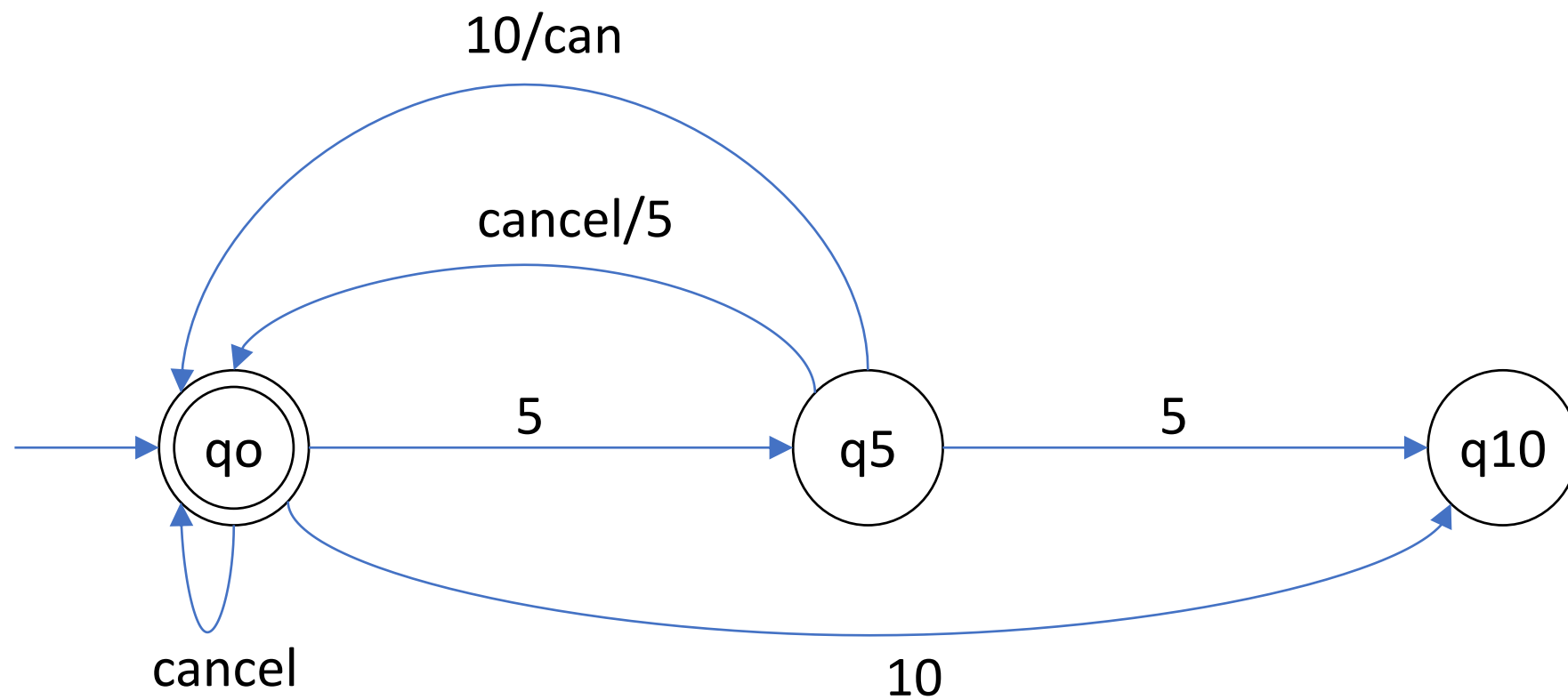


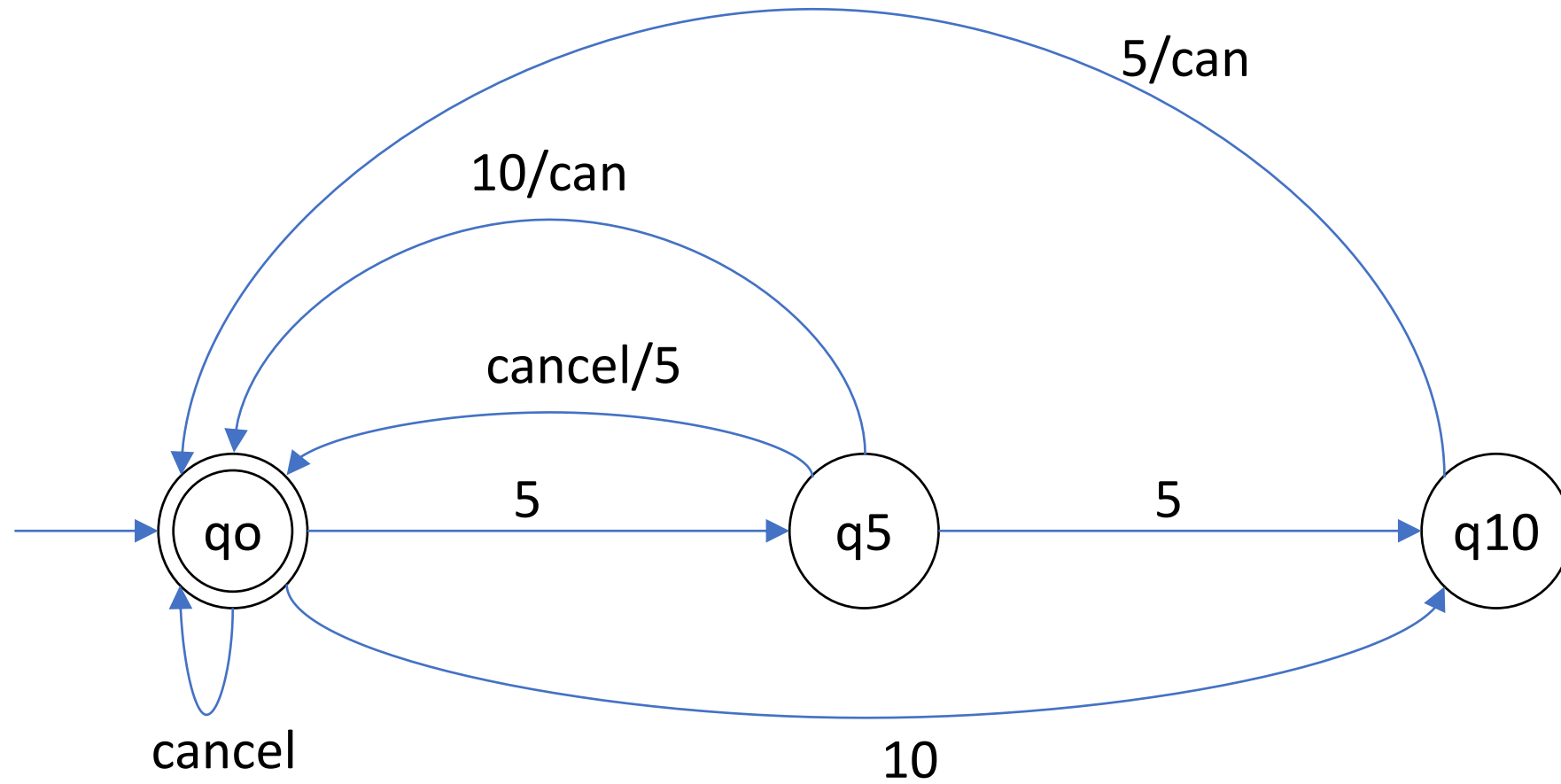


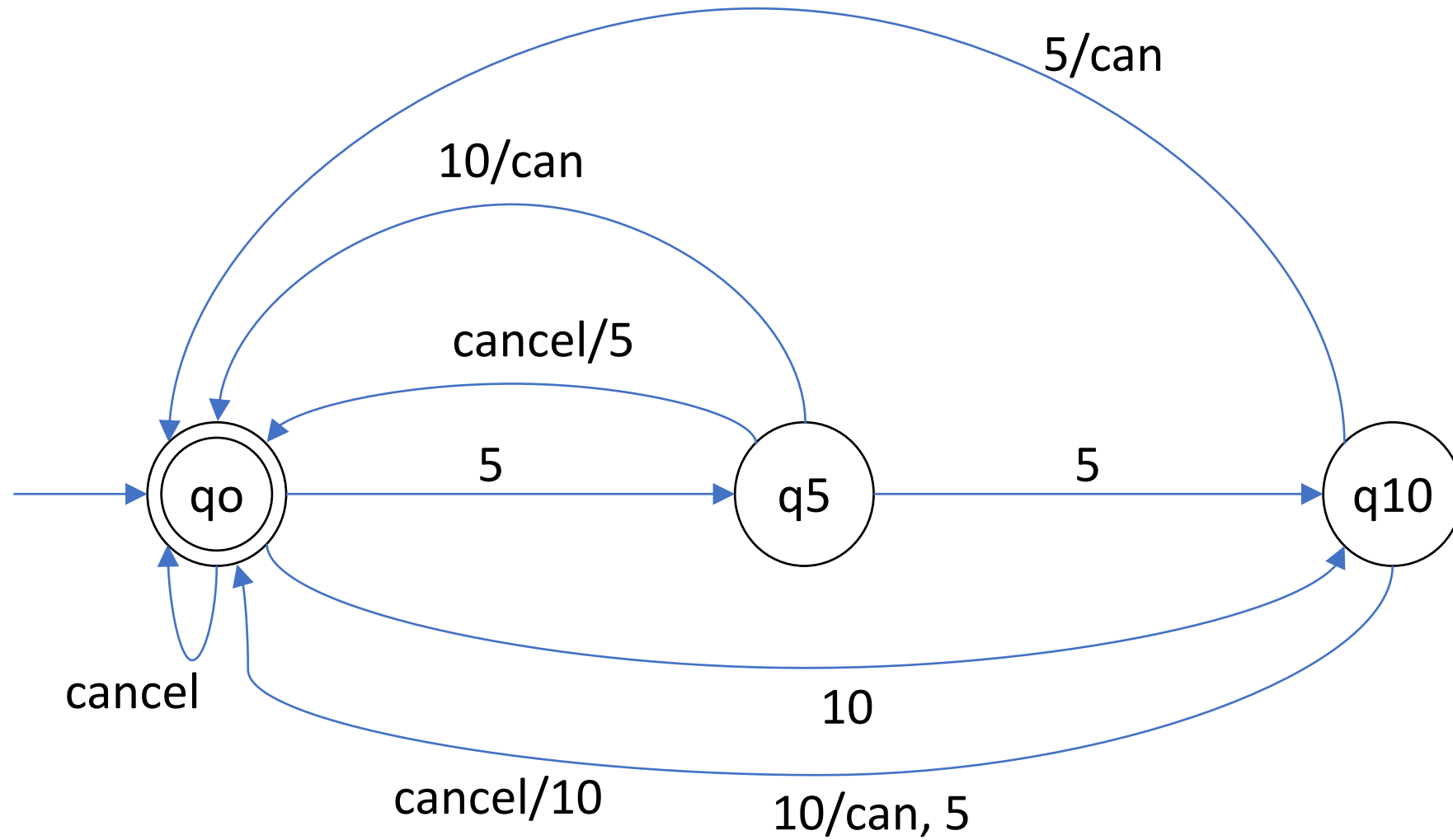












**This DFA is also called Mealy machine.**