* **Logic of the Mealy Vending Machine**

In this example, the vending machine requires 15 cents to release a can

Of soda. The purchaser can insert a nickel or a dime, one at a time, to

Purchase the soda. The chart behaves like a Mealy machine because its

Output (soda) depends on both the input coin and current state.

State 1:

When initial state (got\_0) is active. No coin has been received or no

Coins are left.

If a nickel is received (coin == 1), output (soda) remains 0, but state

(got\_nickel) becomes active.

If a dime is received (coin == 2), output (soda) remains 0, but state

(got\_dime) becomes active.

If input coin is not a dime or a nickel, state (got\_0) stays active and

no soda is released (output (soda = 0)).

State 2:

In active state (got\_nickel). A nickel was received.

If another nickel is received (coin == 1), state (got\_dime) becomes

active, but no can is released ((soda) remains at 0).

If a dime is received (coin == 2), a can is released (soda = 1),

the coins are banked, and the active state becomes (got\_0)because no coins are left.

If input coin is not a dime or a nickel, state (got\_nickel)stays

active and no can is released (output (soda = 0)).

State 3:

In active state (got\_dime).A dime was received.

If a nickel is received (coin == 1), a can is released (soda = 1),

the coins are banked, and the active state becomes (got\_0)because no coins are left.

If a dime is received (coin == 2), a can is released (soda = 1), 15

cents are banked, and the active state becomes (got\_nickel) because a

nickel (change) is left.

If input coin is not a dime or a nickel, state (got\_dime) stays active

and no can is released (output (soda = 0)).