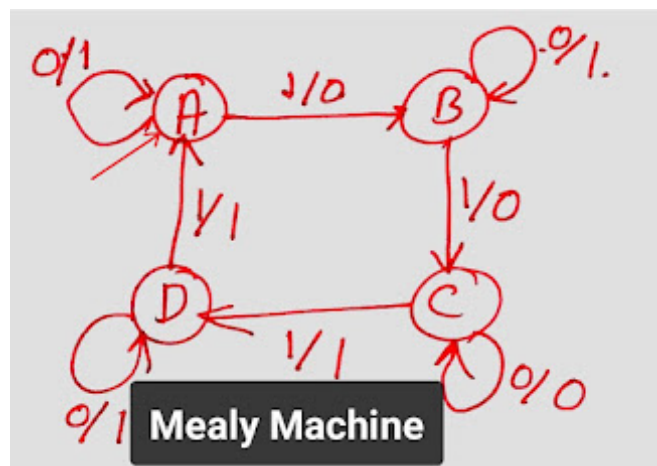


Difference between Mealy and Moore machine

Mealy machine has 6 tuples: $(Q, q_0, \Sigma, O, \delta, \lambda')$

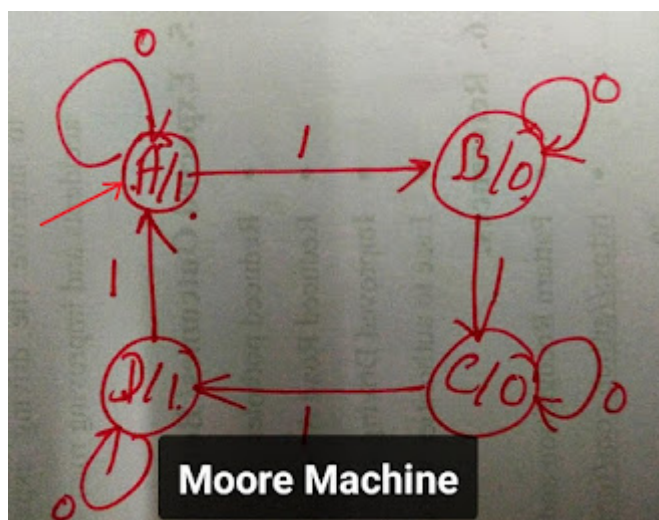
1. Q : Finite set of states
 1. In diagram below $Q = \{A, B, C, D\}$
2. q_0 : Initial state/ Starting state
 1. In diagram below A is initial state
3. Σ : Input alphabet
 1. In diagram below input alphabets are $\{0,1\}$
4. O : Output alphabet
 1. In diagram below output alphabets are $\{0,1\}$
5. δ is transition function which maps $Q \times \Sigma \rightarrow Q$
6. ' λ ' is the output function which maps $Q \times \Sigma \rightarrow O$



Moore machine has 6 tuples: $(Q, q_0, \Sigma, O, \delta, \lambda')$

1. Q : Finite set of states

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Mealy machine vs Moore machine

| Mealy machine | Moore machine |
|---|--|
| Output depends on present state as well as present input. | Output depends on the present state. |
| If input changes, output also changes | If input changes, output does not changes. |

| | |
|--|---|
| Compare to Moore less number of states are required. Because states do not depend on output. | Compare to Mealy more number of states are required. Because states depend on number of output. |
| Difficult to develop. Difficulty due to input affects output. | Easy to develop. |
| Output is placed on transition arrow. | Output is placed with state. |

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