

The de Bruijn Graph and its efficient representation

Different kind of graph

“tomorrow and tomorrow and tomorrow”

Different kind of graph

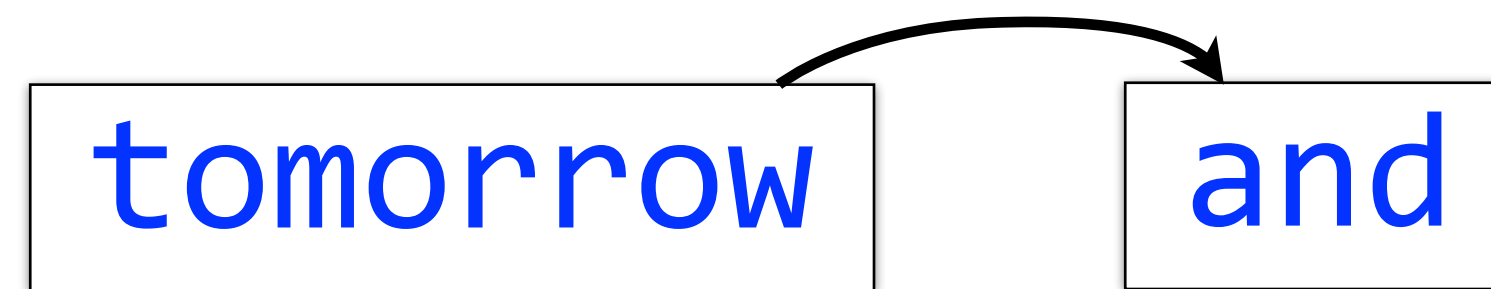
“tomorrow and tomorrow and tomorrow”

tomorrow

and

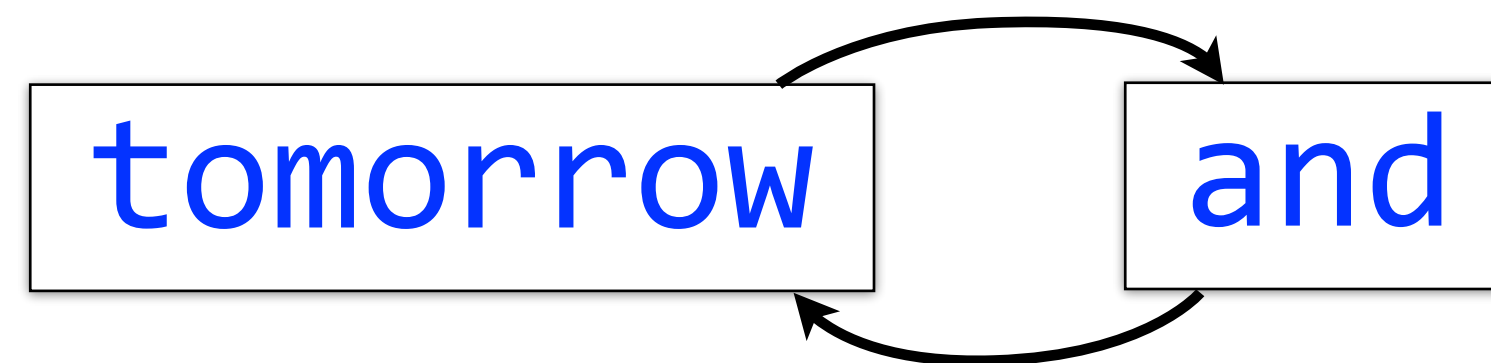
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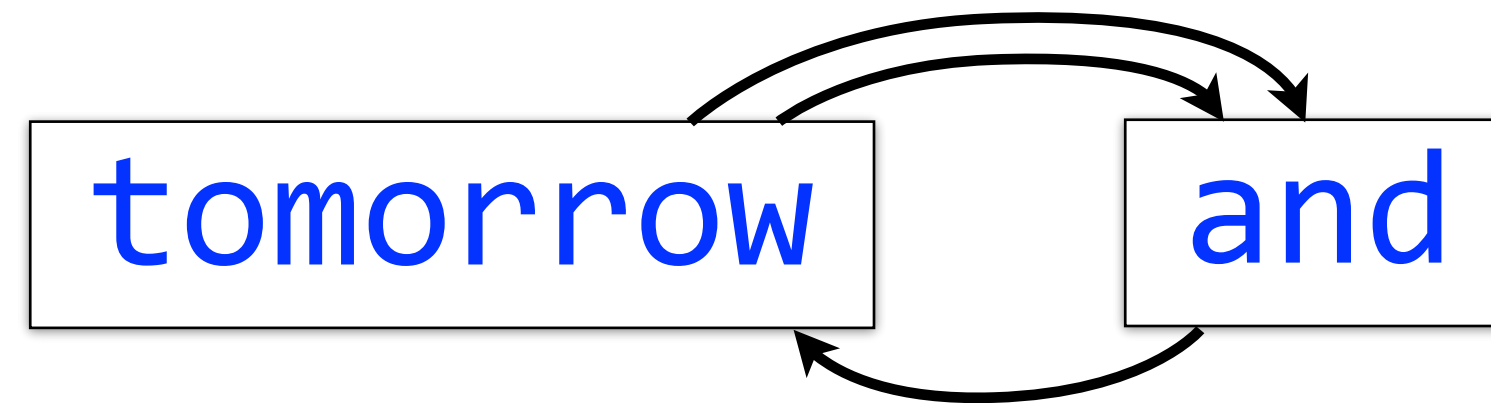
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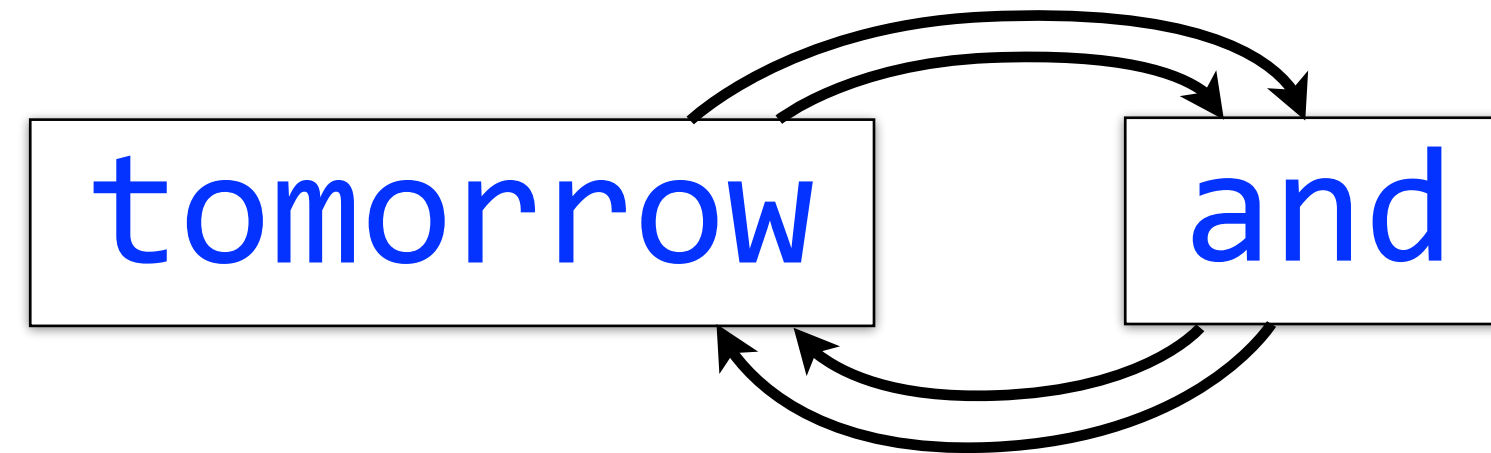
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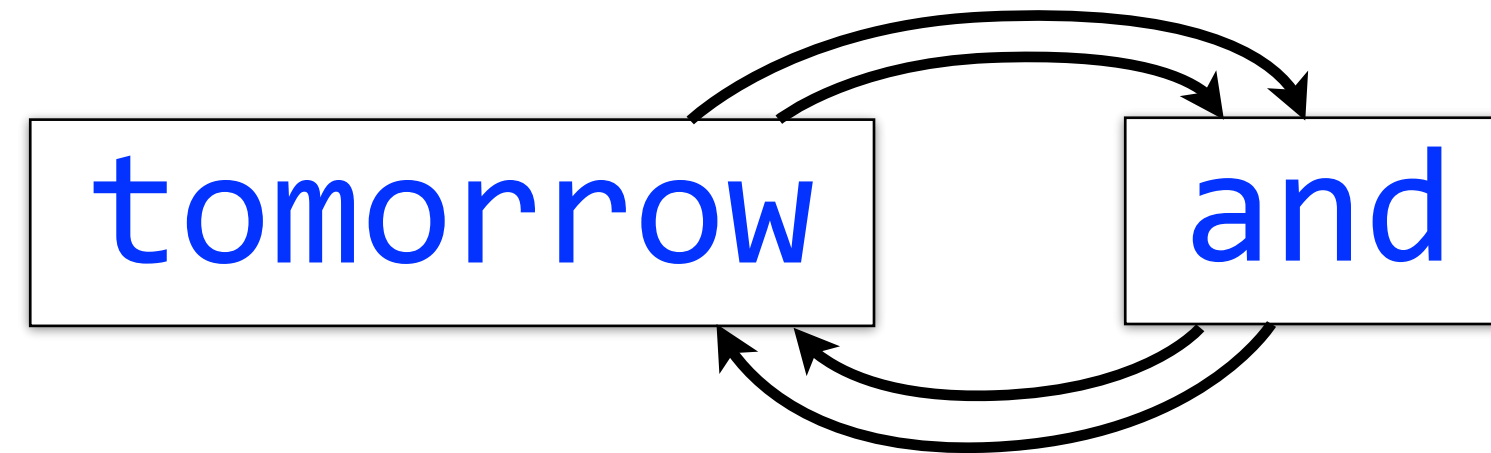
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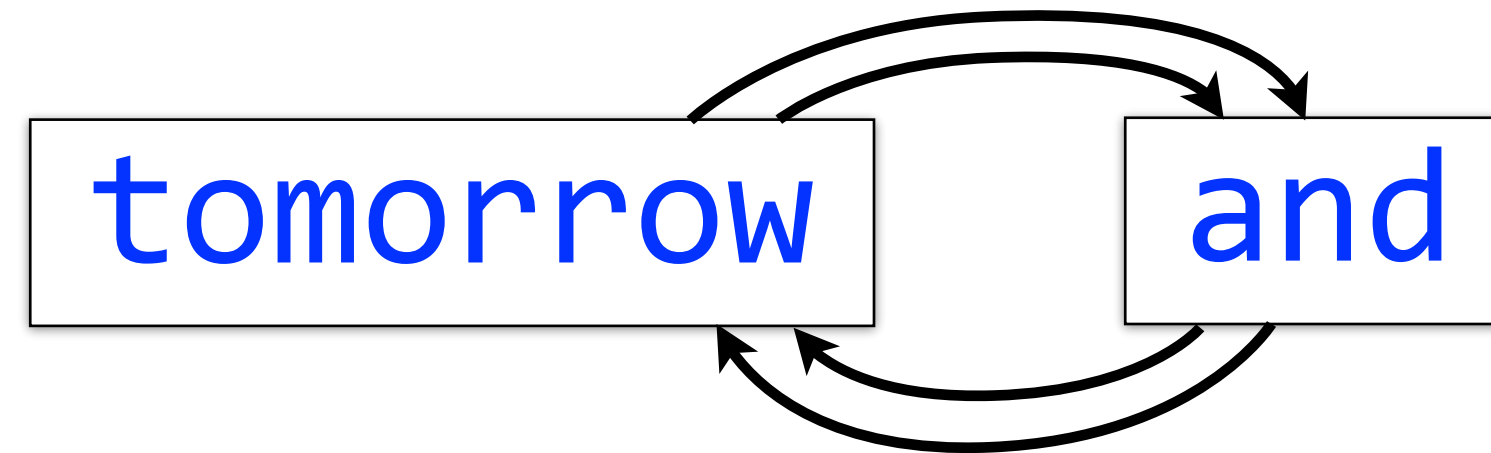
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An edge represents an ordered pair of adjacent words in the input

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Multigraph: there can be more than one edge from node A to node B

De Bruijn graph

genome: **AAABBBBA**

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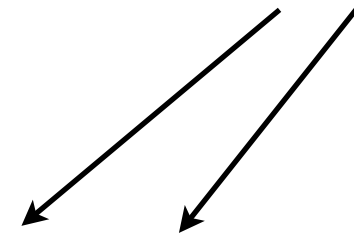
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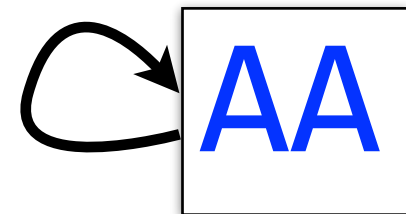
AA

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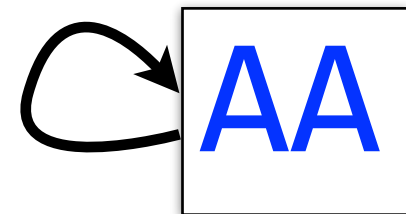
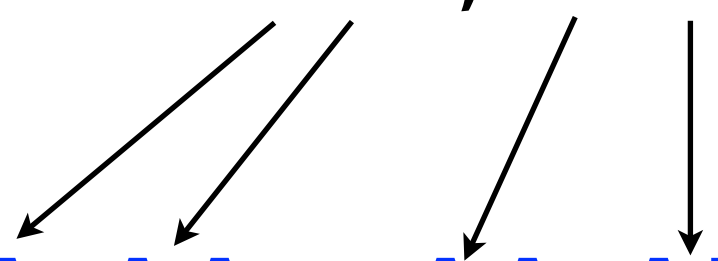


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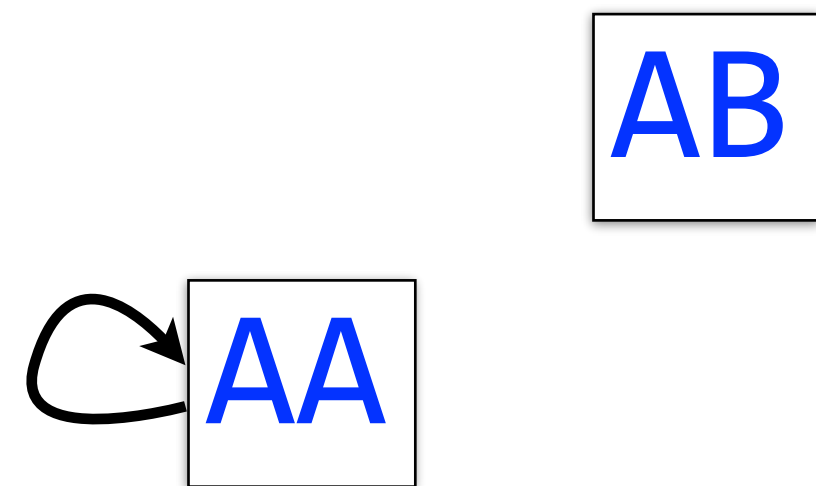


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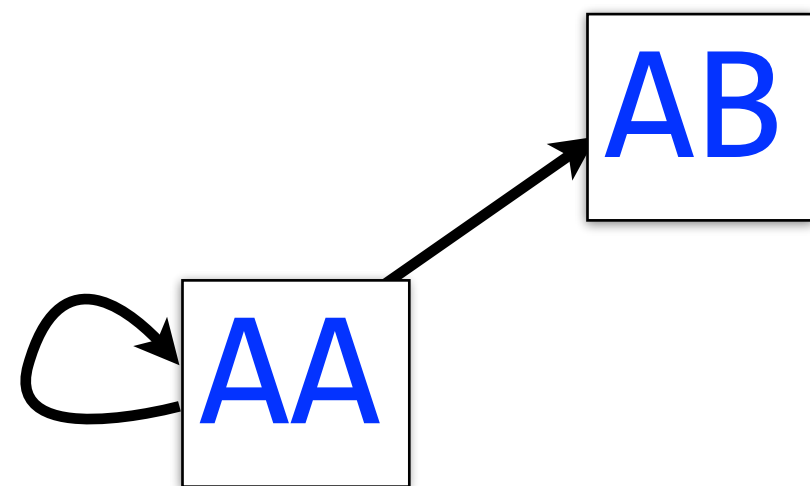


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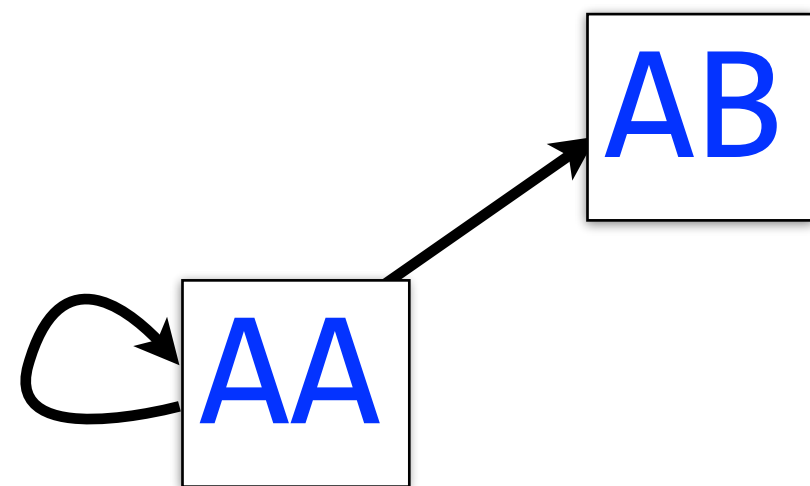


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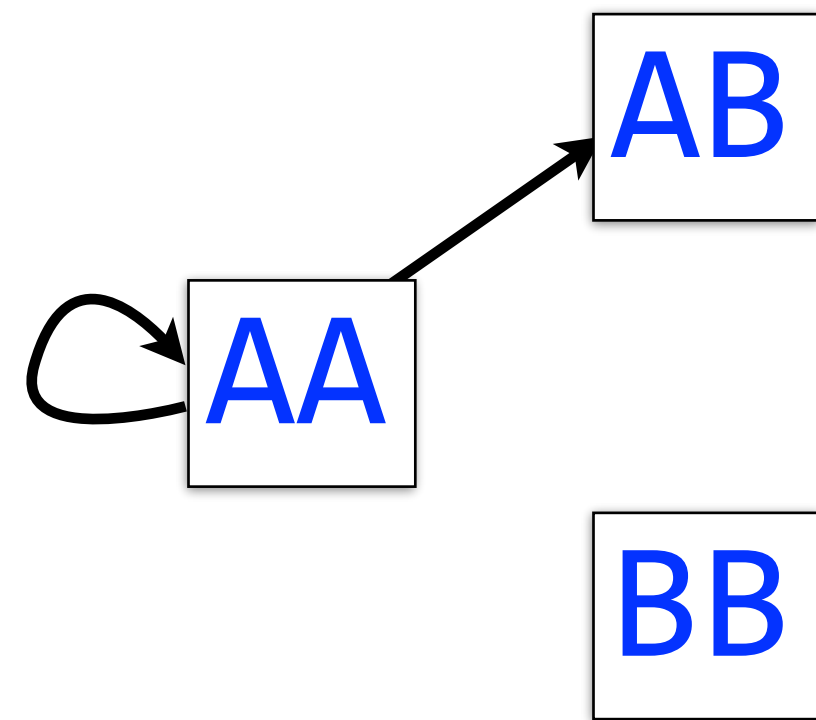


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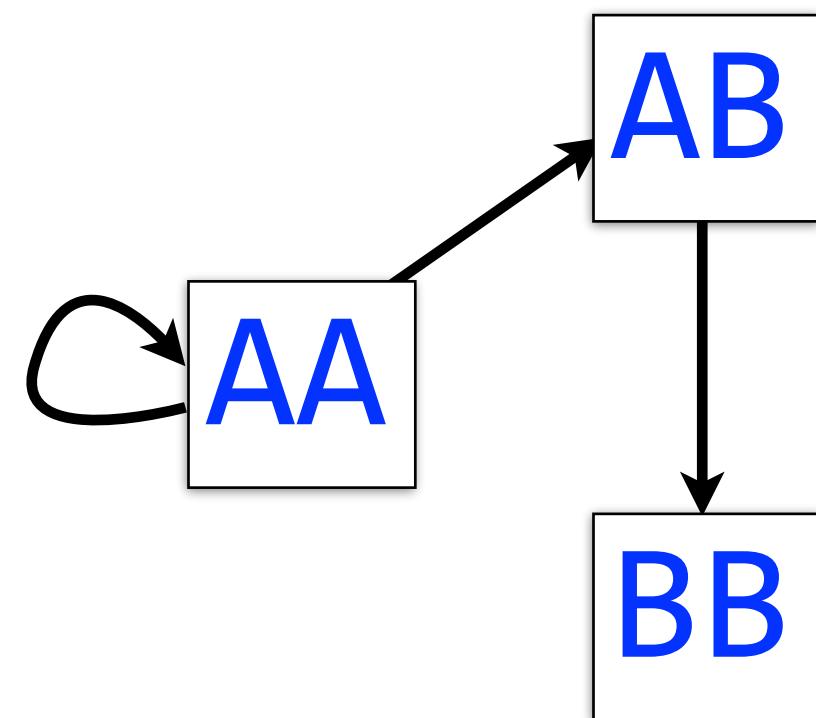


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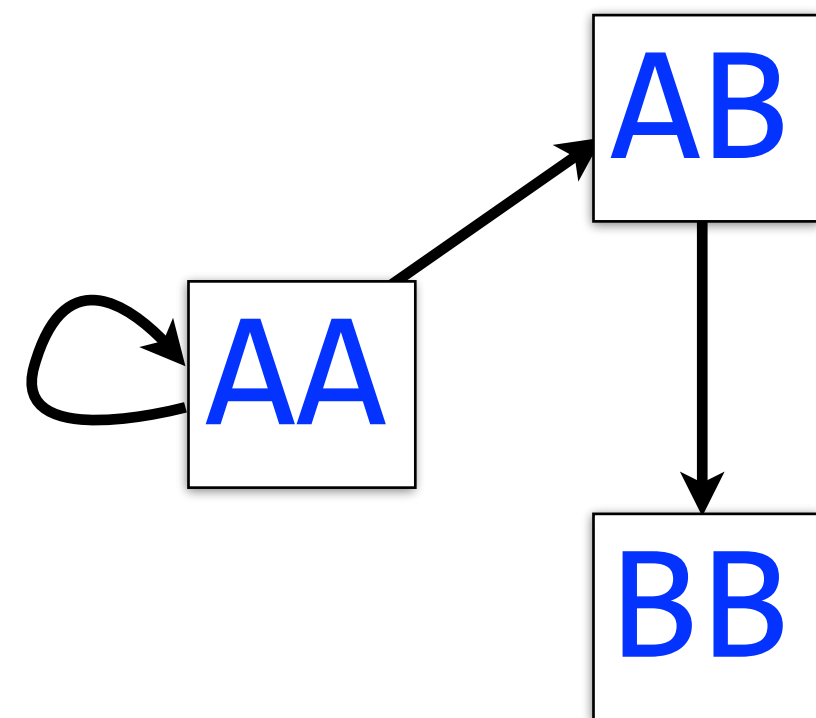


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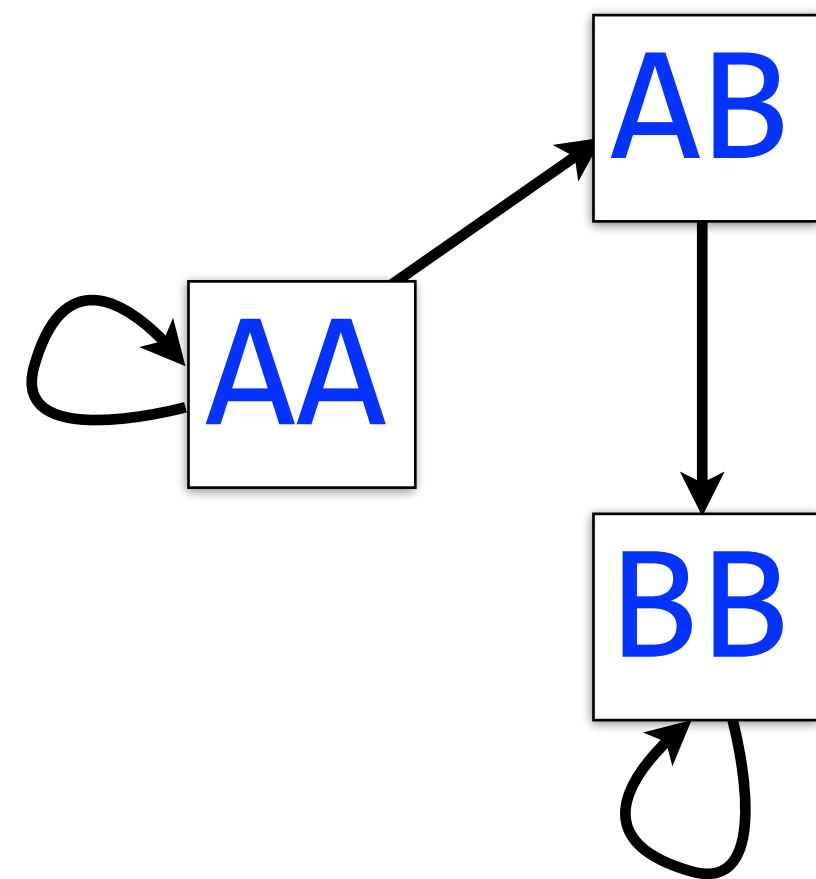


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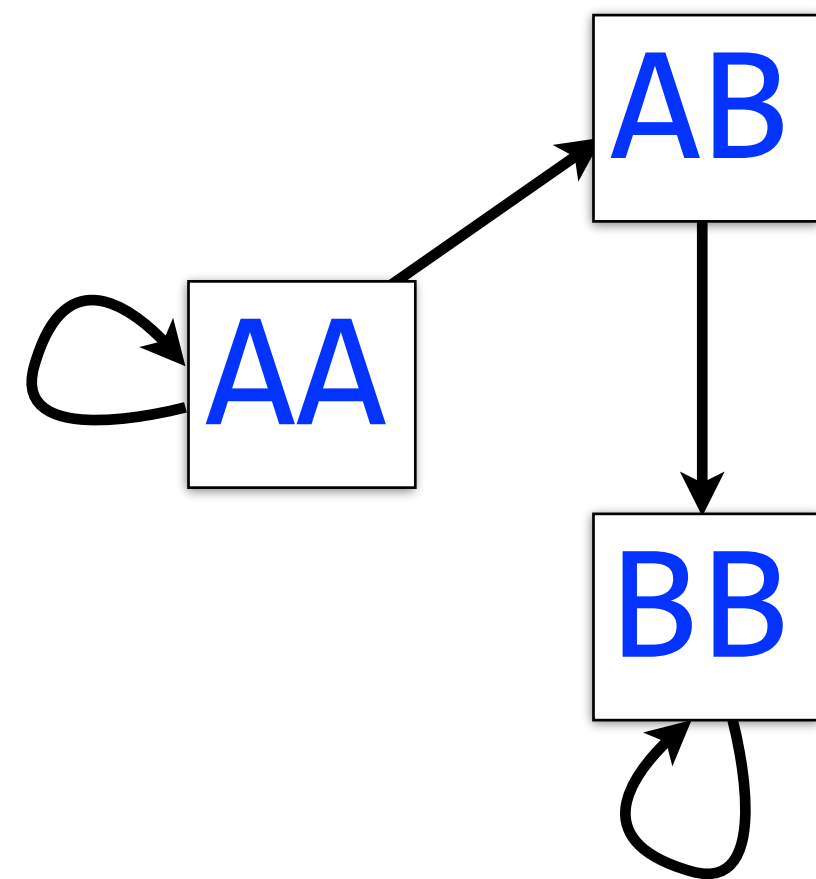


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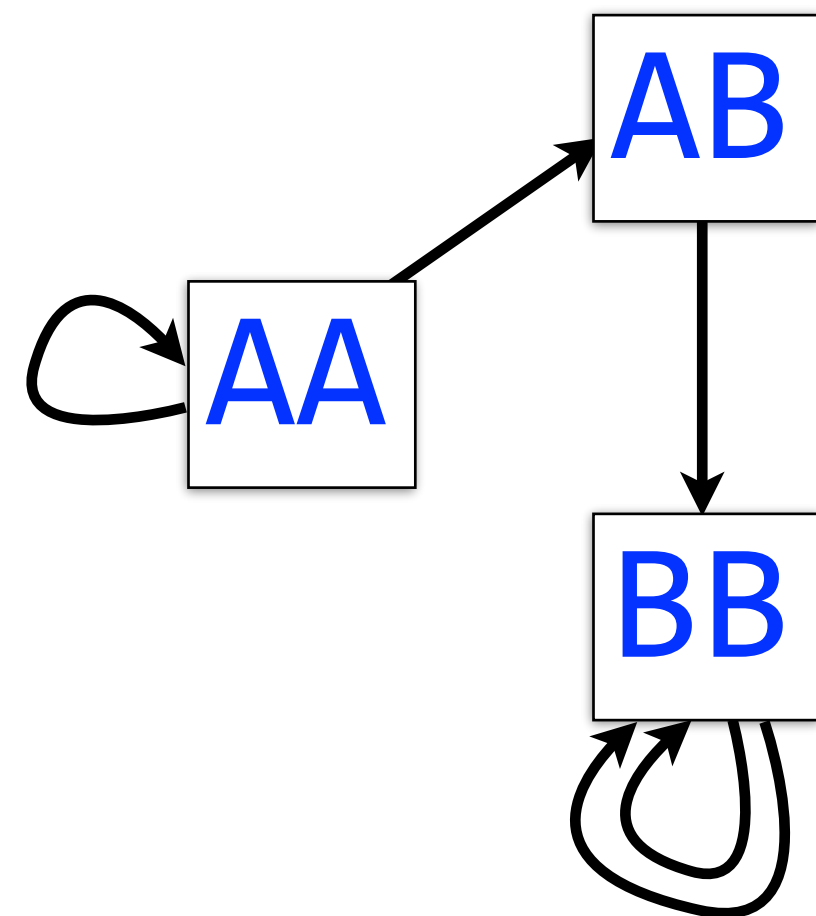


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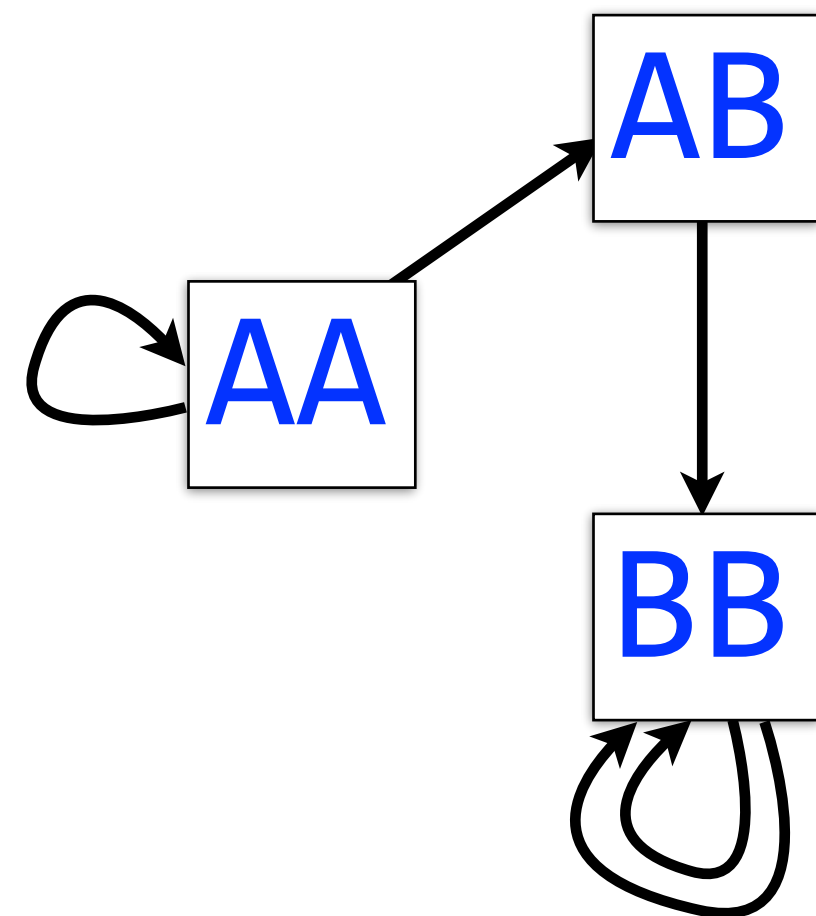


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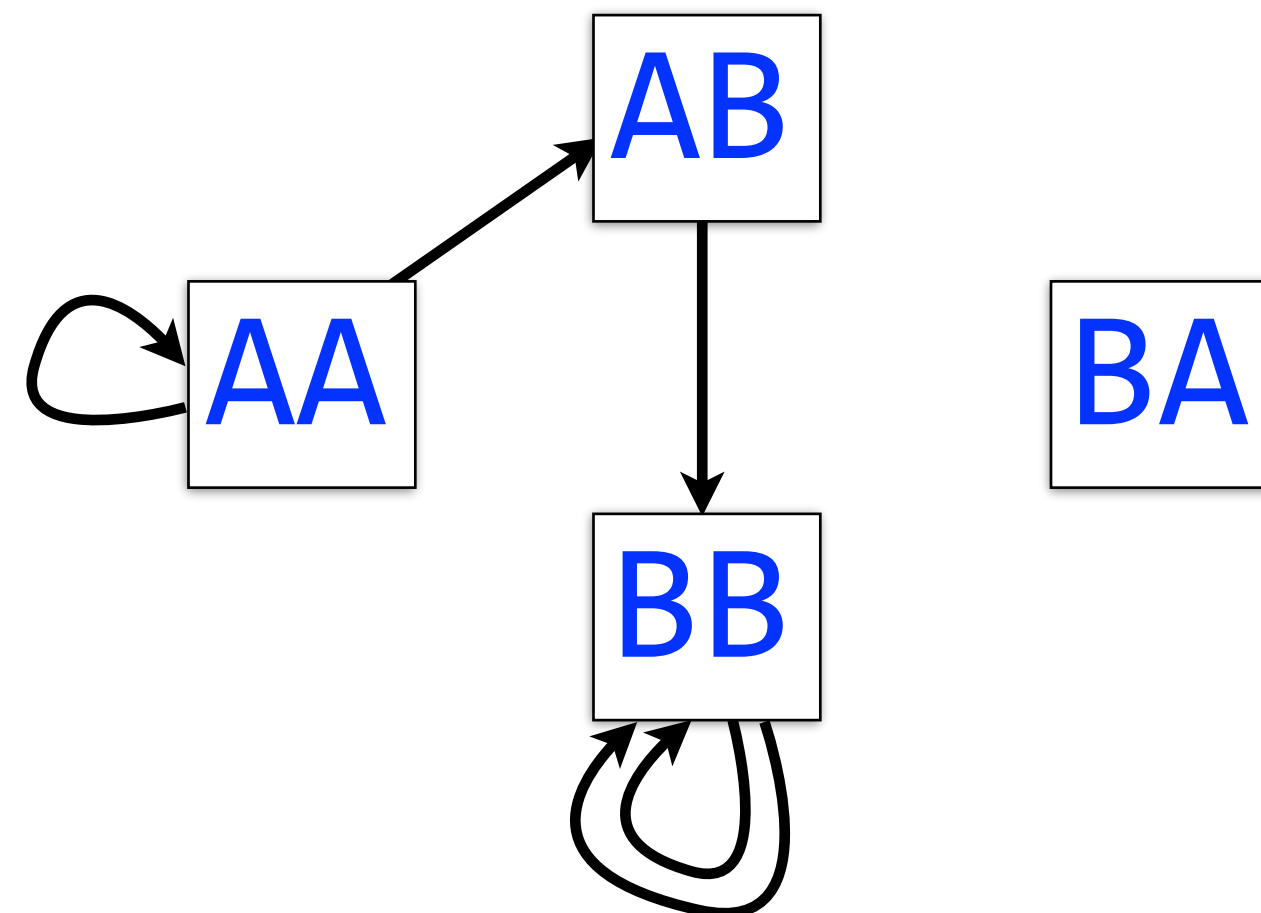


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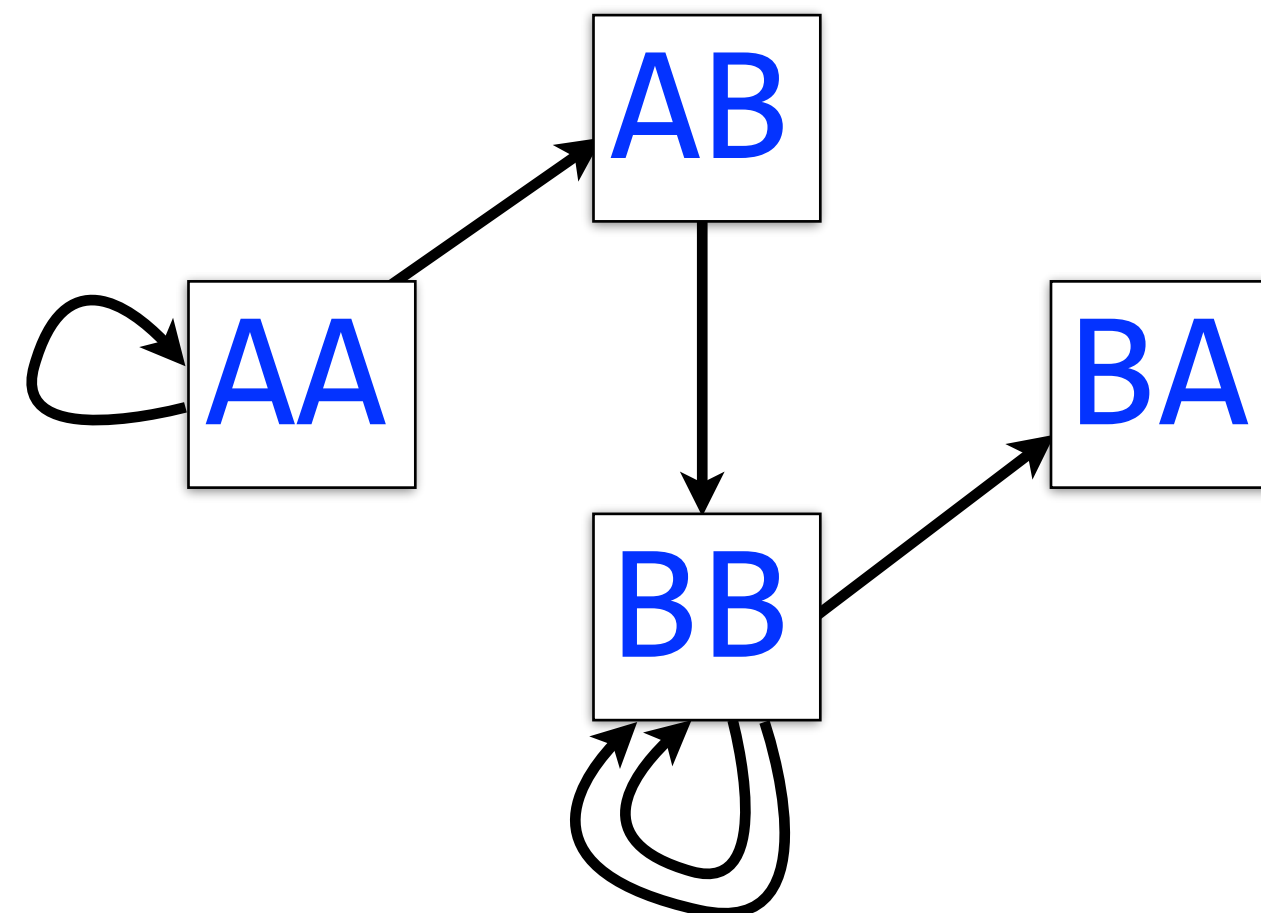


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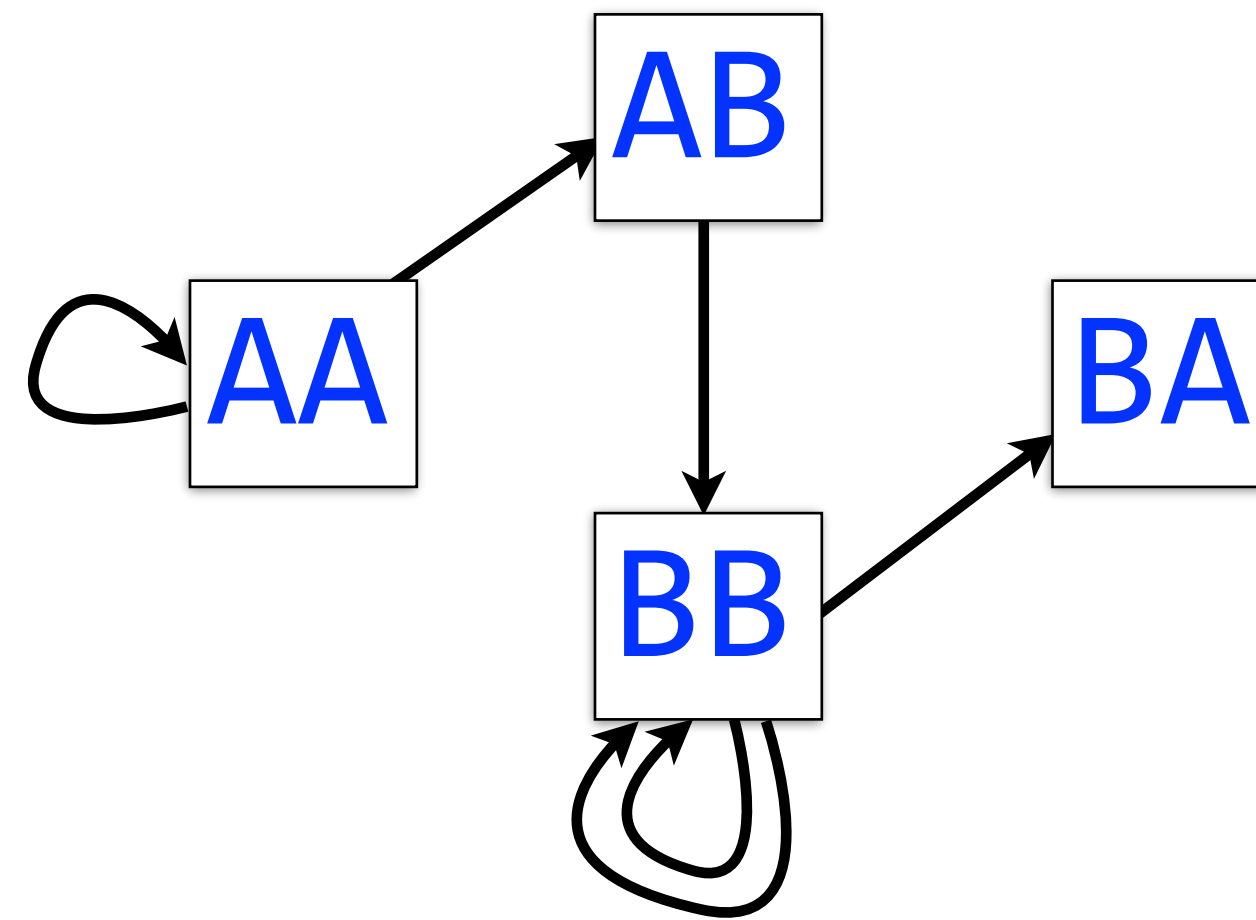
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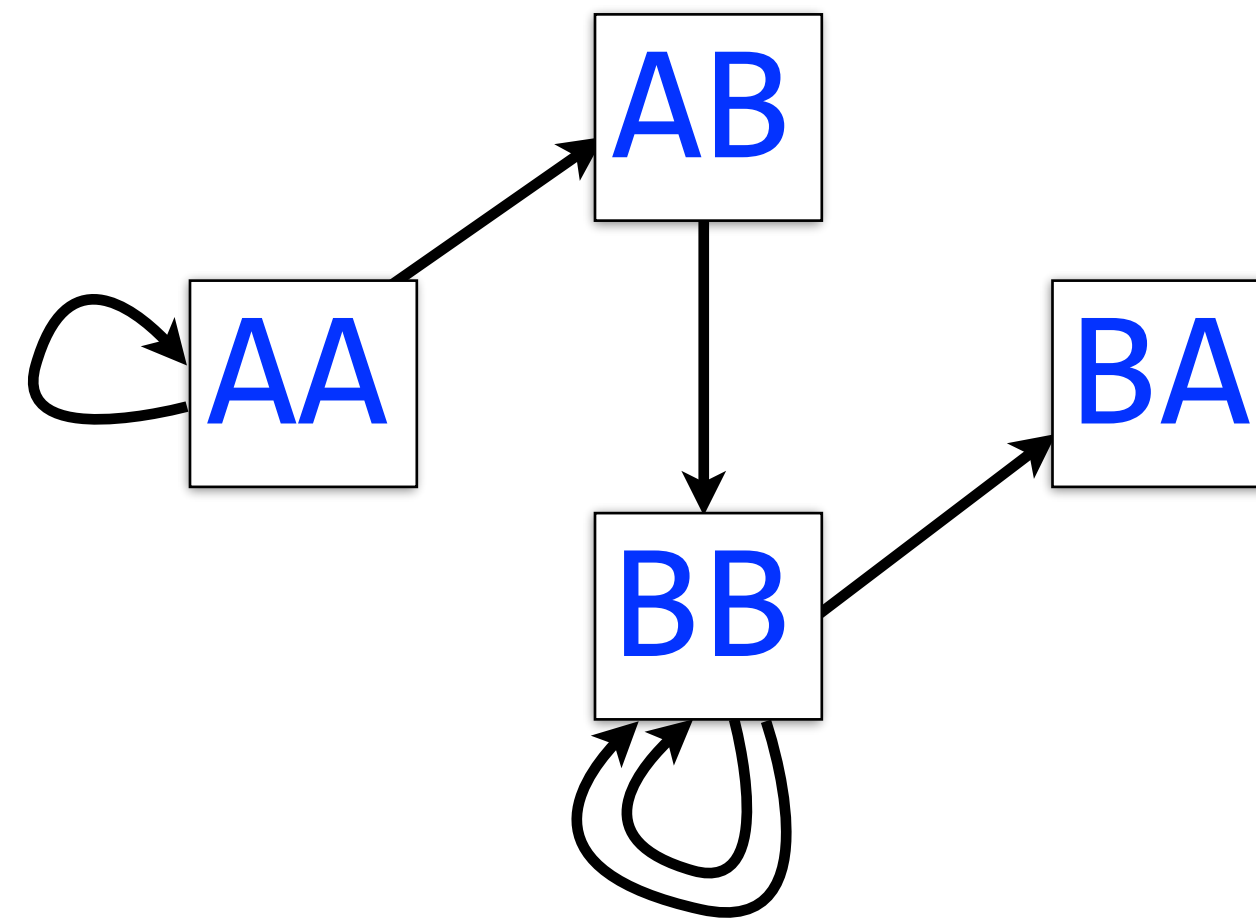
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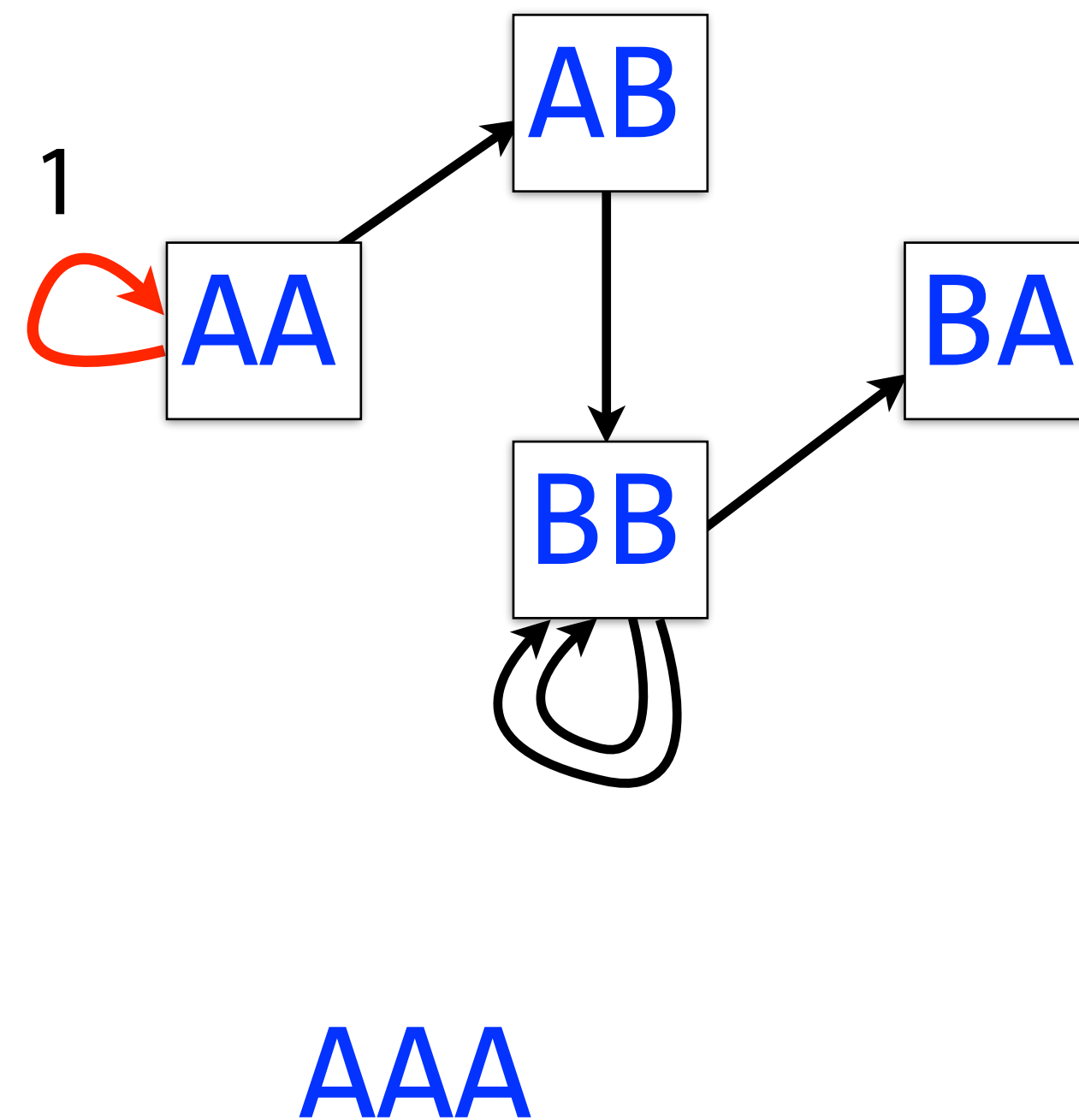


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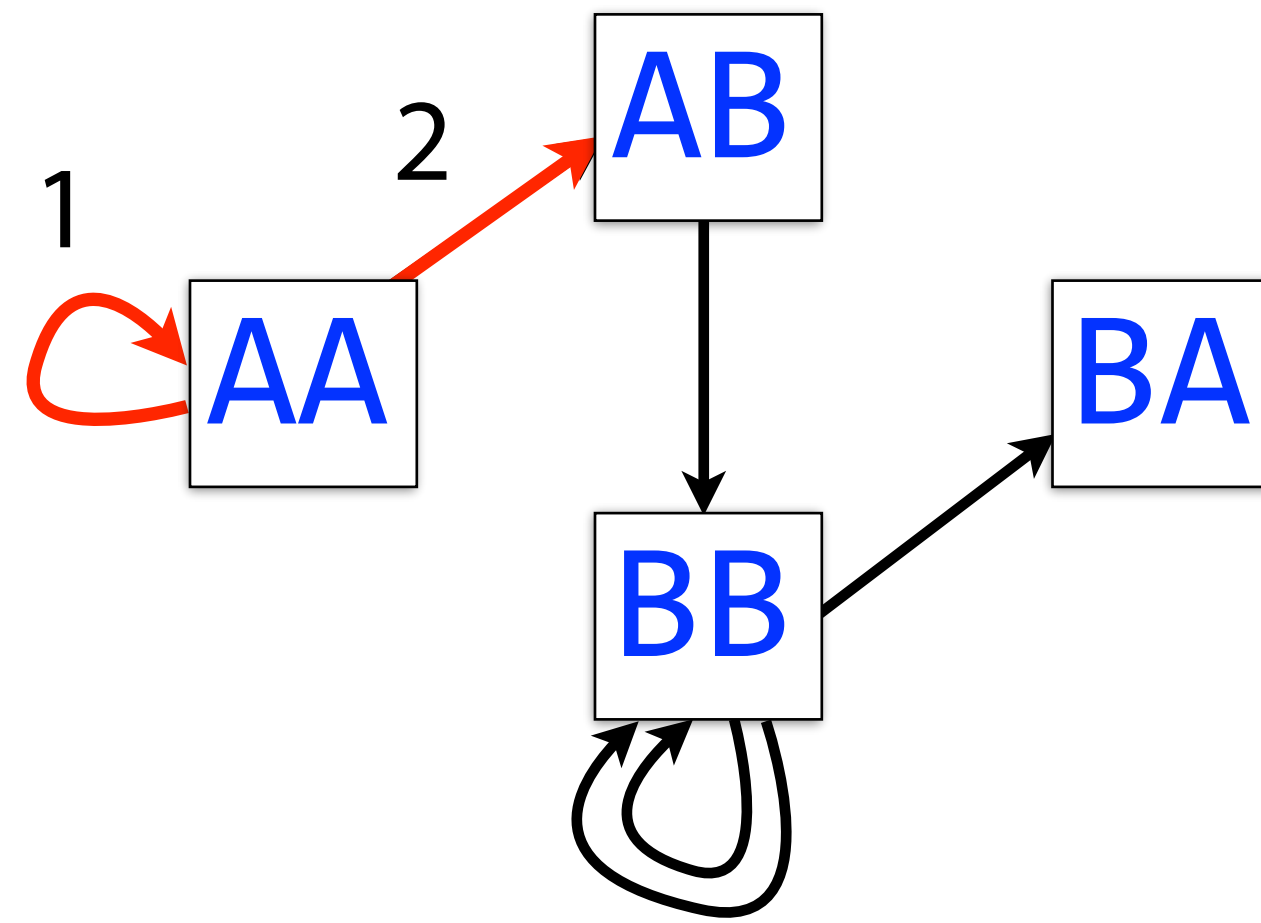
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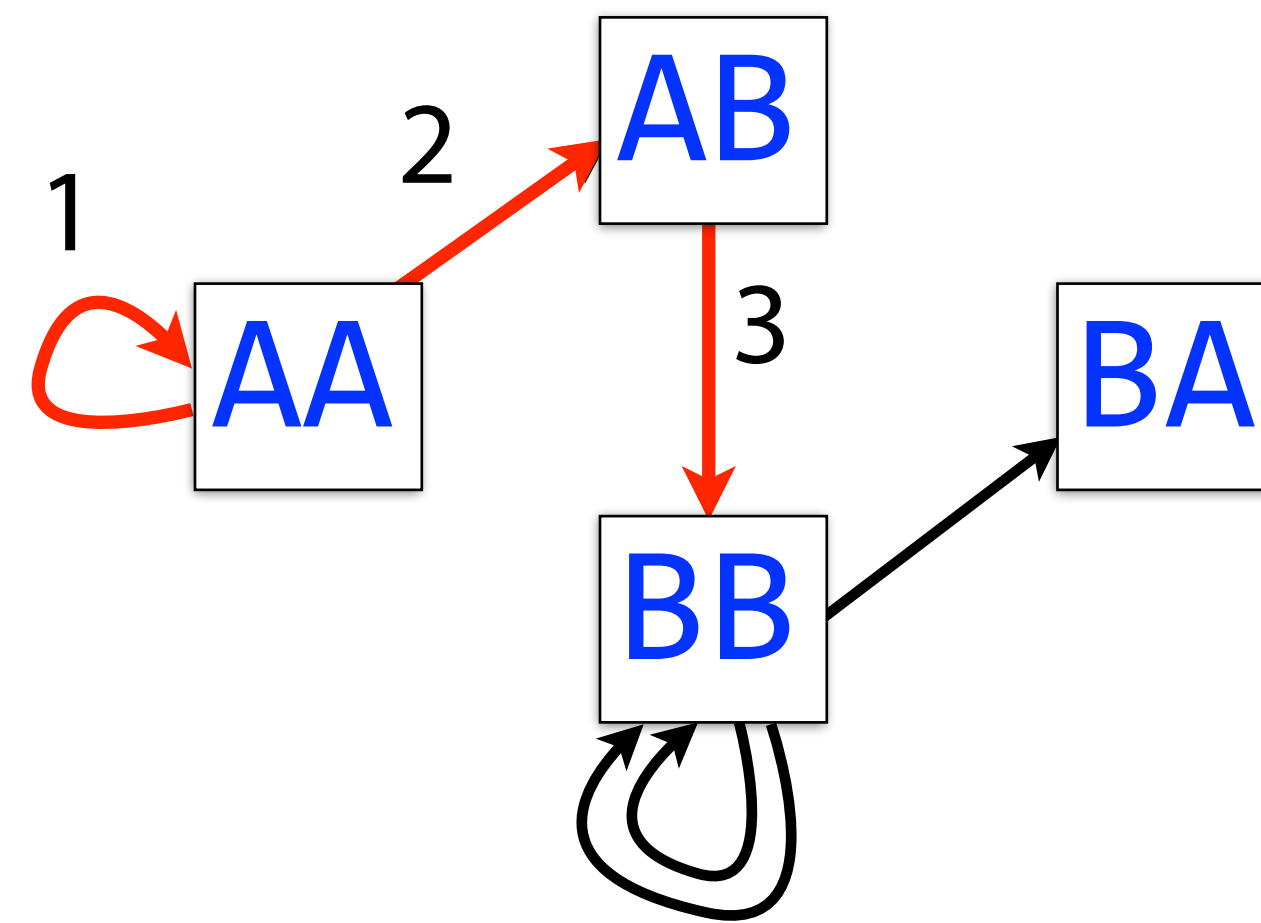
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AAA B

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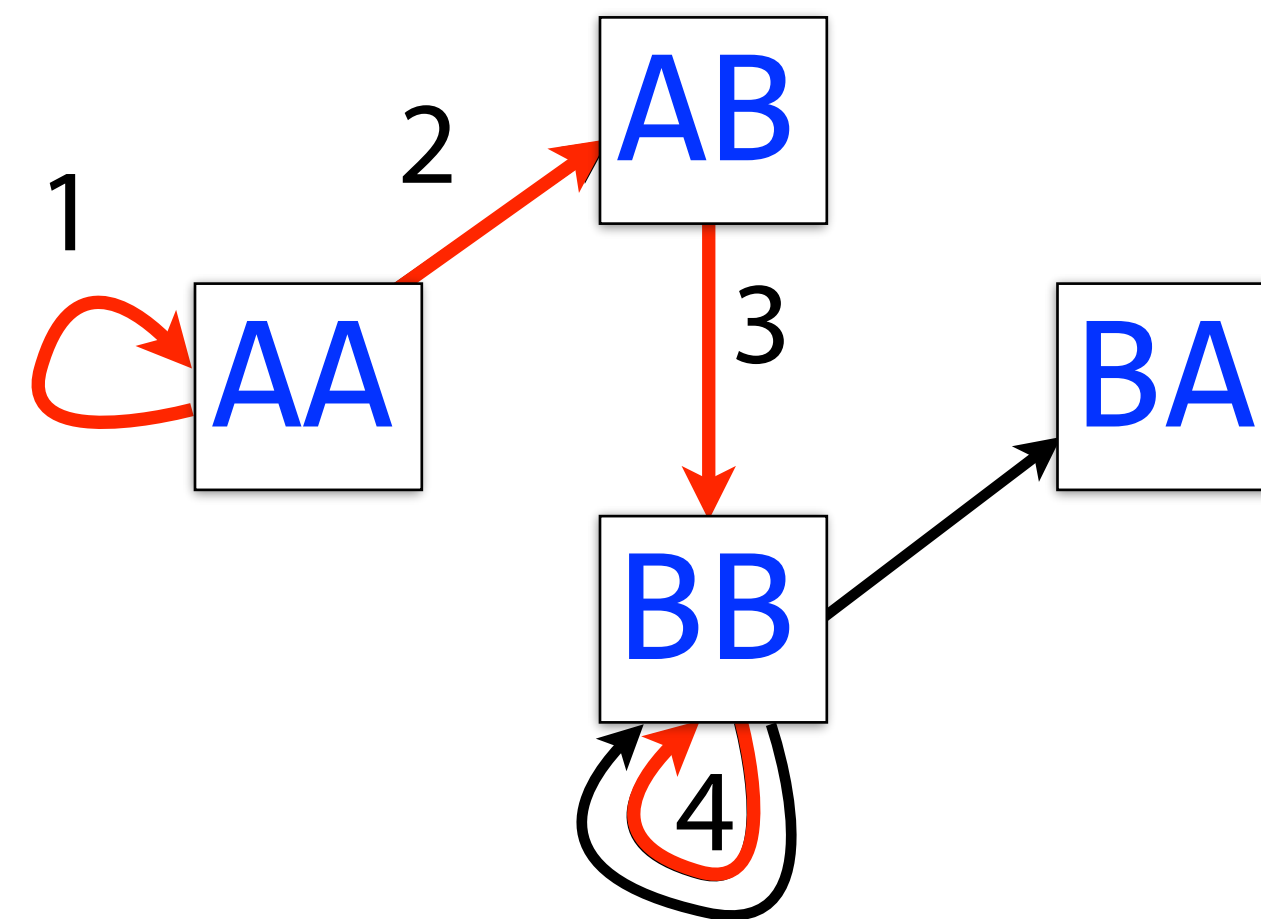
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