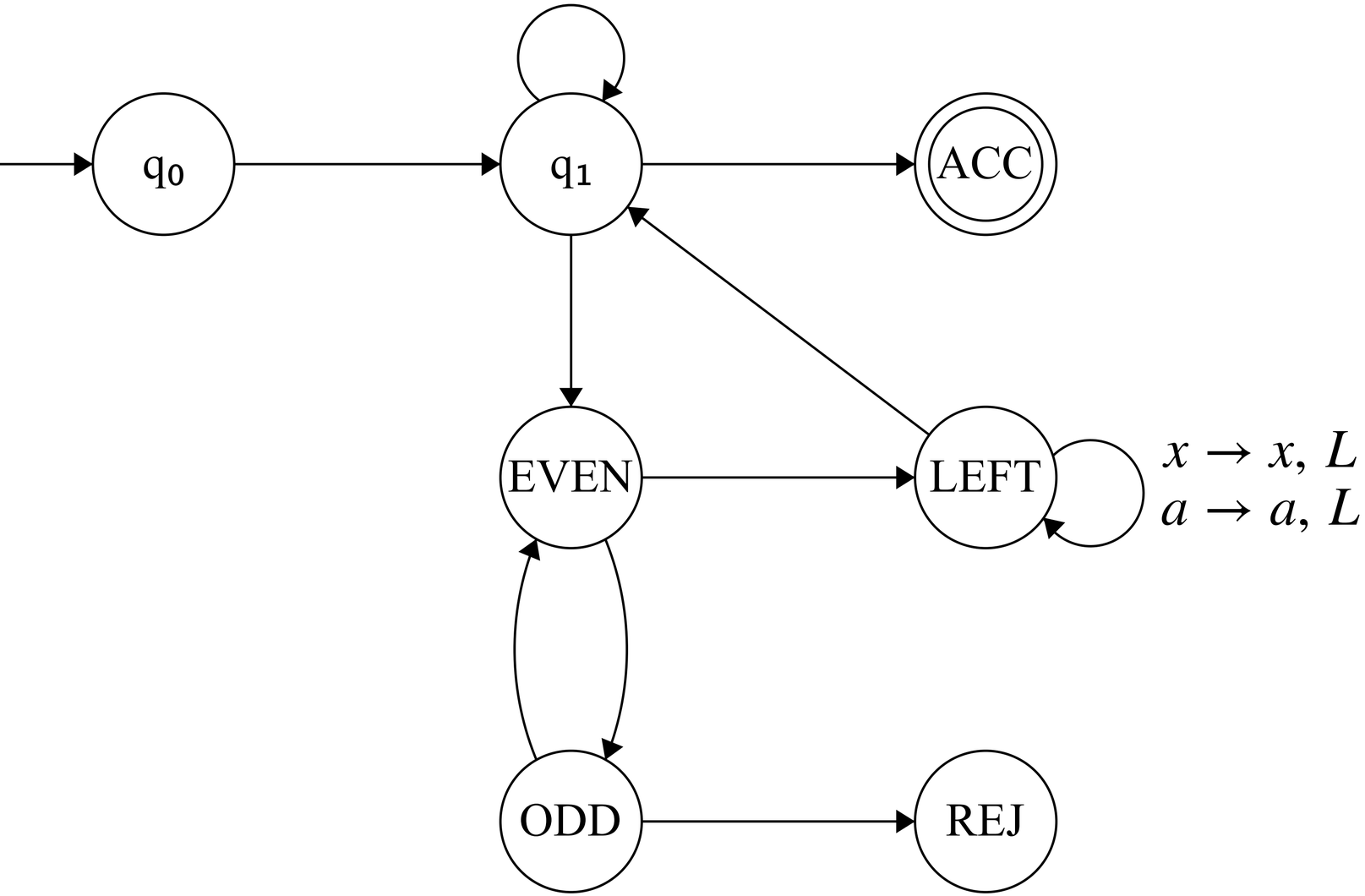
Turing Machine Examples

State Diagrams and Algorithms

Oliver Chubet, October 30, 2024

Deciding Powers of 2



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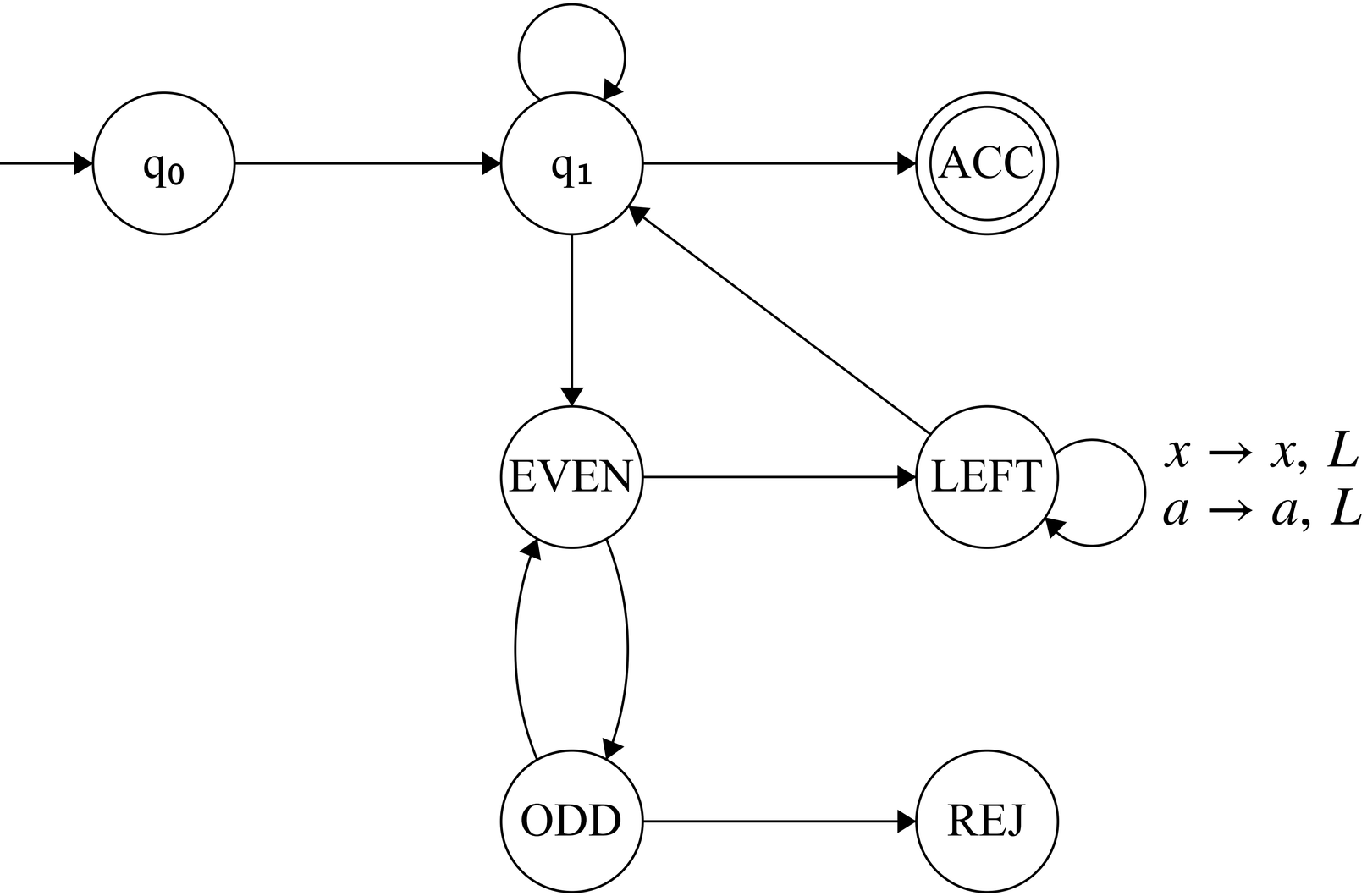

On input a^m:

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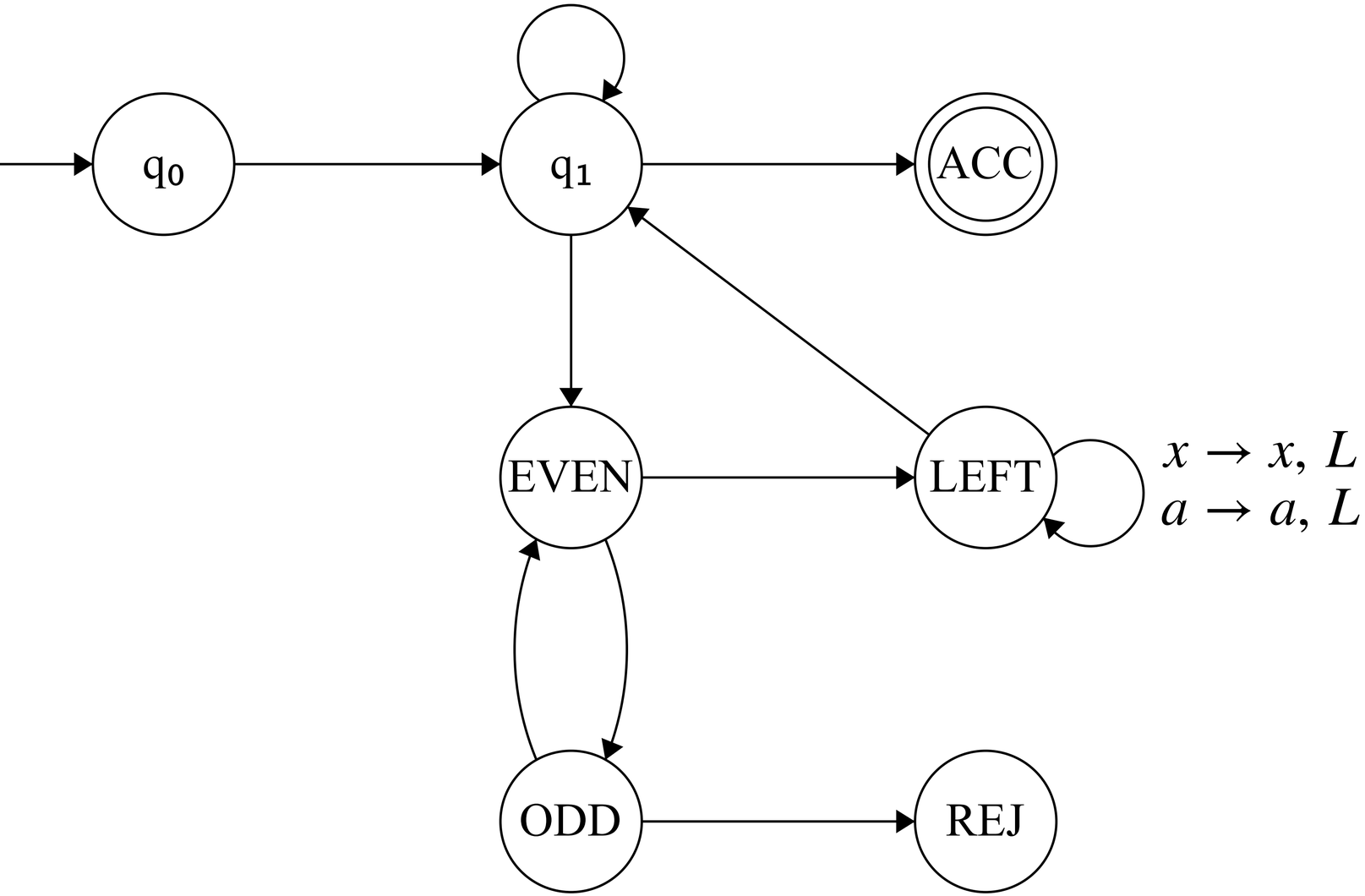

On input a^m:

1. **Convert** the first a symbol to a b.

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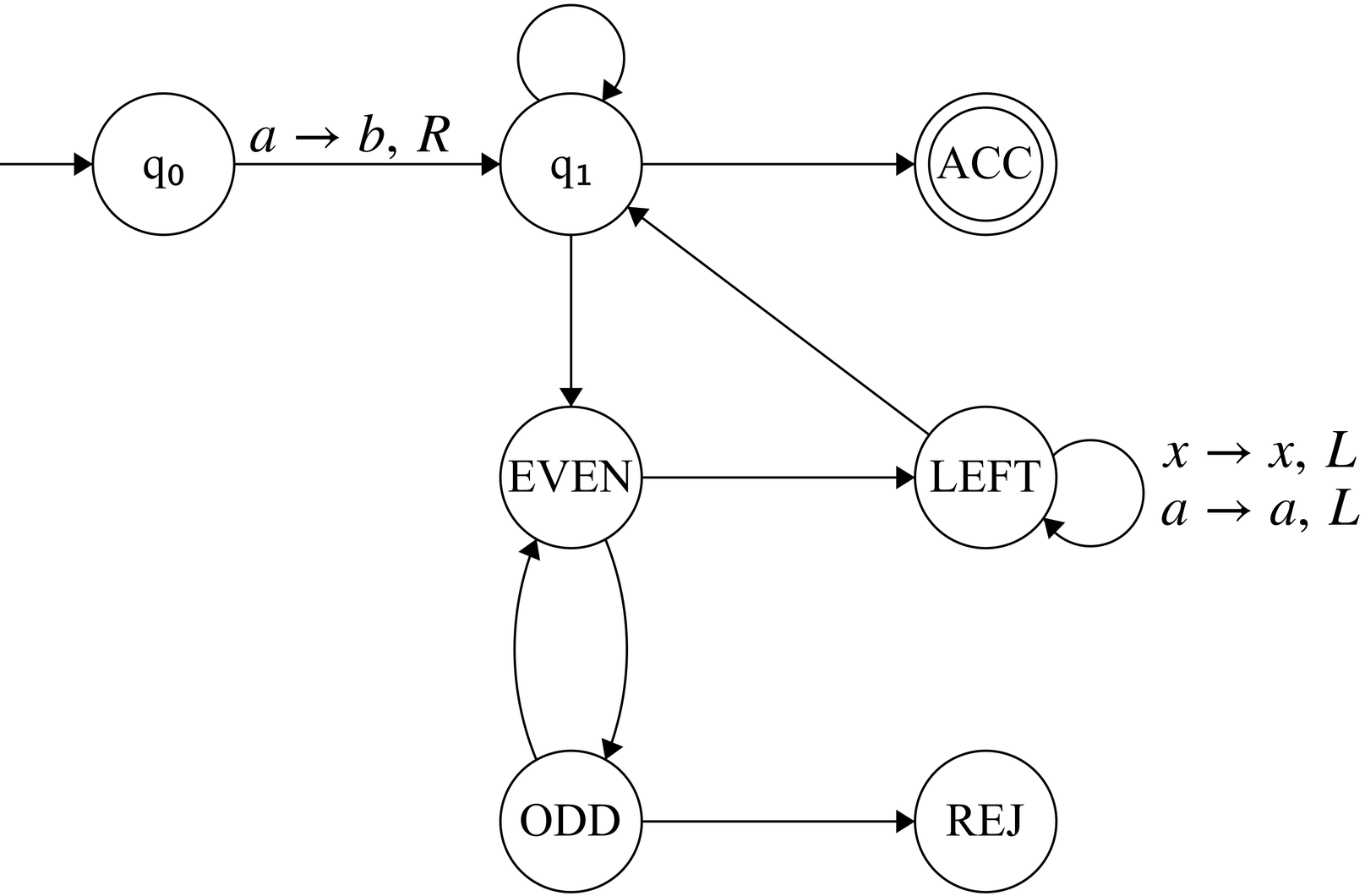

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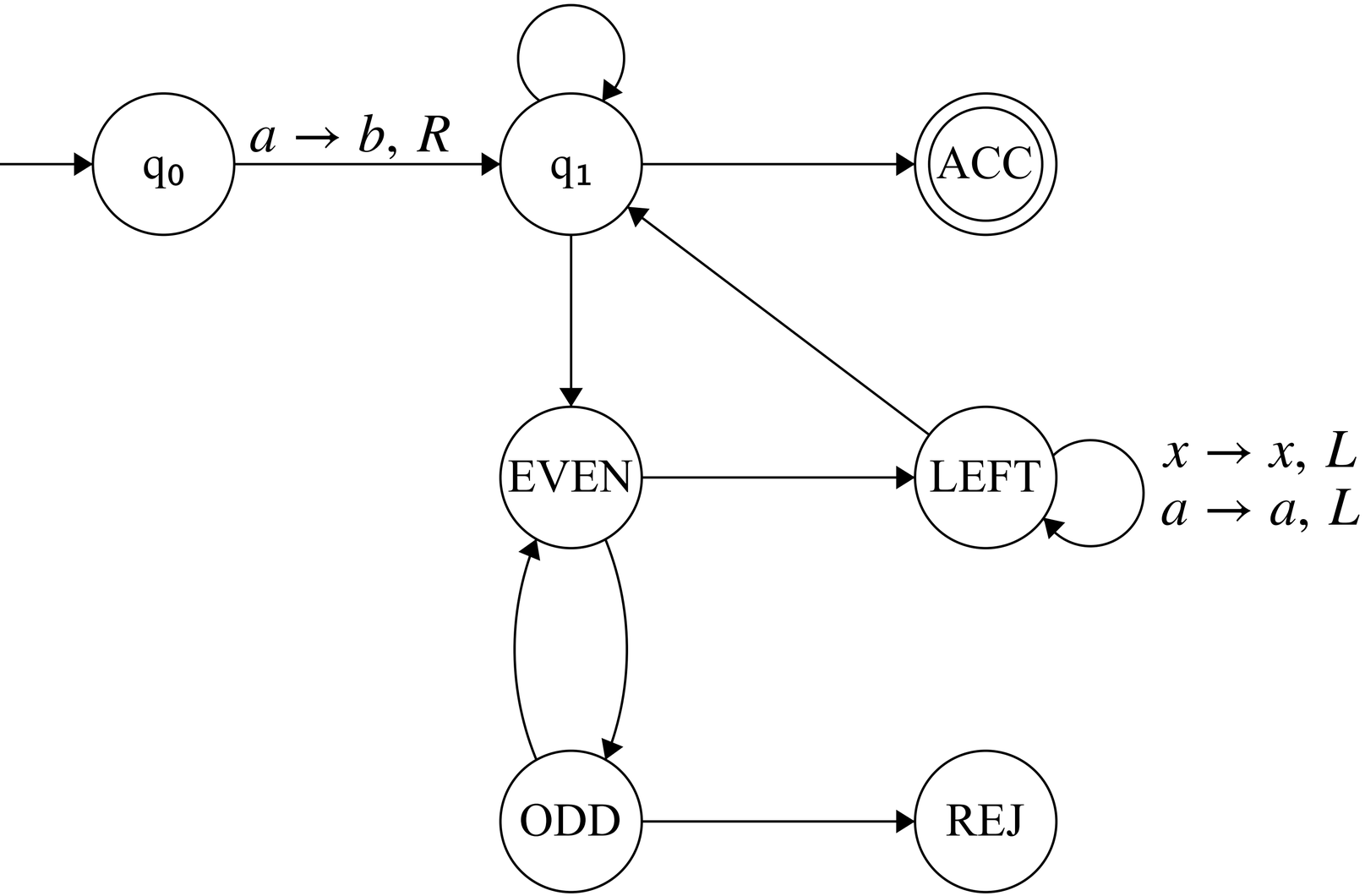

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1. **Convert** the first a symbol to a b.
2. **Scan right**, marking every other a symbol found (starting with the next a found after the b)

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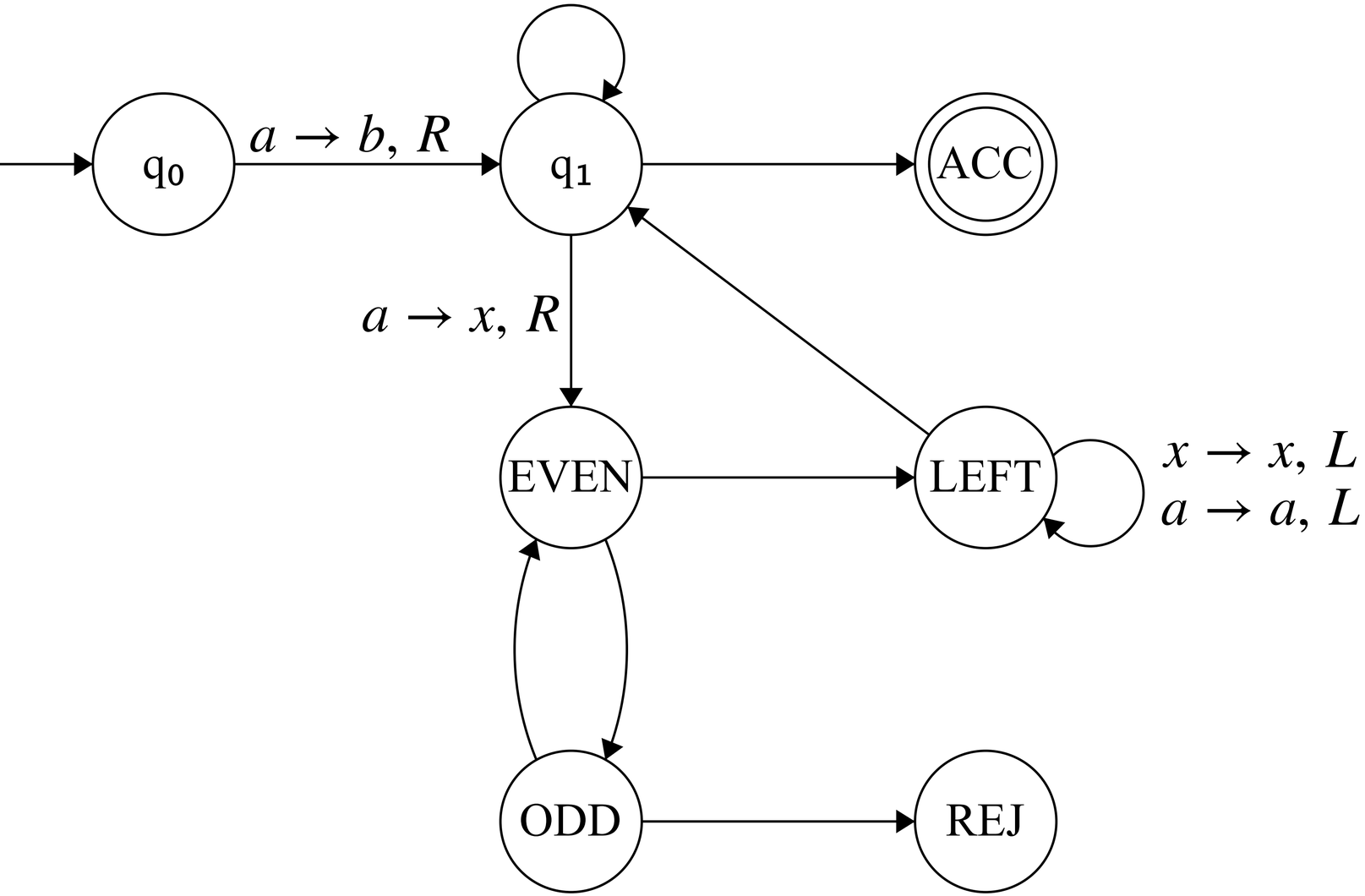

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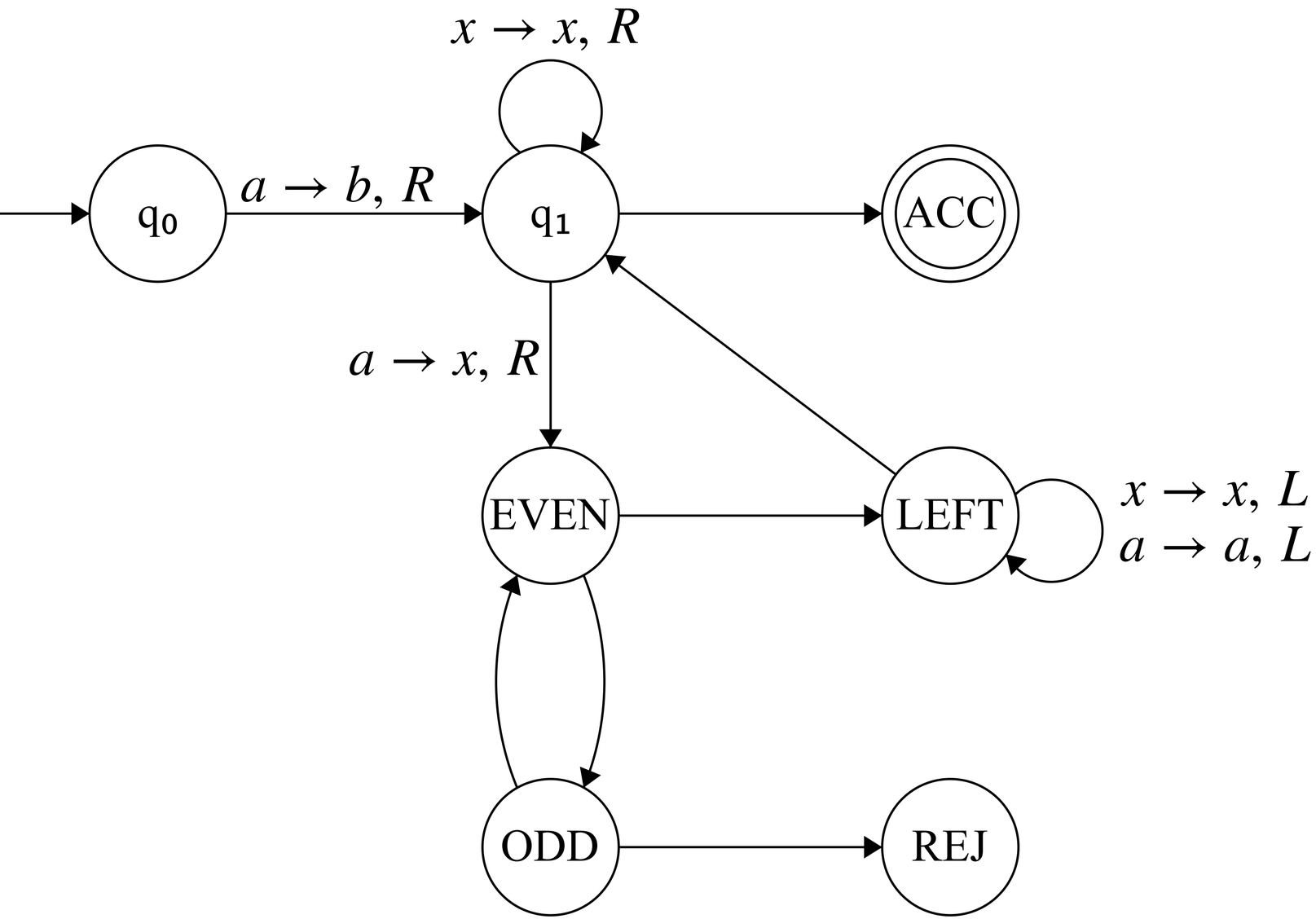

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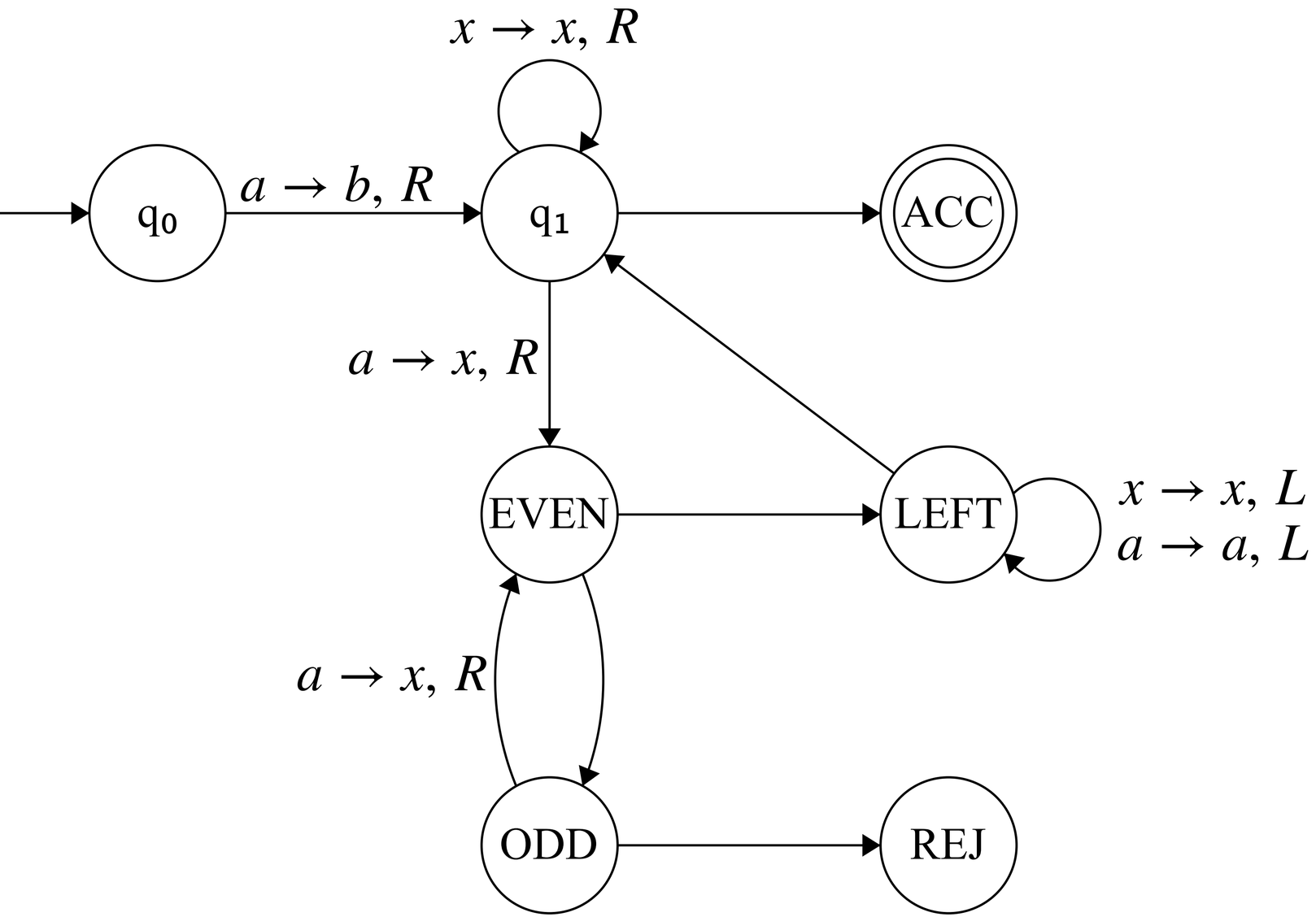

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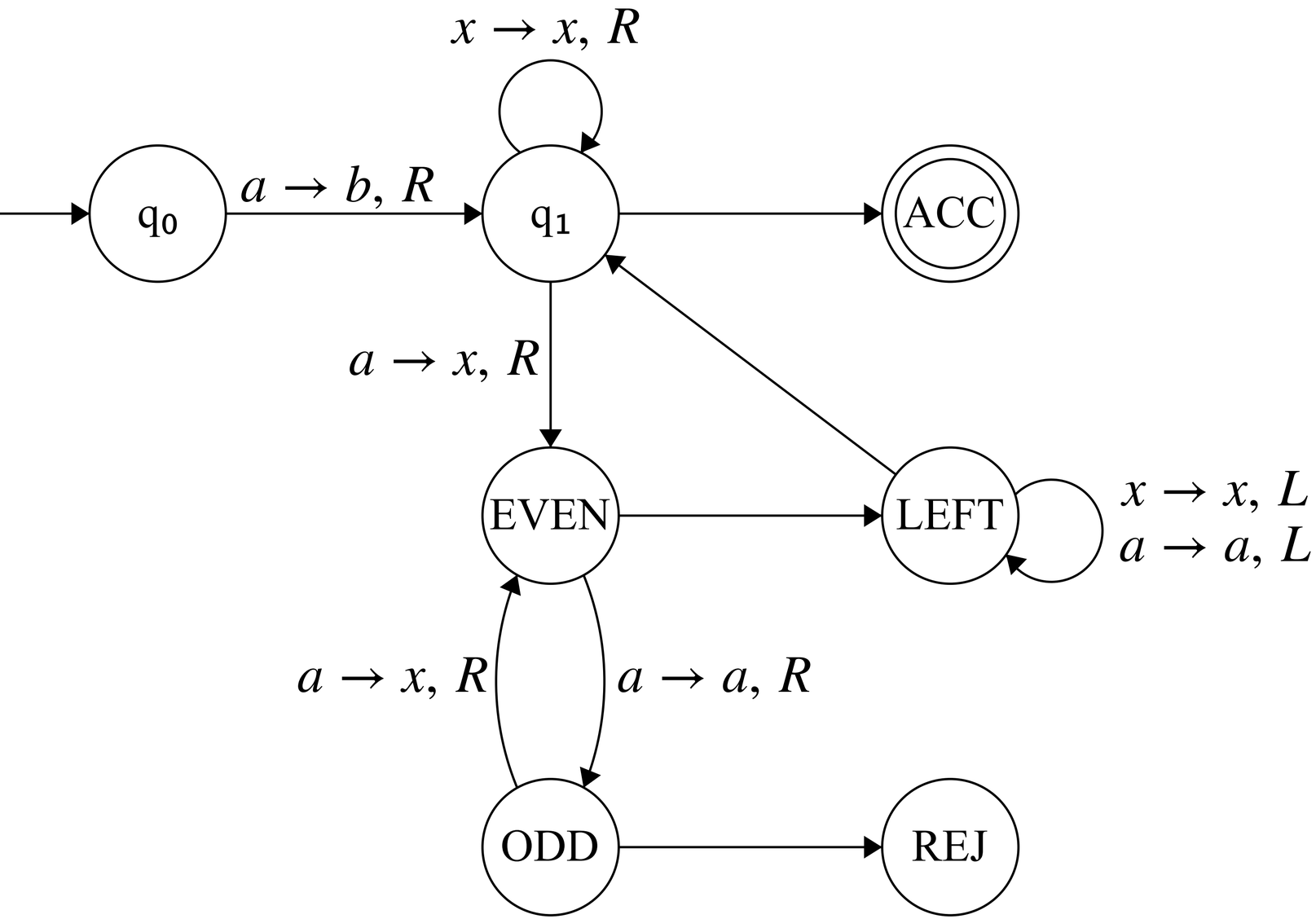

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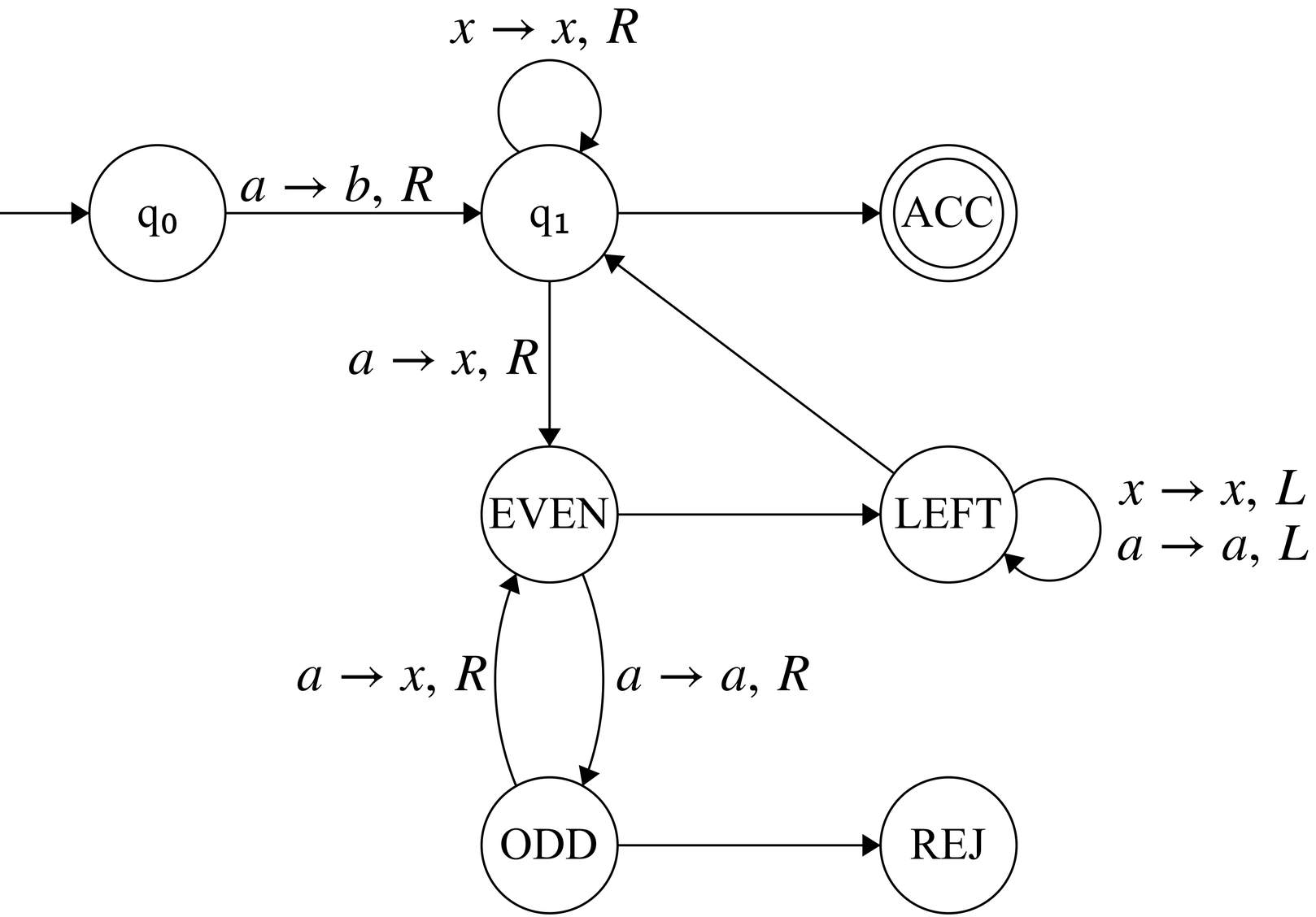

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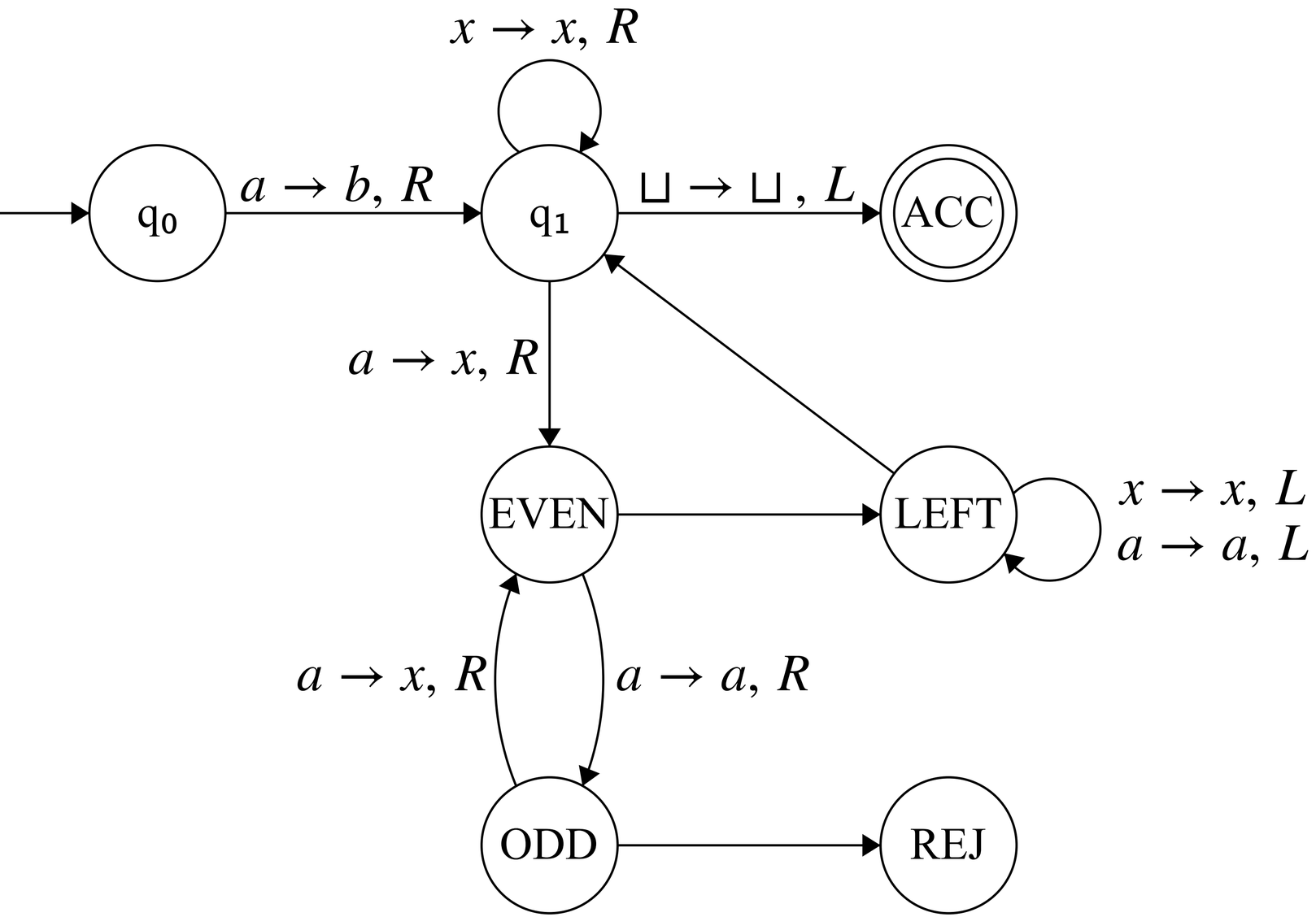

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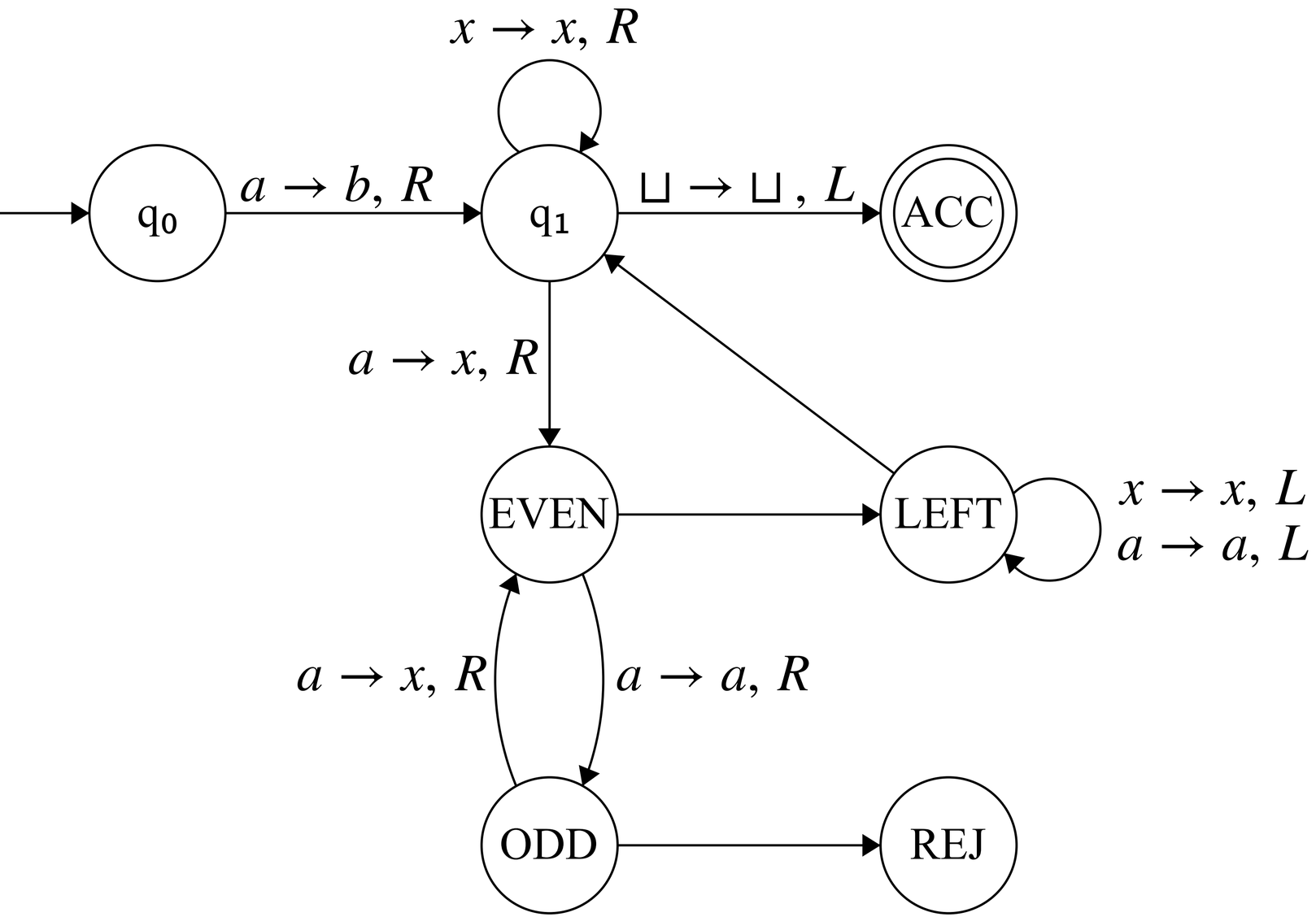

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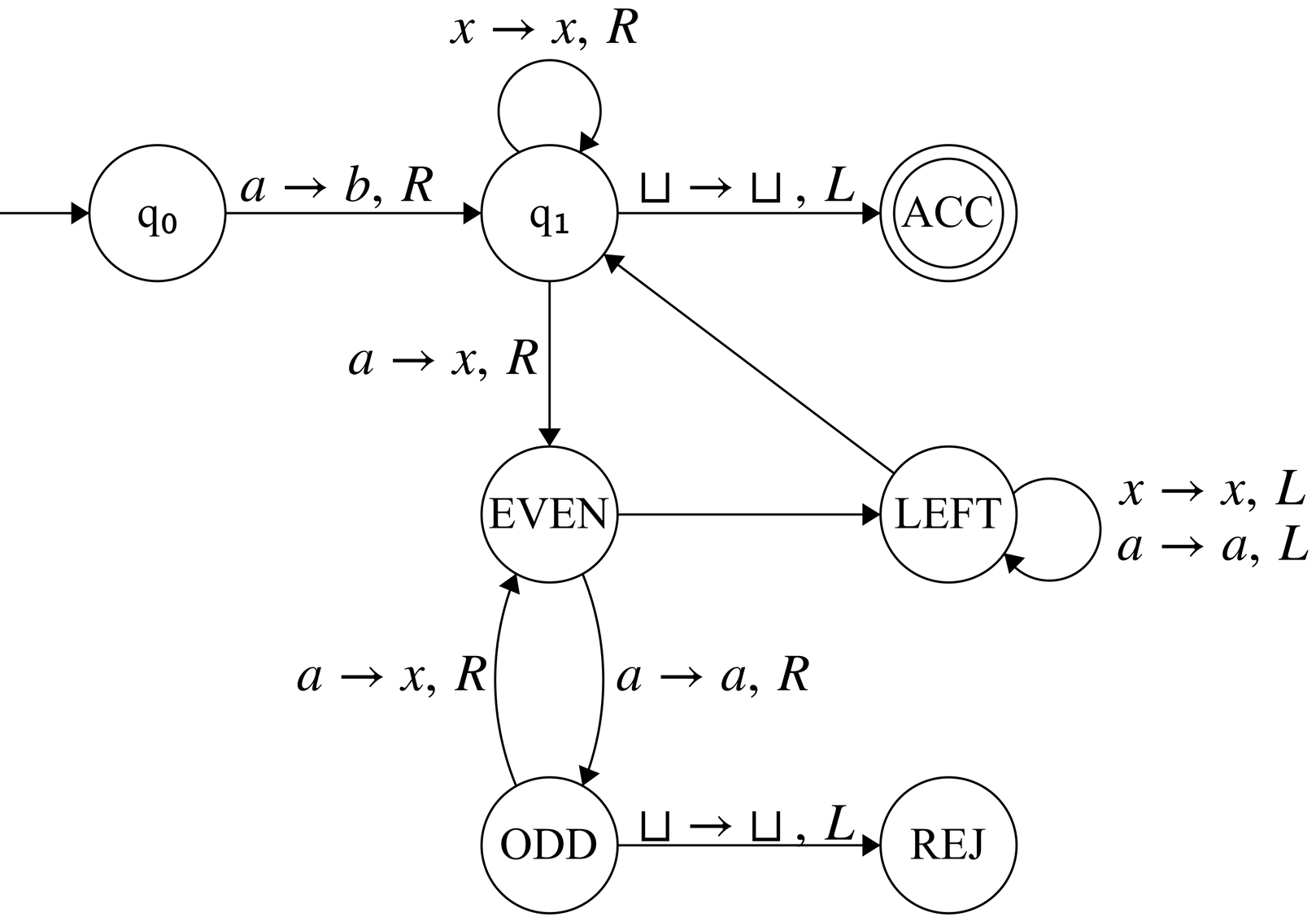

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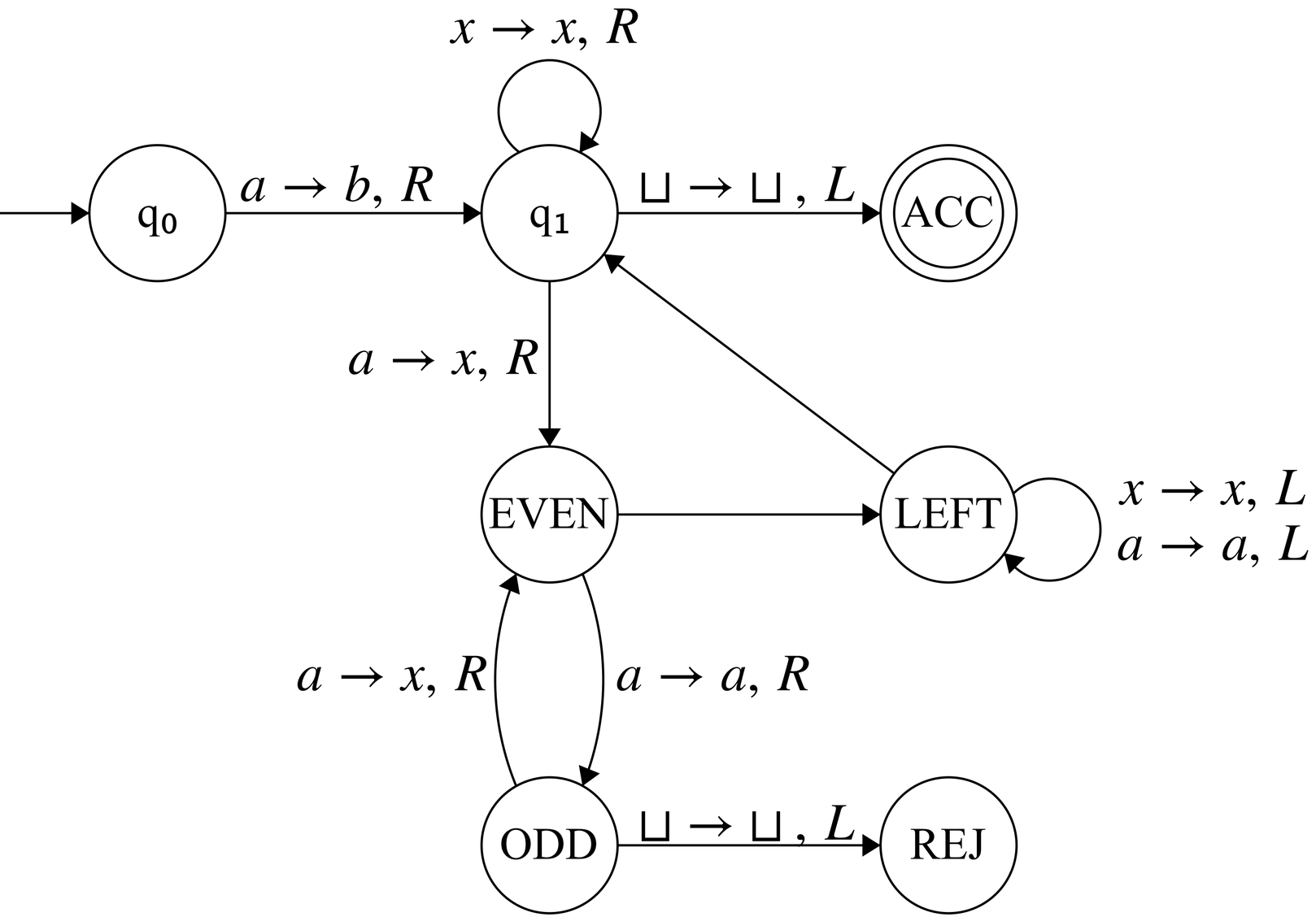

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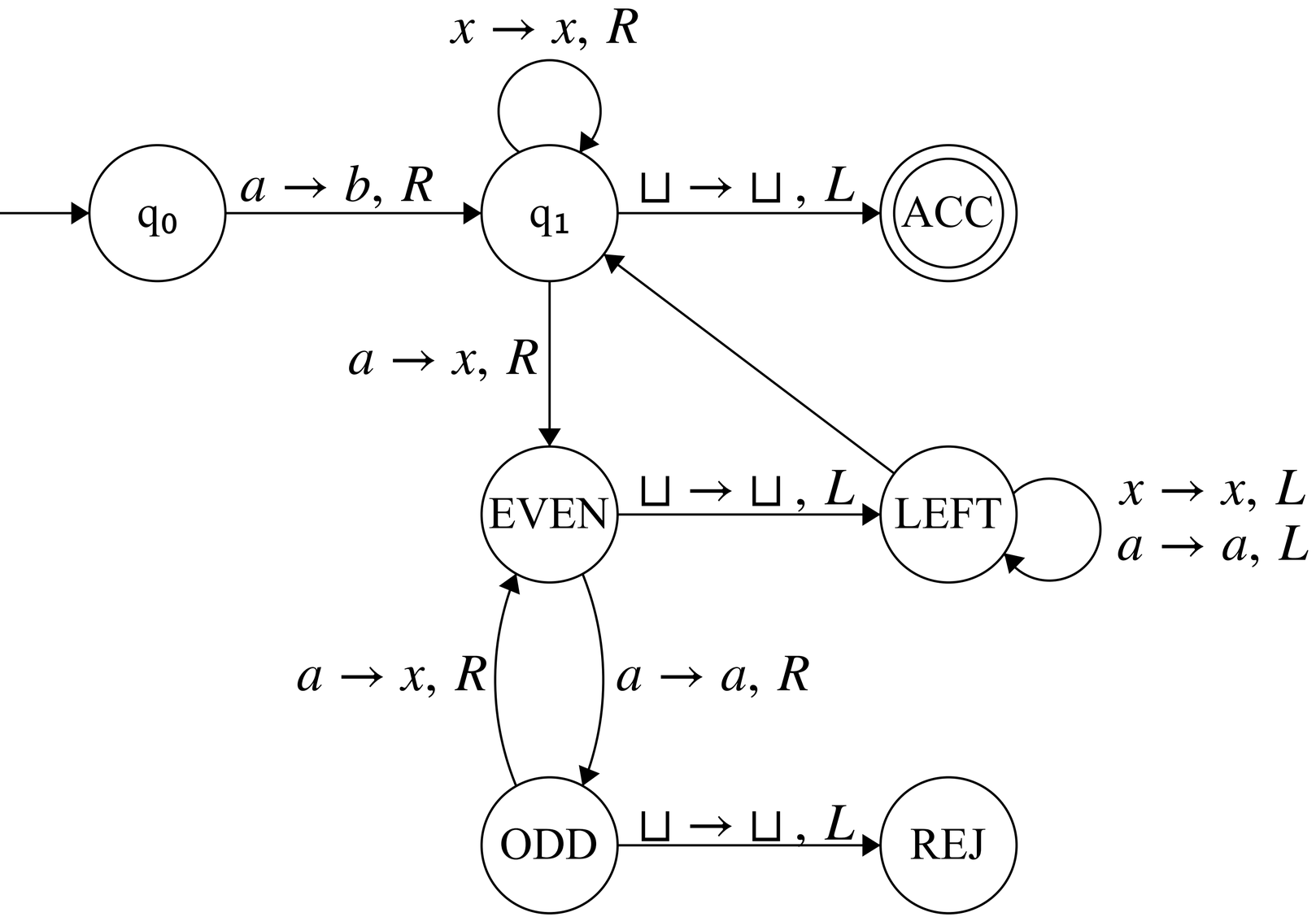

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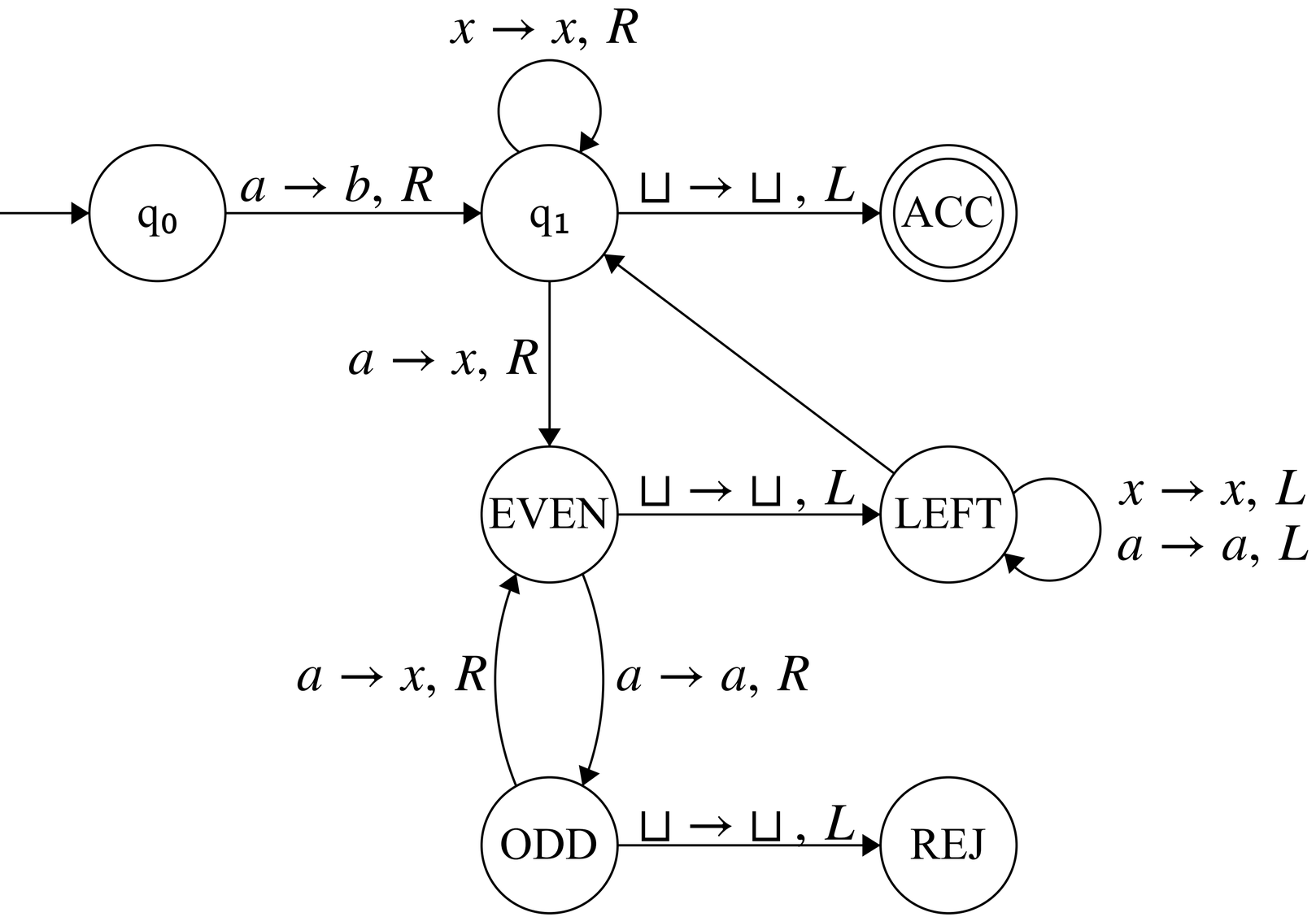

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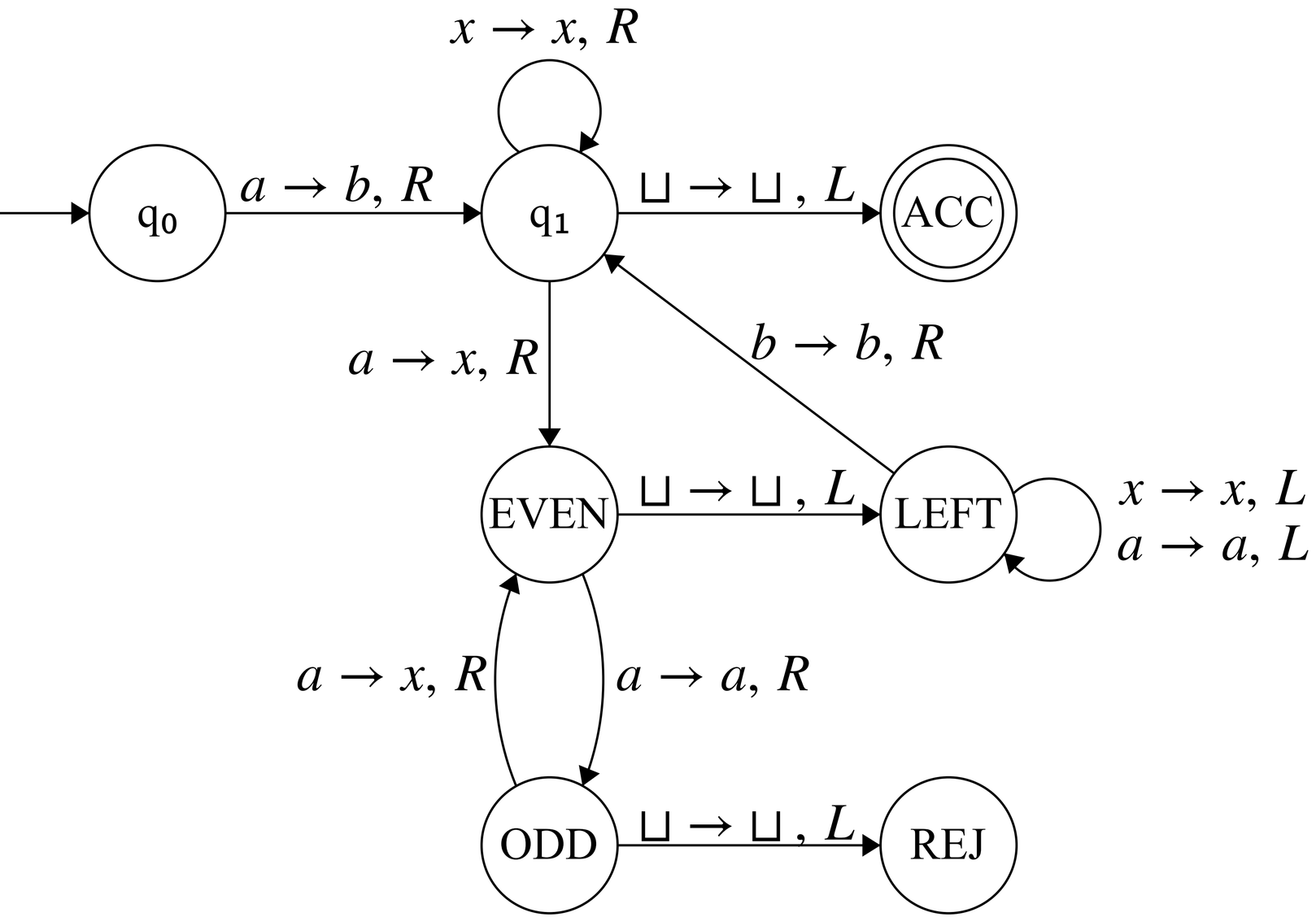

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