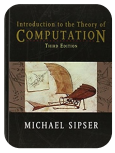
Exercício 1

Capítulo 1, Página 83



Introduction to the Theory of Computation

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Certificado

Passo 1

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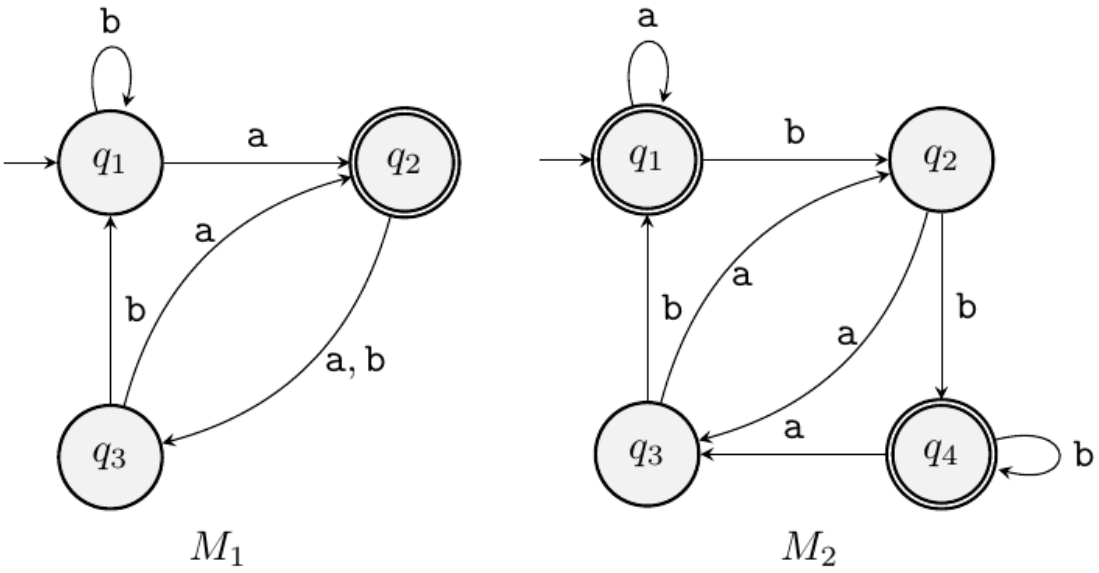

Passo 2

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Part (a)

Start state is the one in which the arrow enters from "nowhere", i.e. not from any other state. We see that starting states are following:

M_1 : q_1

M_2 : q_1

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Part (b)

Every accept state is double circled. We see that sets of accept states are following:

M_1 : $\{q_2\}$

M_2 : $\{q_1, q_4\}$

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Part (c)

We just need to follow the appropriate arrows, starting from start states. Here are the sequences:

M_1 : $q_1 \xrightarrow{a} q_2 \xrightarrow{a} q_3 \xrightarrow{b} q_1 \xrightarrow{b} q_1$

M_2 : $q_1 \xrightarrow{a} q_1 \xrightarrow{a} q_1 \xrightarrow{b} q_2 \xrightarrow{b} q_4$

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Part (d)

Now we need only determine whether last state of previous sequences is an accept state or not.

- M_1 : Rejects.
- M_2 : Accepts.

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Part (e)

When input is empty word ε, the machine just enters the start state and stays there. Hence the question whether machine accepts empty string ε is equivalent to whether start state is an accept state.

- M_1 : Rejects.
- M_2 : Accepts.

Resultado 7 de 7

We explain what every term means and give solutions.

‹ Exercício 15

Avaliar esta solução ☆ ☆ ☆ ☆ ☆

Exercício 2 ›