

Construct a **Turing machine** that **computes** the function:

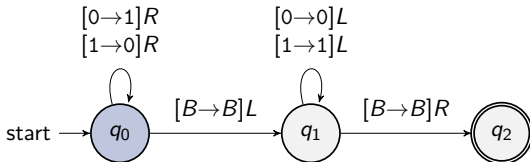
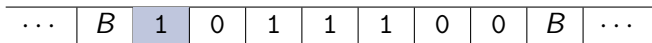
$$f(w \in \{0, 1\}^*) = (\text{the flip of each bit in } w)$$

...	<i>B</i>	1	0	1	1	1	0	0	<i>B</i>	...
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- 1: Flip each bit of the input: $1 \rightarrow 0$ and $0 \rightarrow 1$
- 2: Go to the first input symbol

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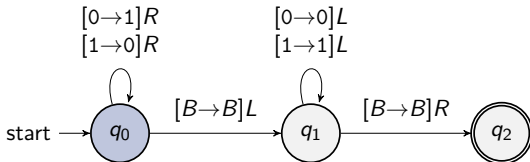
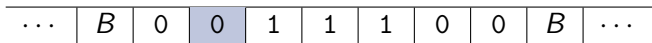
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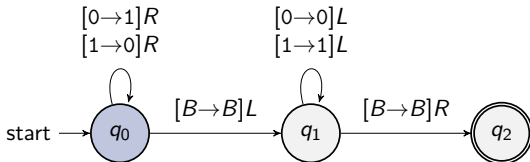
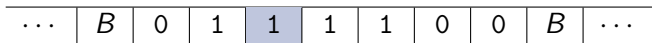
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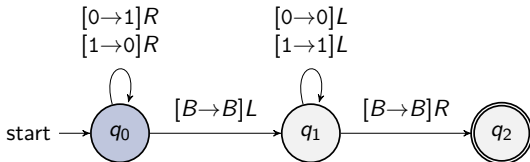
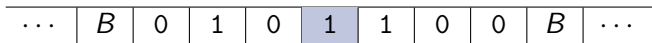
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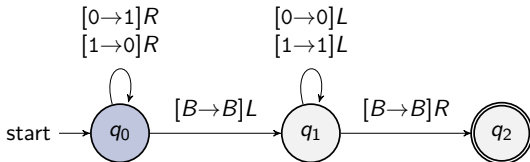
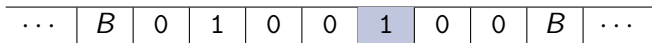
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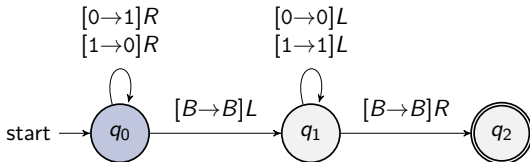
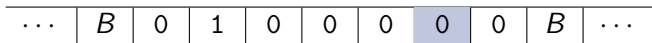
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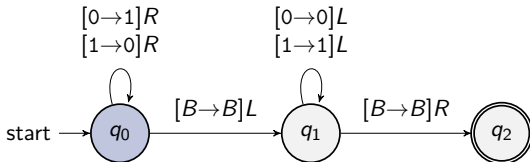
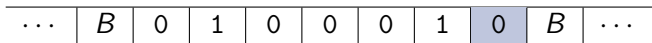
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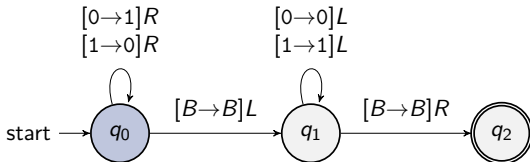
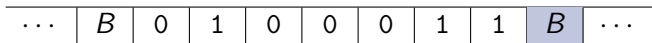
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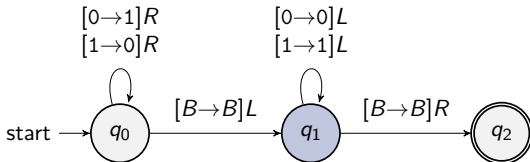
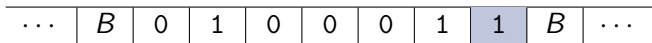
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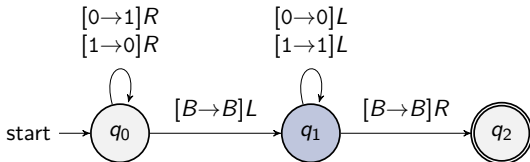
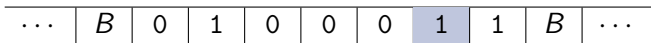
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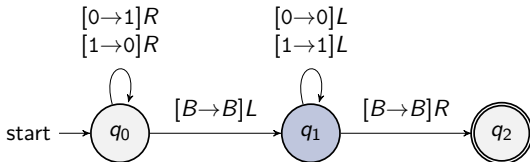
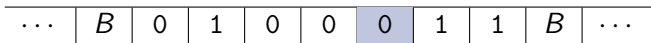
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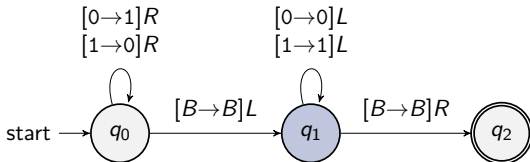
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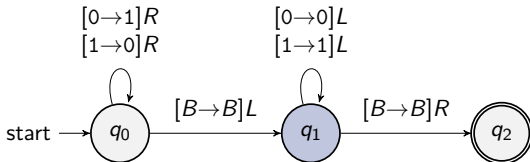
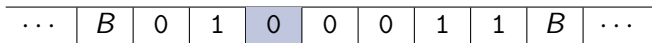
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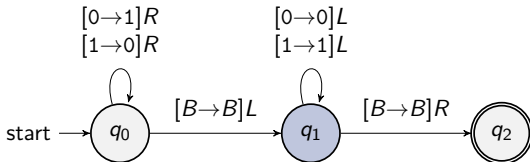
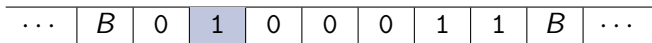
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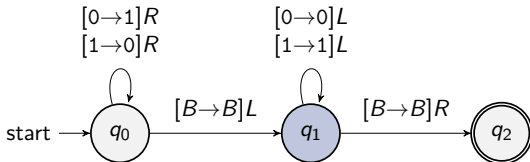
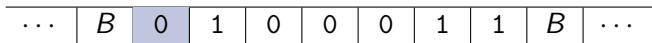
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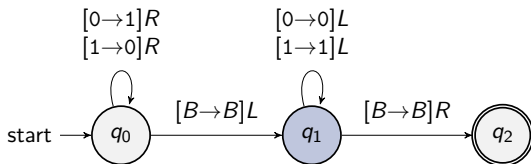
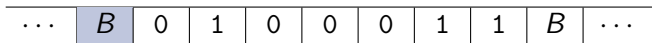
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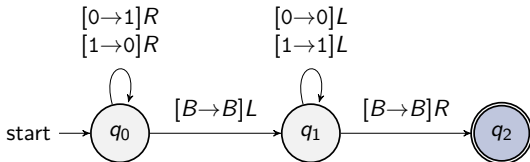
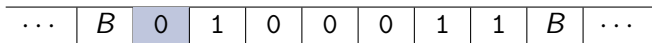
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Computed! $f(1011100) = 0100011$