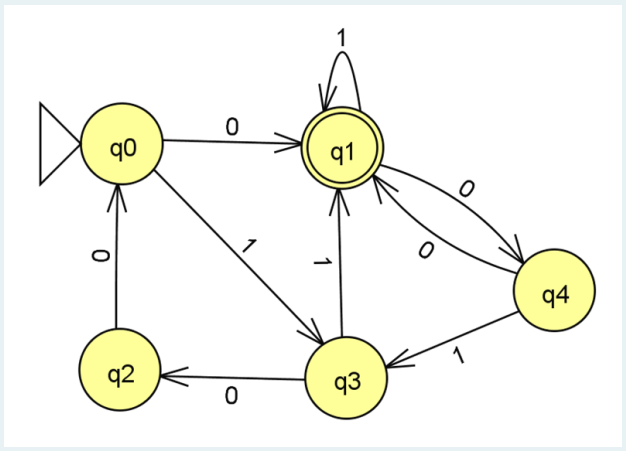
AA2 - DFAs (Assessment Activity 2) (L.EIC-TC-2021-22)

...

Pontos: 7/7

1

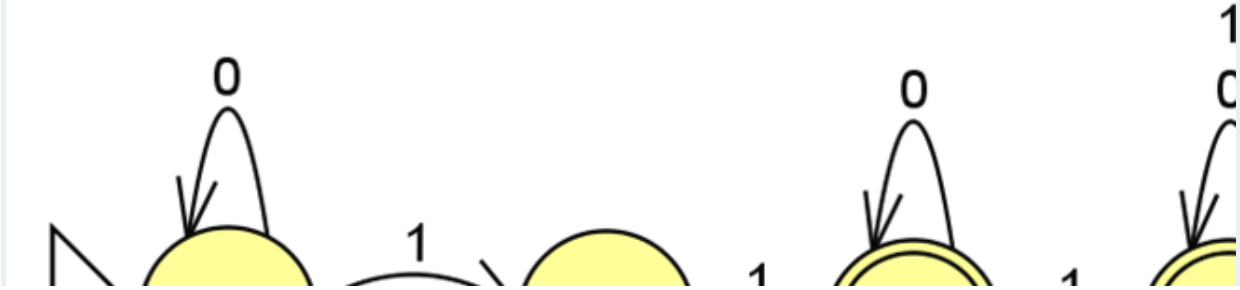


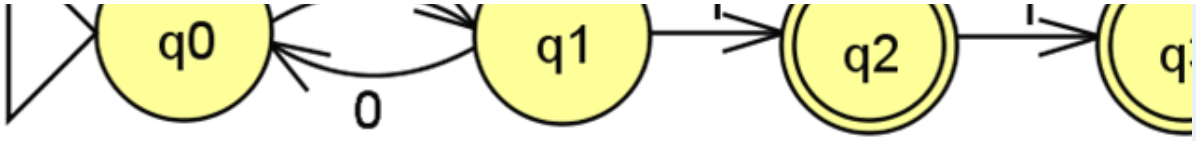
Consider the following automaton. Which of the following extended transition functions arrives at a dead state?
(1/1 Ponto)

- δ^(q0, 1101110)
- δ^(q0, 0110101) ✓
- δ^(q0, 0100110)
- δ^(q0, 1100001)

2

Consider the following automaton. Which of the following options describes the language accepted by it?
(1/1 Ponto)





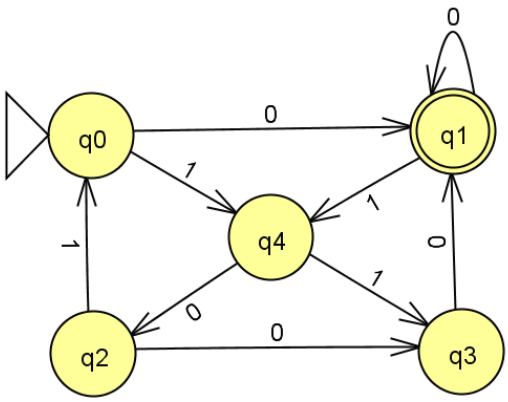
- Strings over the alphabet {0, 1} with 11 at the end of the string
- Strings over the alphabet {0, 1} with 111 at the end of the string
- Strings over the alphabet {0, 1} with 11 in any place of the string ✓
- Strings over the alphabet {0, 1} with 111 in any place of the string

3

An automaton stops when it reaches an acceptance state.
(1/1 Ponto)

- True
- False ✓

4

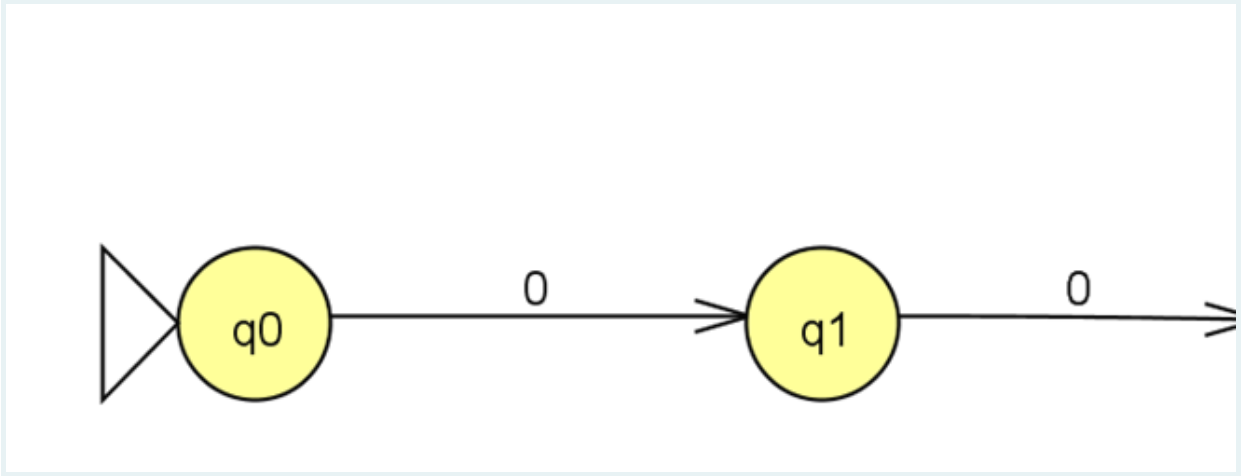


Consider the following automaton. What is the best classification for it?
(1/1 Ponto)

- Complete DFA
- Incomplete DFA ✓
- None of the above

5

Consider the following automaton. Which of the following options describes the language accepted by it?
(1/1 Ponto)



- (●) Strings over the alphabet {0, 1} that start in 00. ✓
- Strings over the alphabet {0, 1} that end in 00.
- Strings over the alphabet {0, 1} with 00 as substring.

6

Consider the DFA 1 with initial state A and acceptance state B, and DFA 2 with initial state C and acceptance D. After applying the cartesian product we obtain a new DFA with states {AC, AD, BC, BD}.

Which states should be the acceptance states if we want to obtain DFA 2 - DFA 1?
(1/1 Ponto)

- BD, AD, BC
- AD ✓
- BC