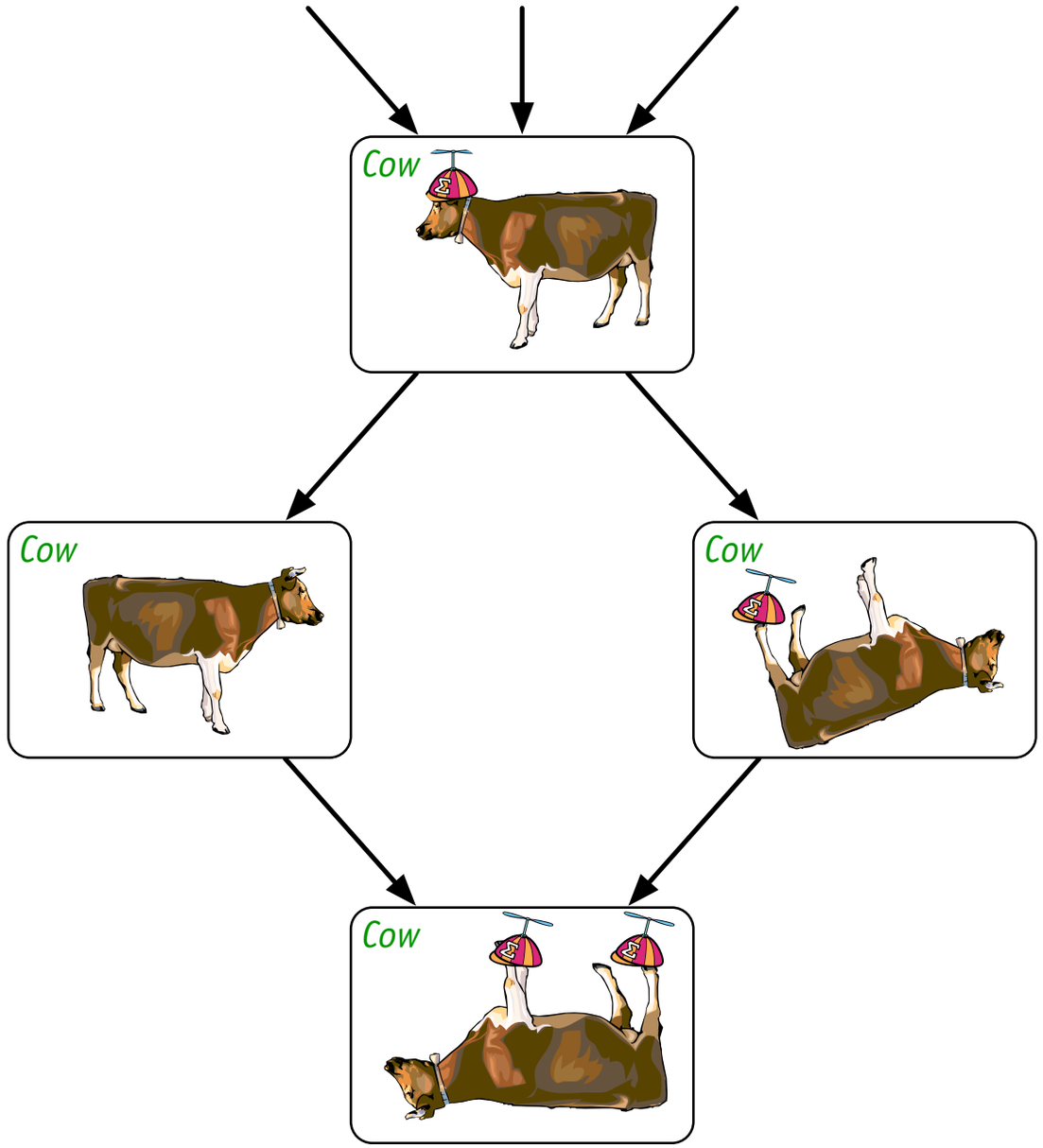
Reference Counting

Keep track of how many objects point to each object.

Zero = Free



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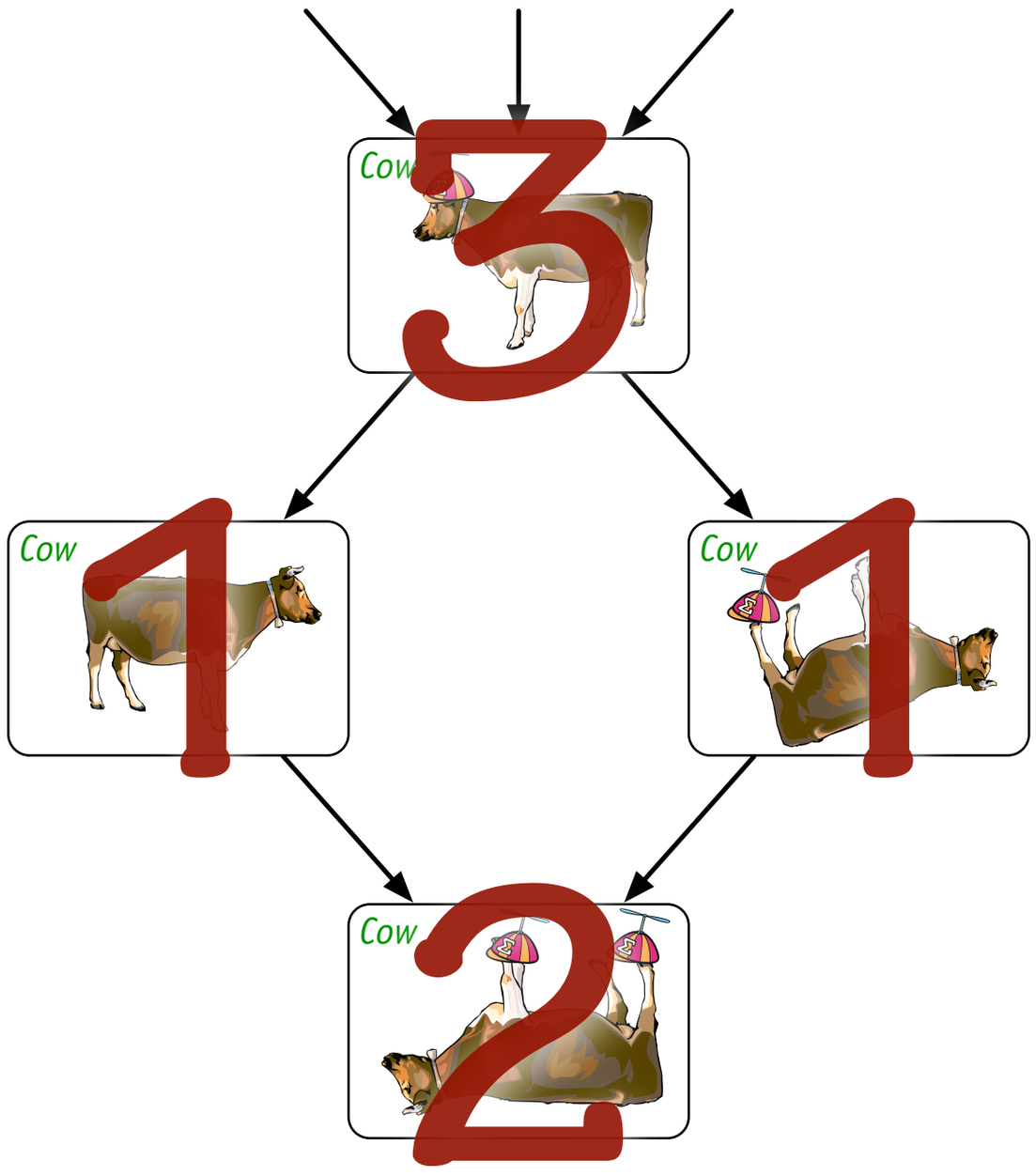

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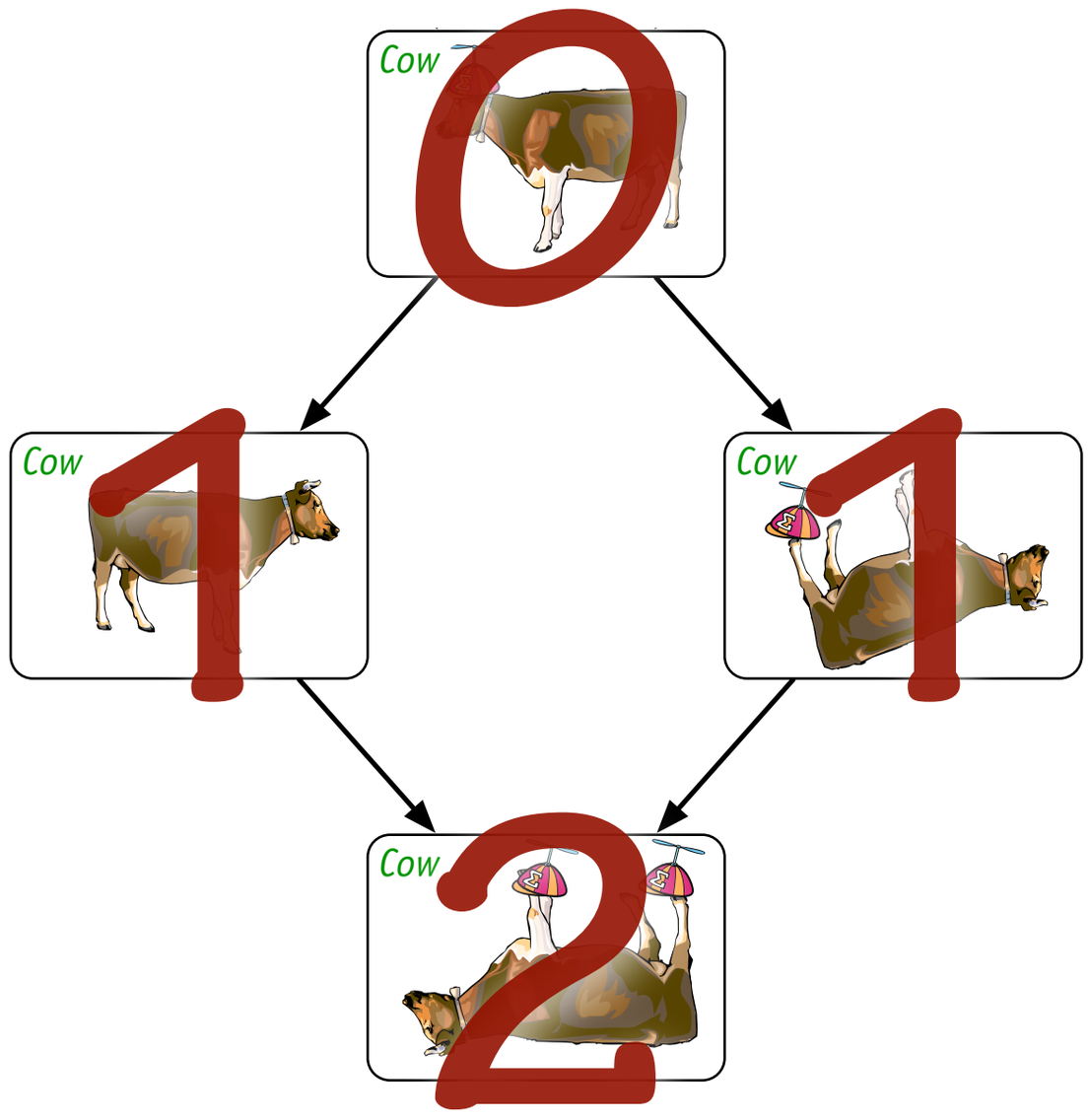

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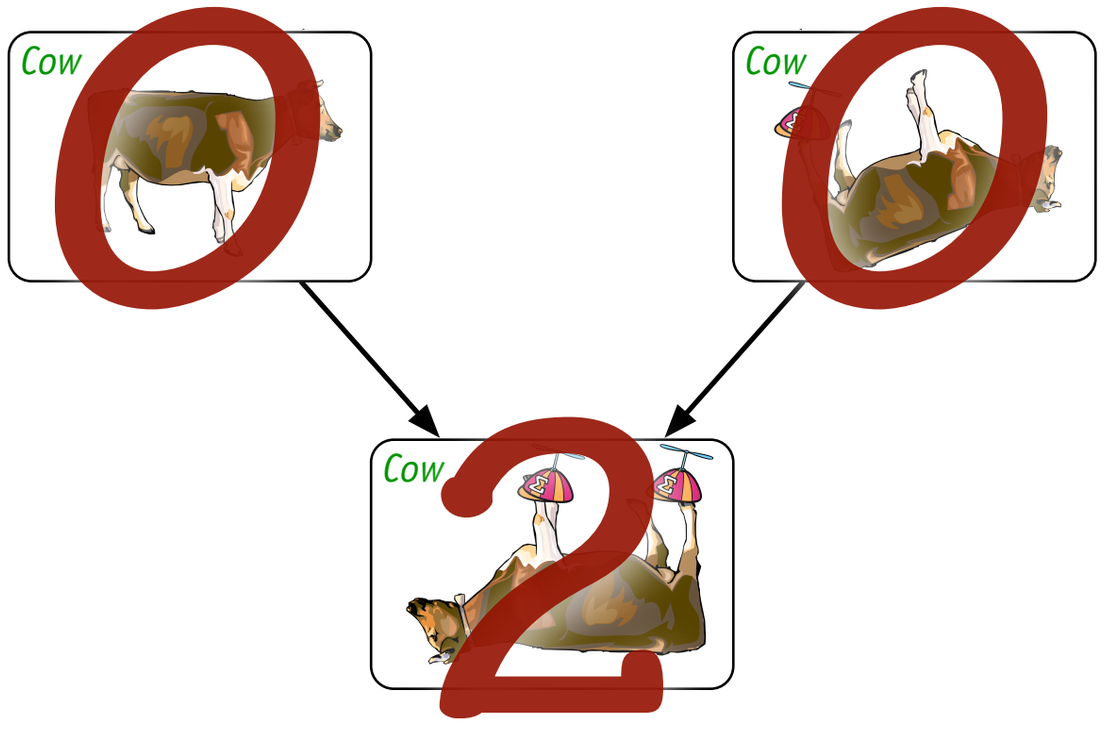

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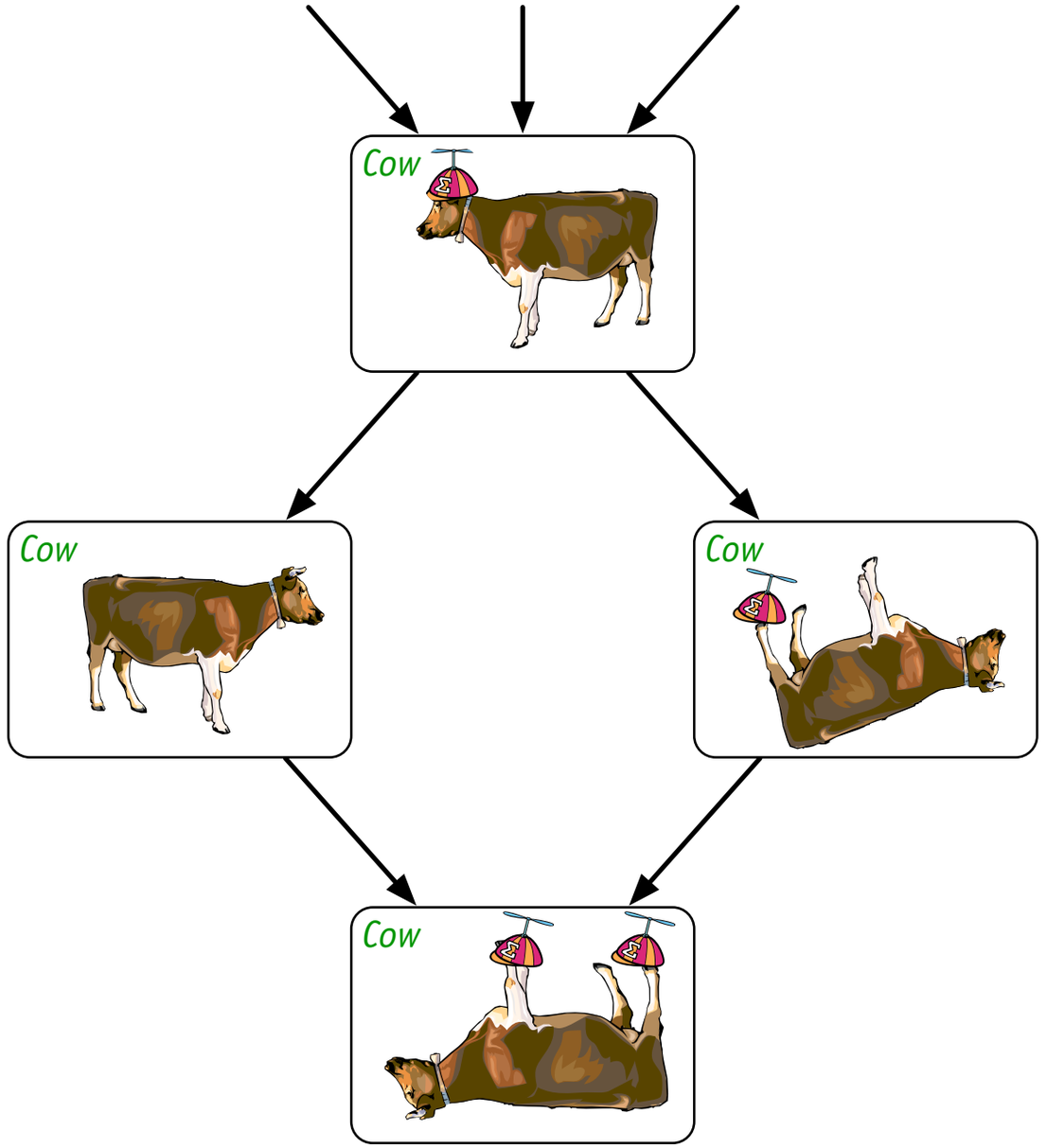
Advantages

Include

- Conceptually simple
- Easy to implement
- Know exactly when each object "dies"
- Memory can be reused immediately

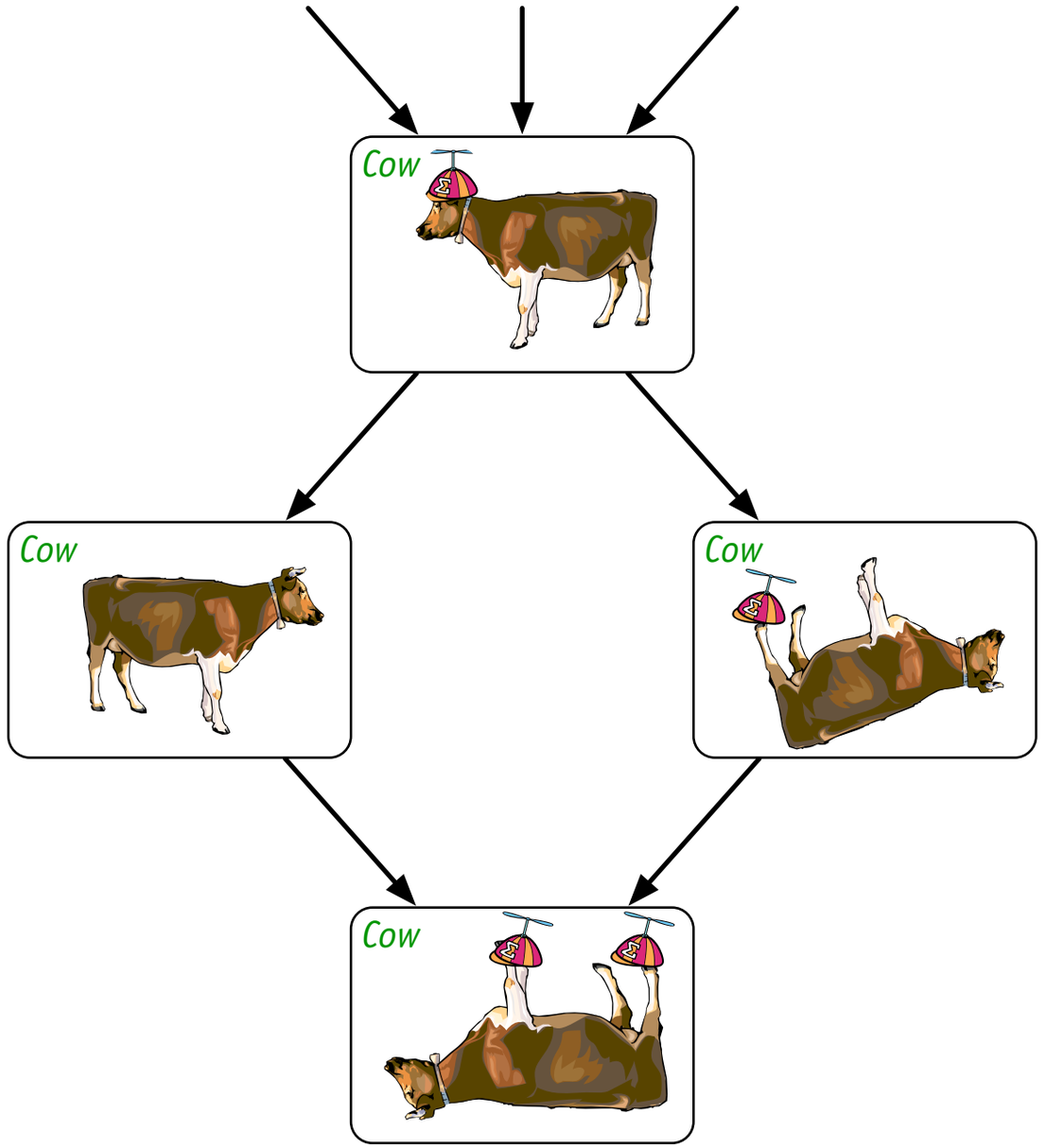
.

Problems



Problems

Cycles are problematic!



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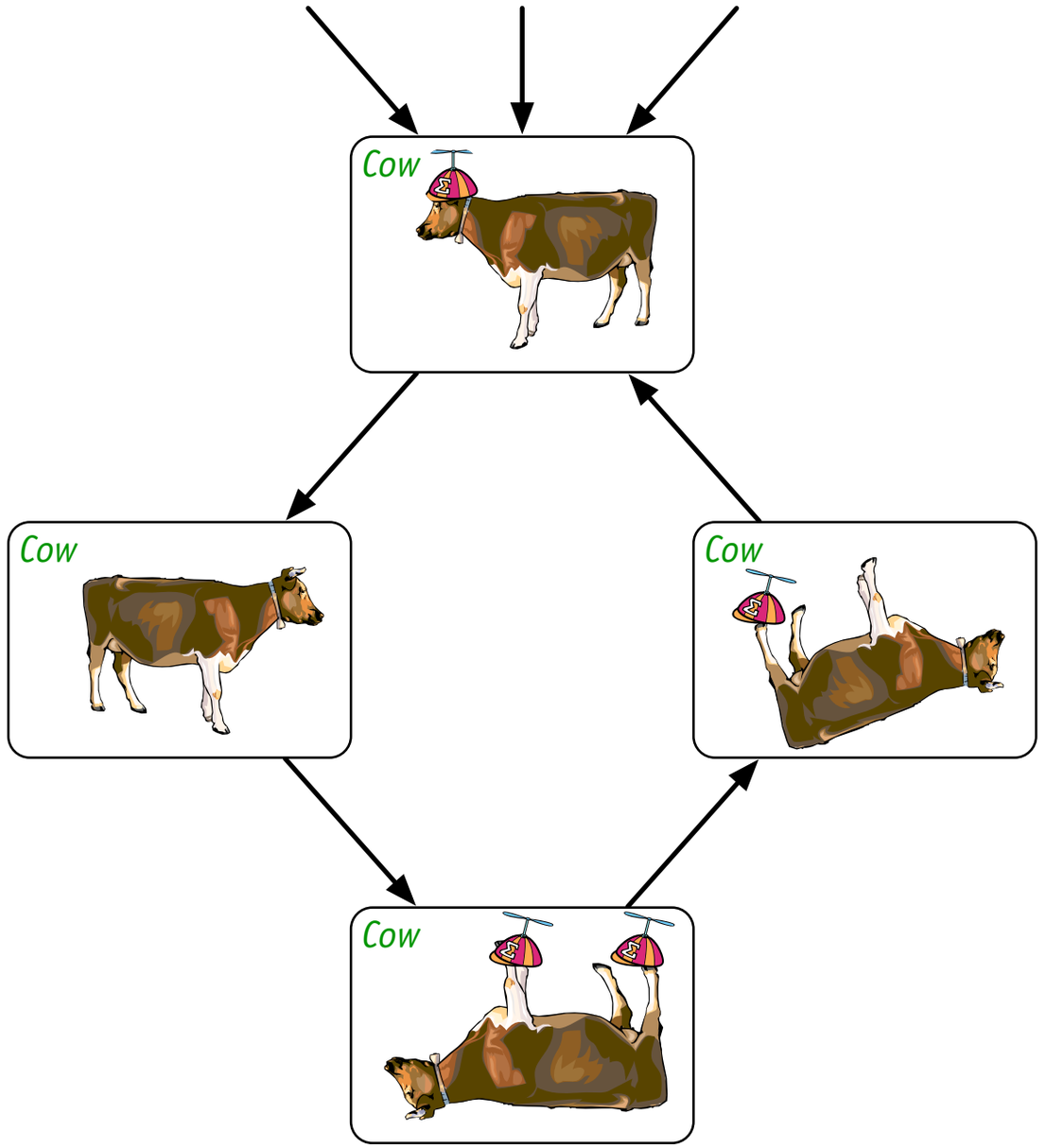

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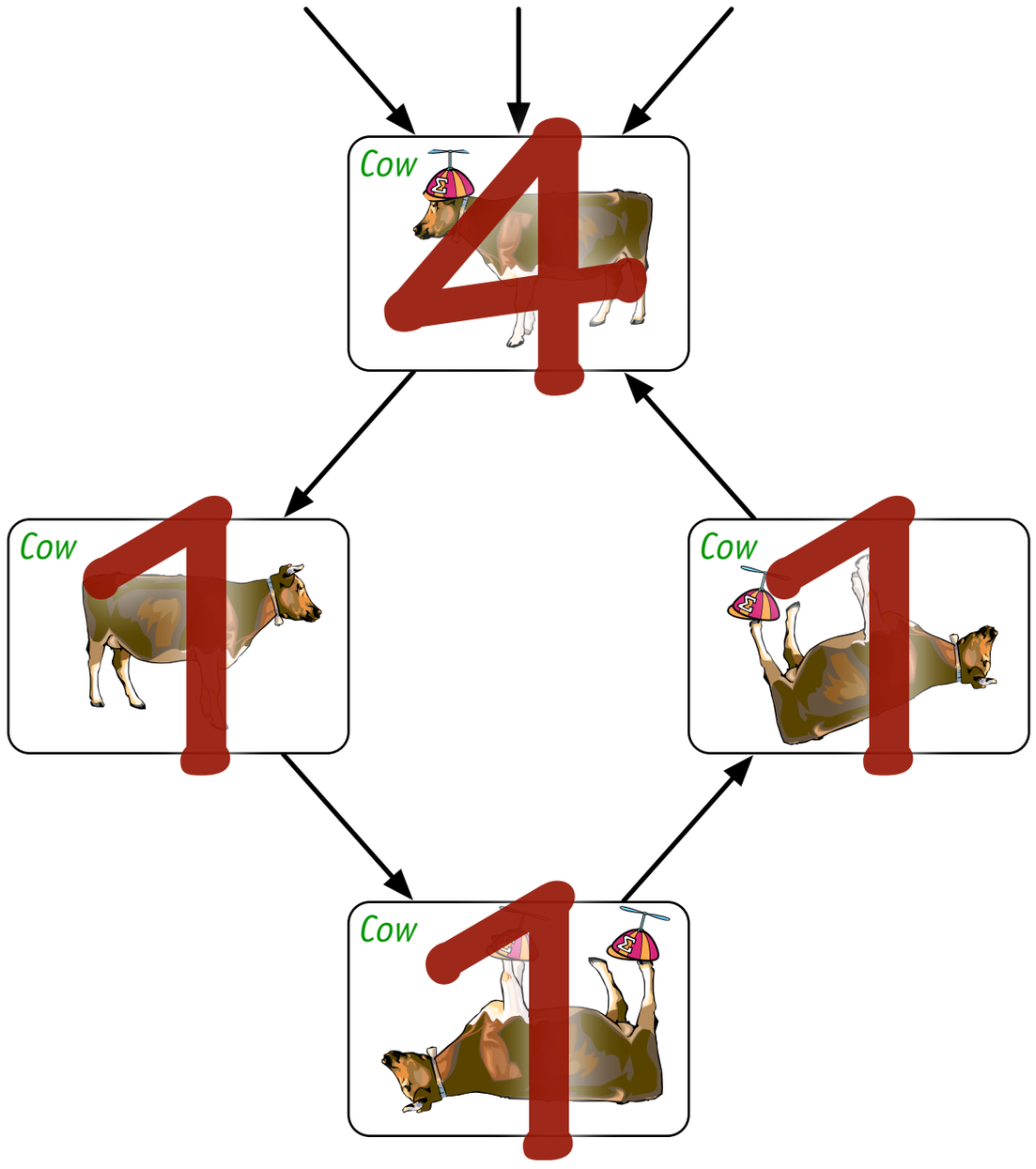

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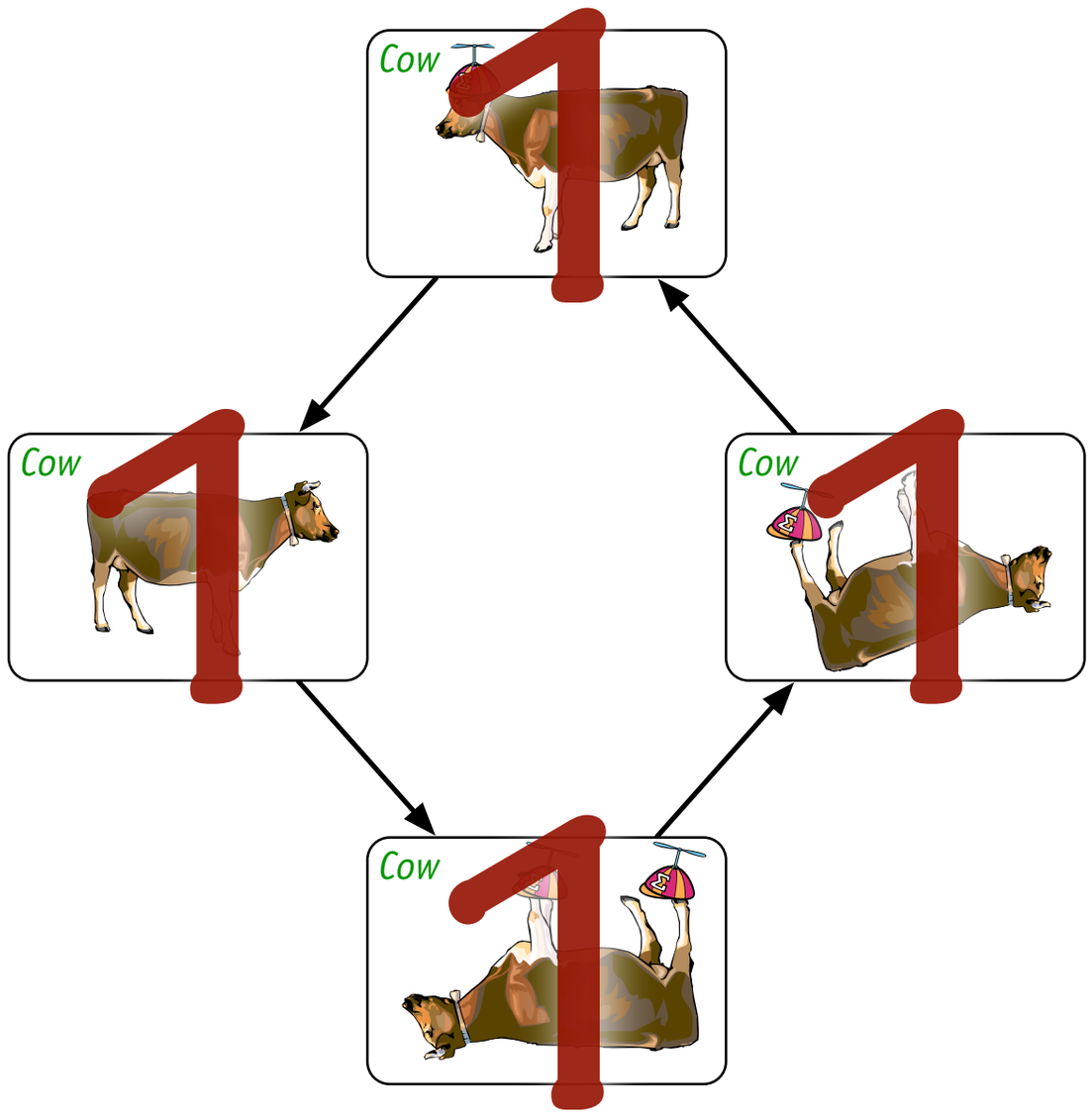
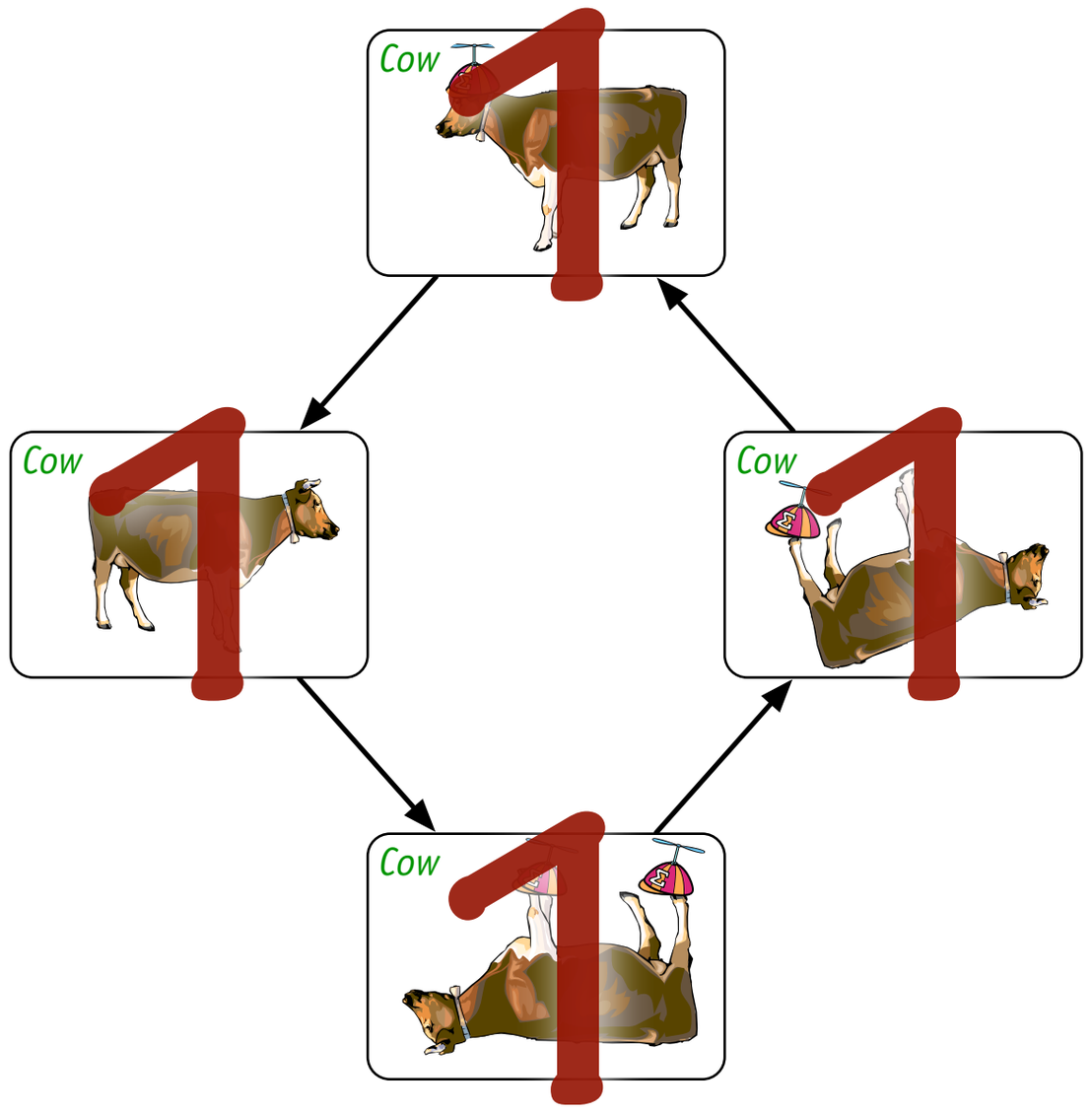


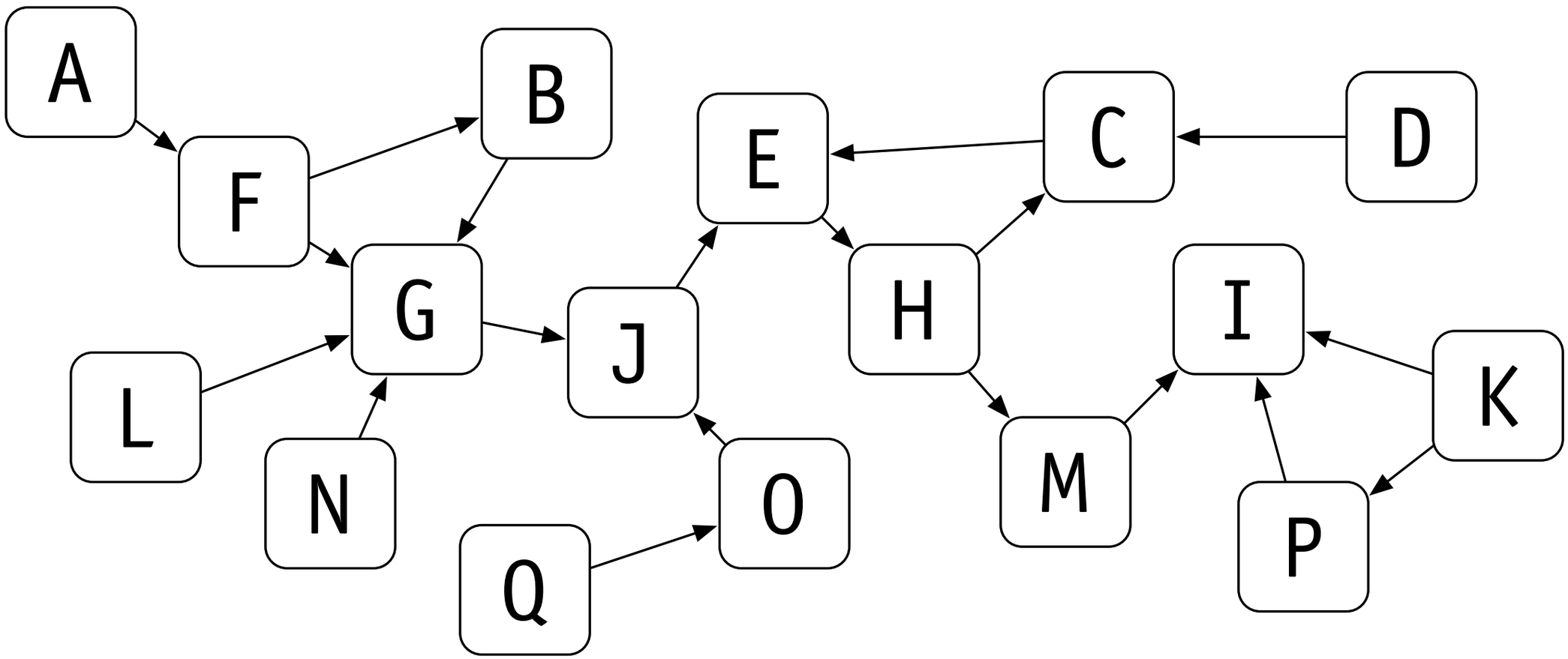
Problems

Cycles are problematic!

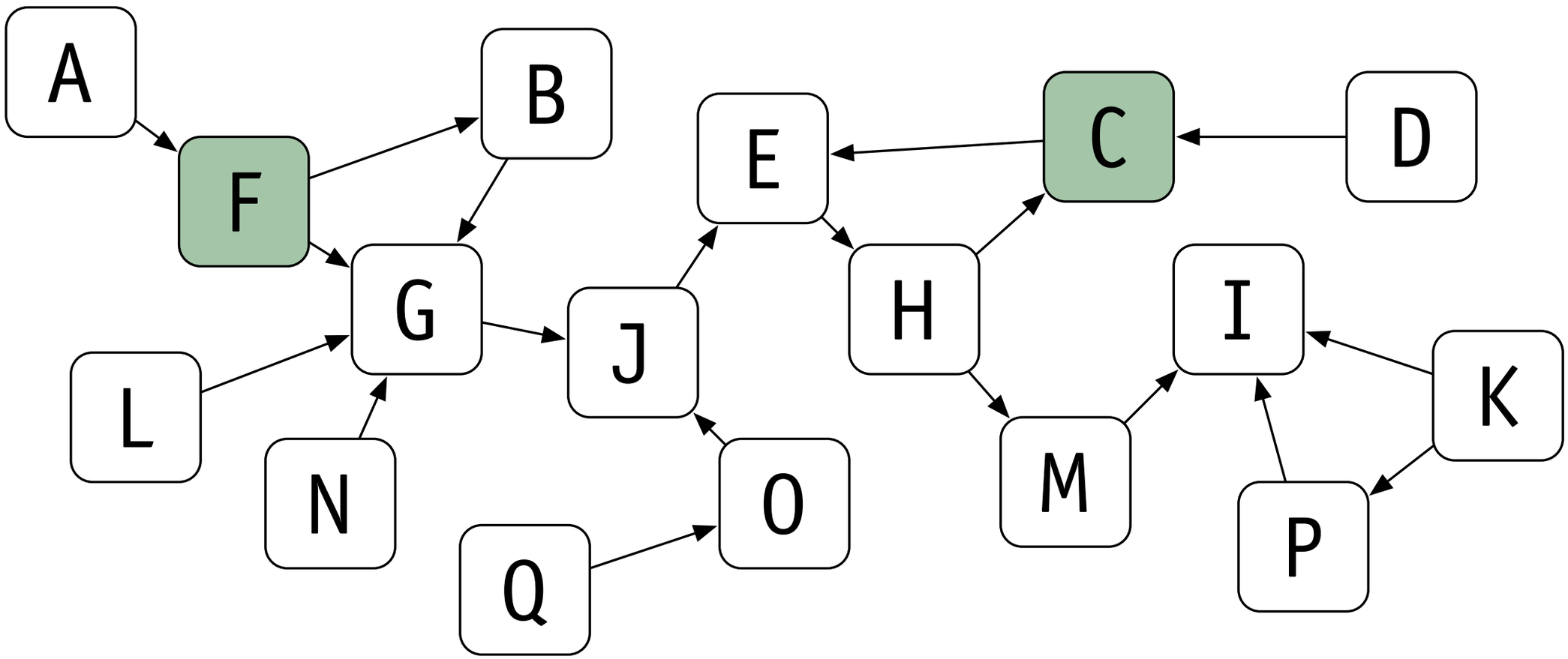
No good solution!



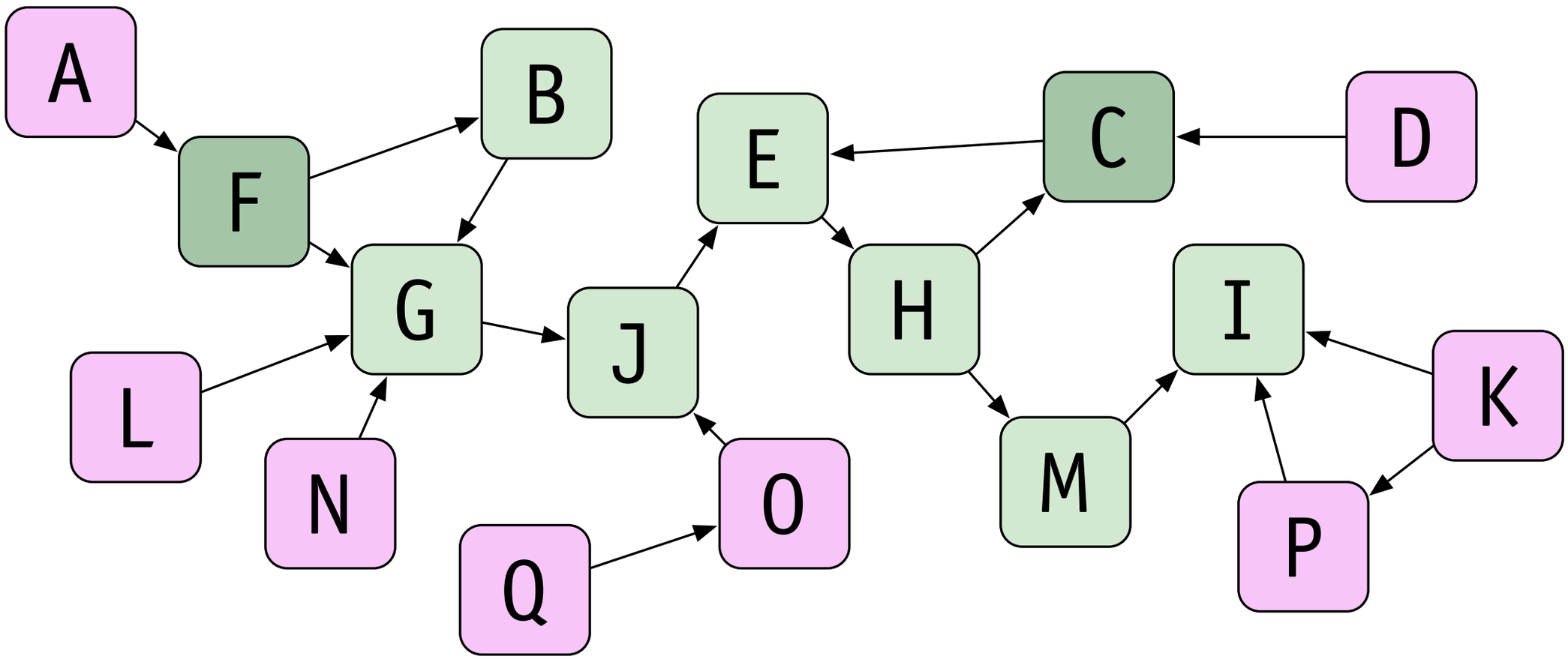
Tracing



Tracing



Tracing



Copying Collector

Copying Collector

To Space...

Allocate

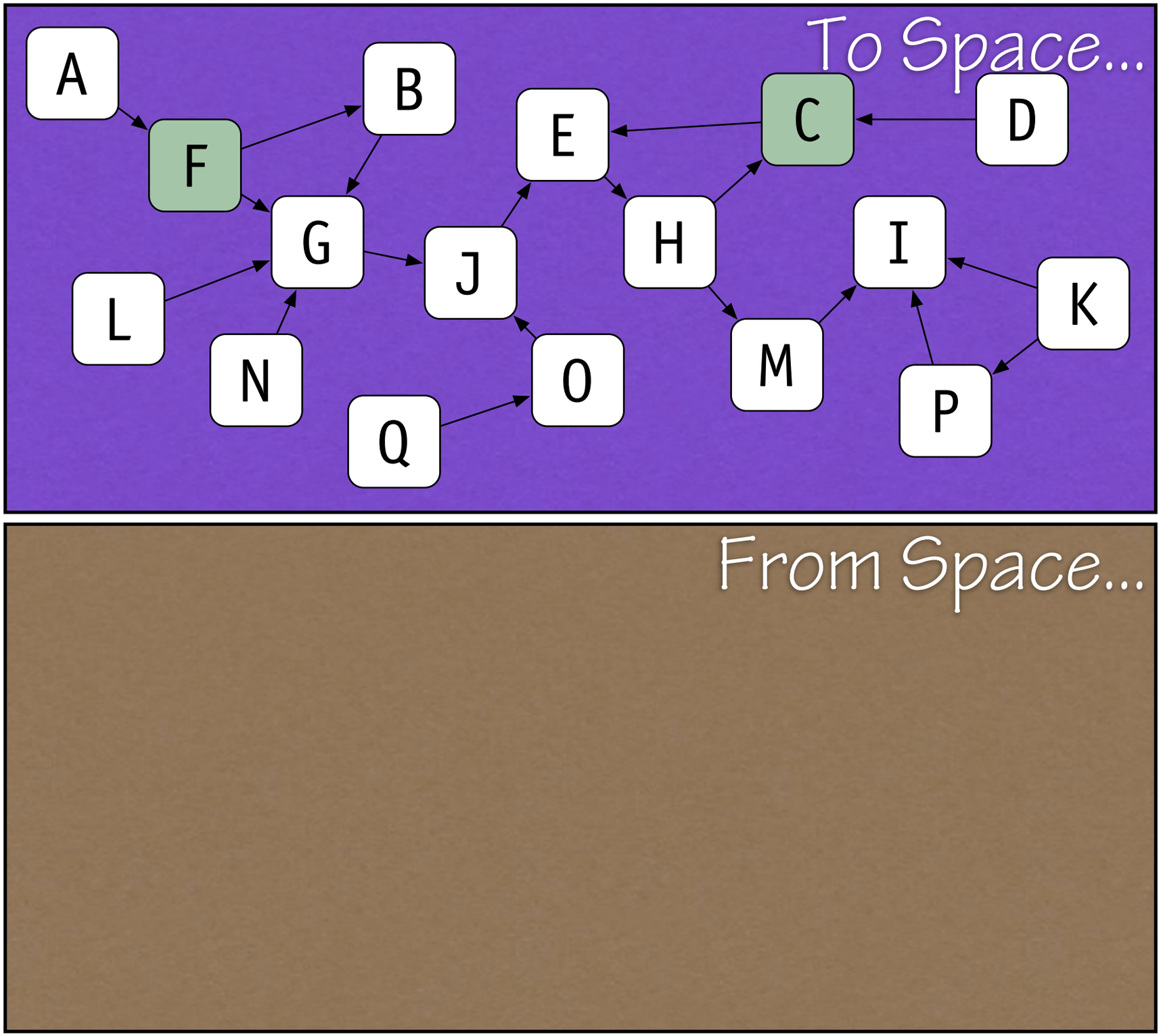
Here

From Space...

Totally

Ignore

Copying Collector



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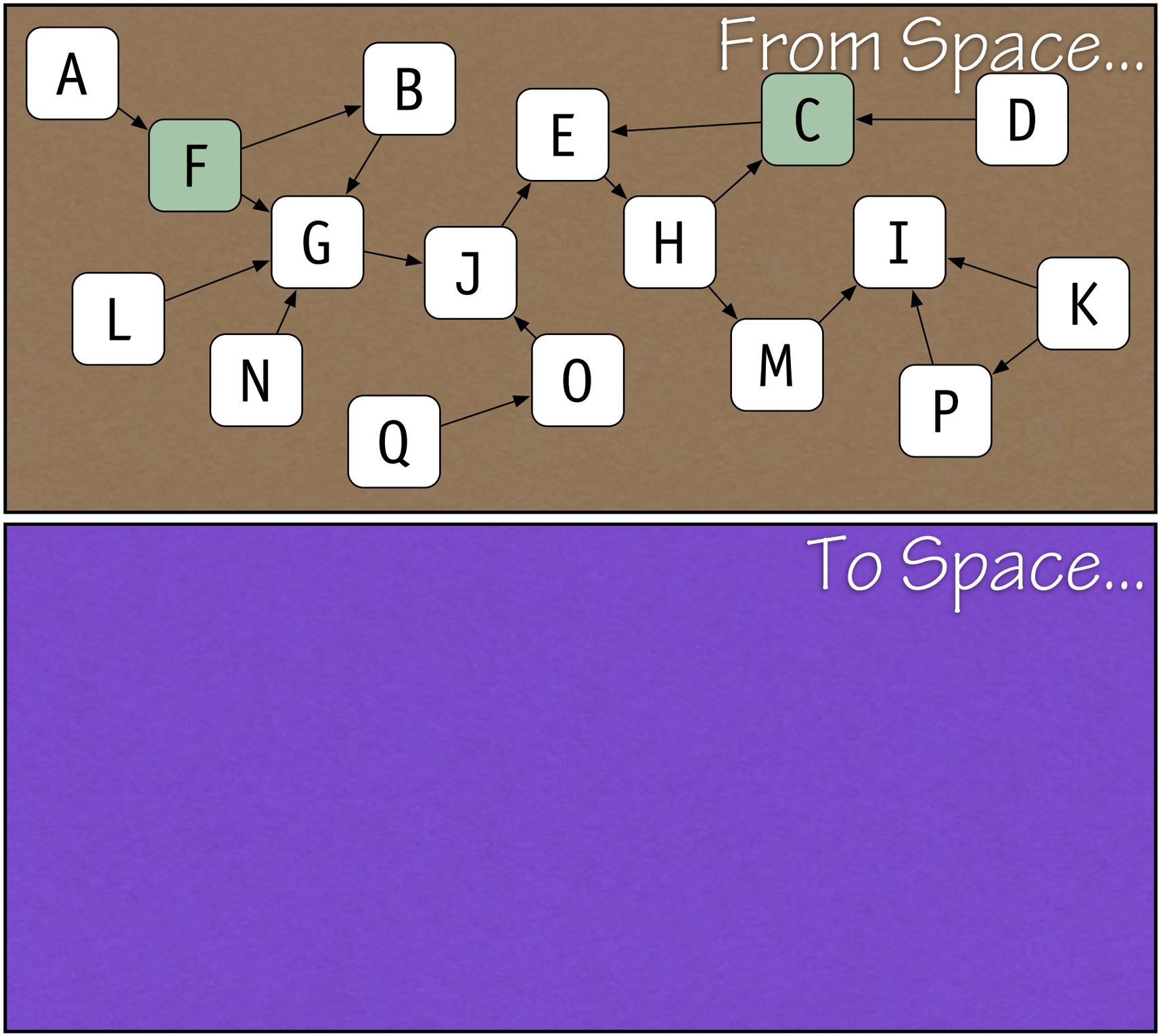

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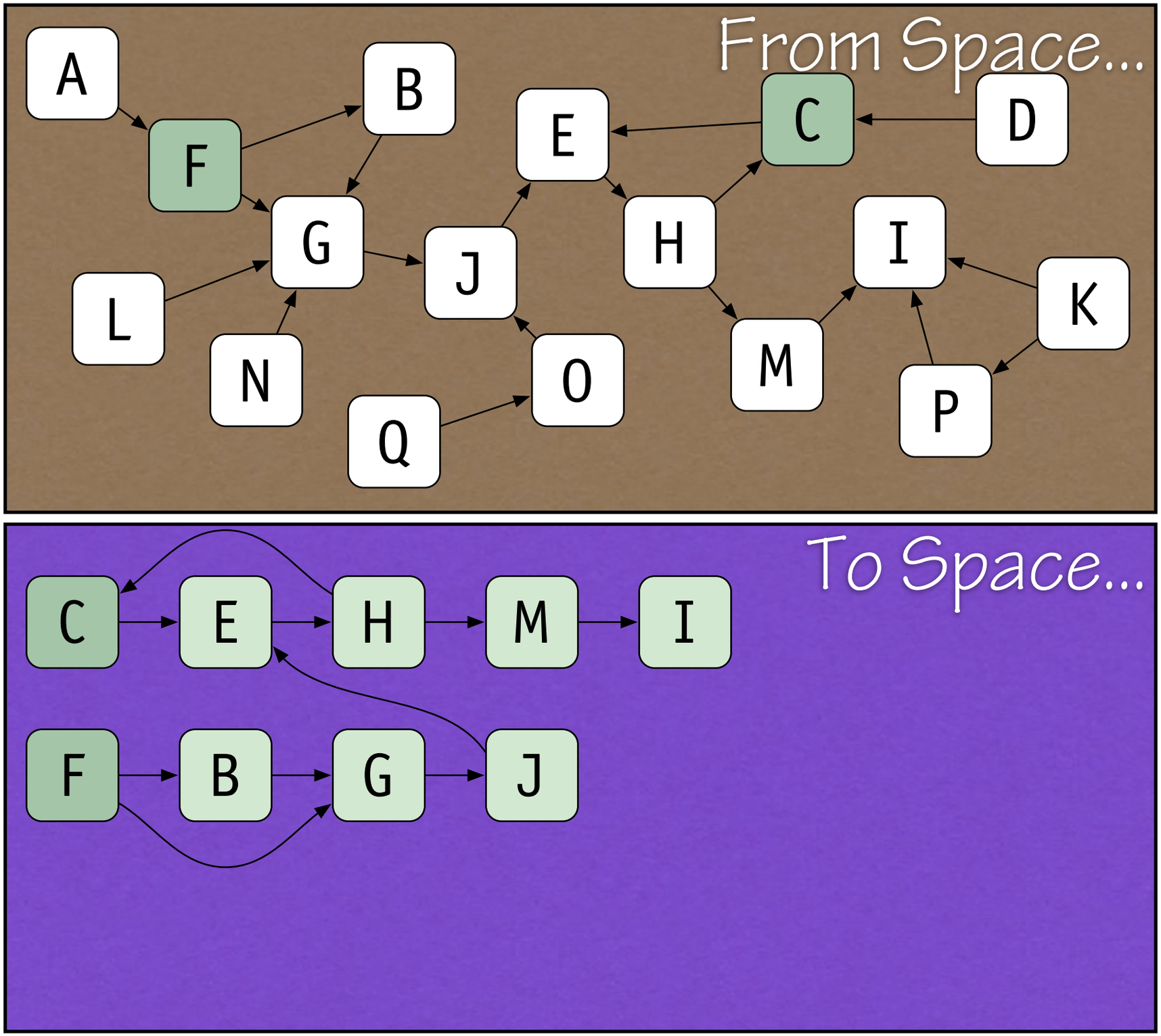

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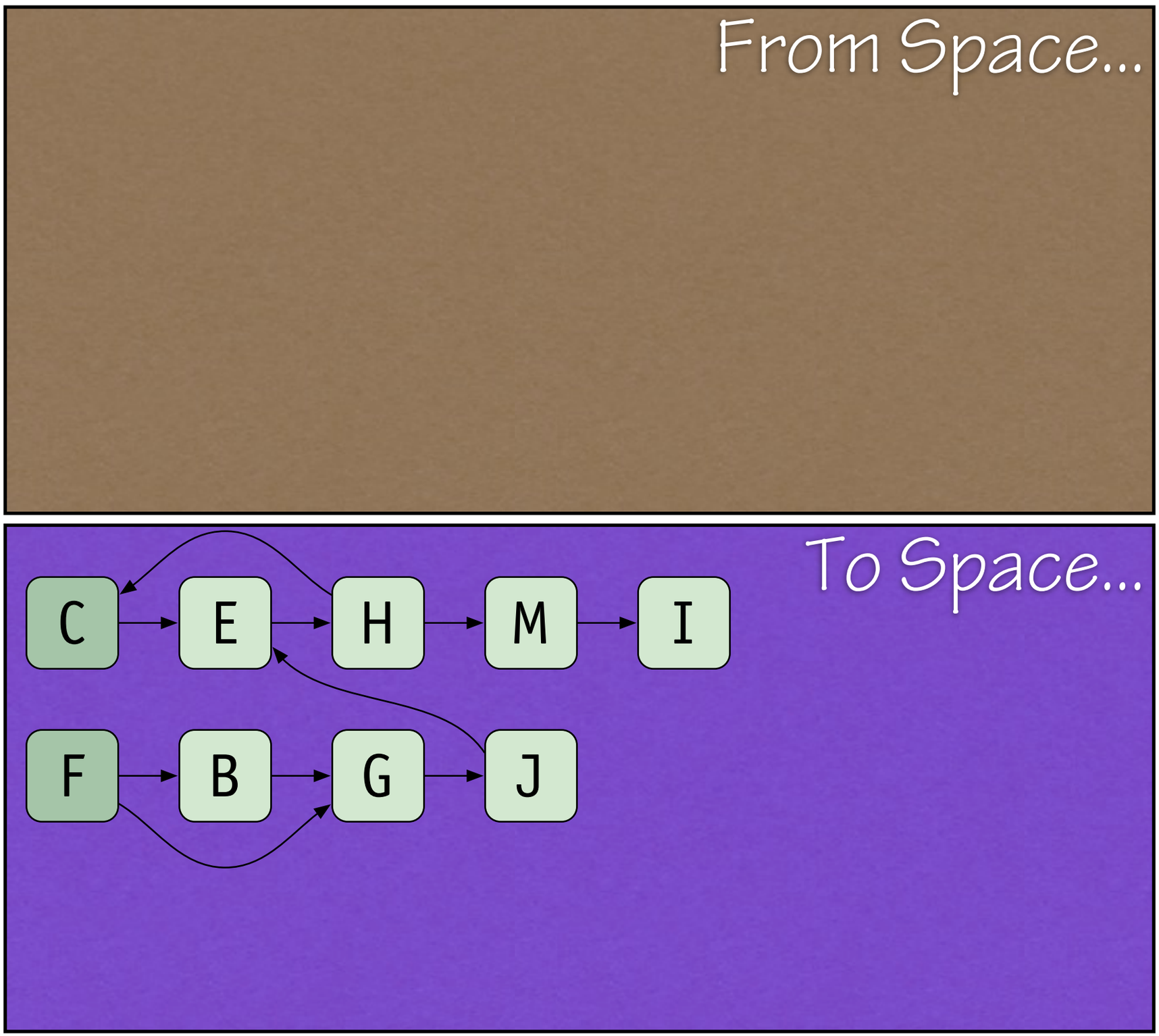
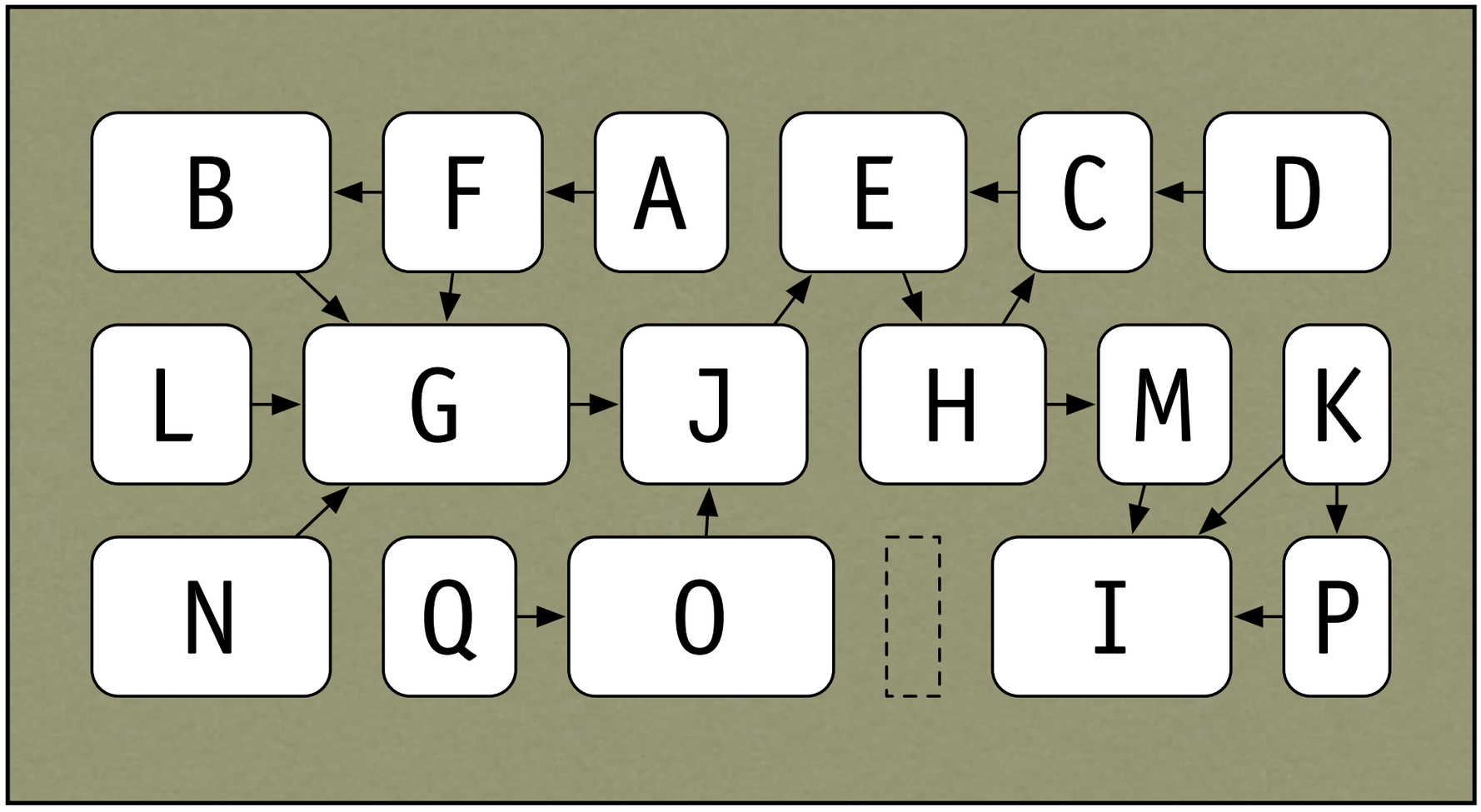


Mark Sweep



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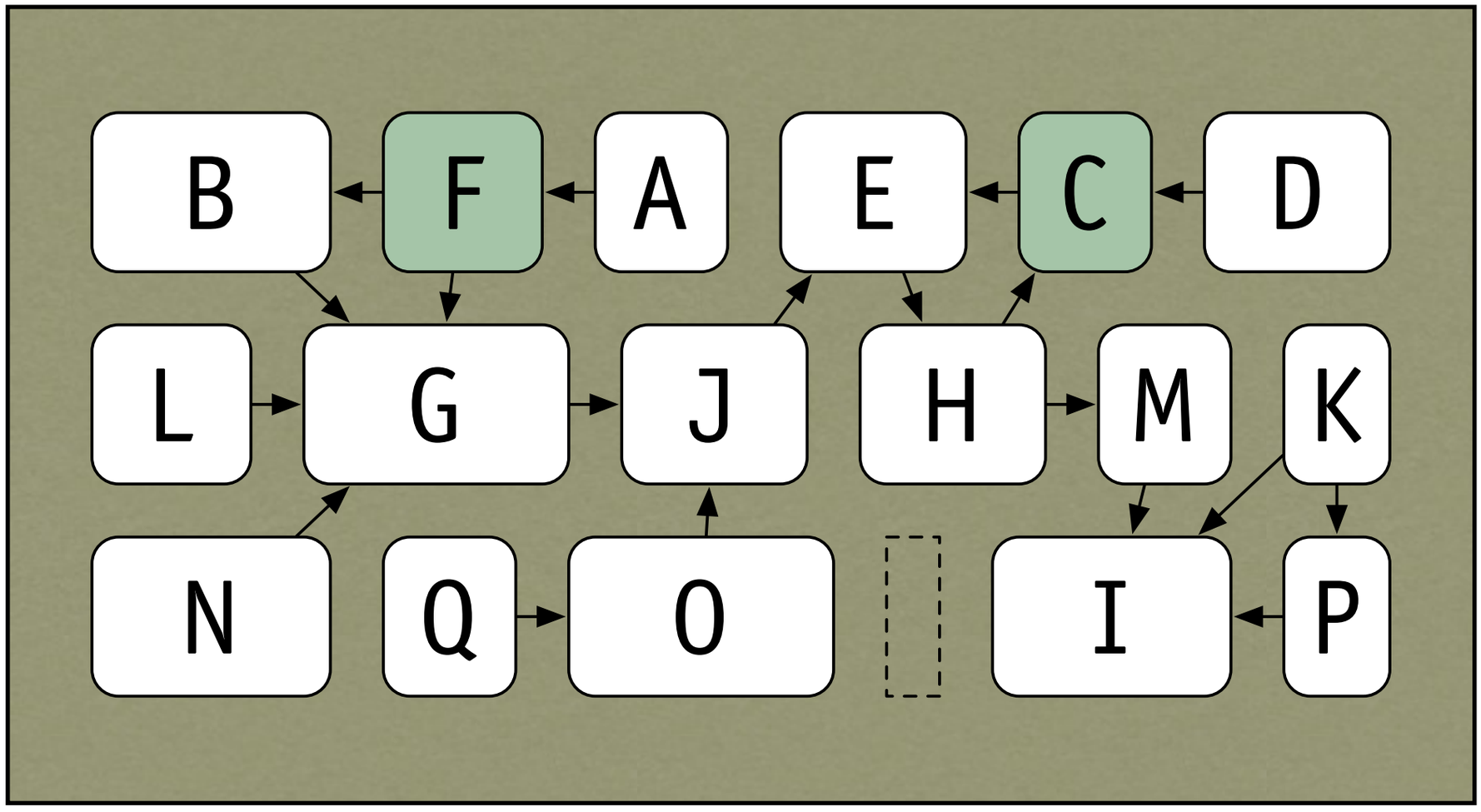

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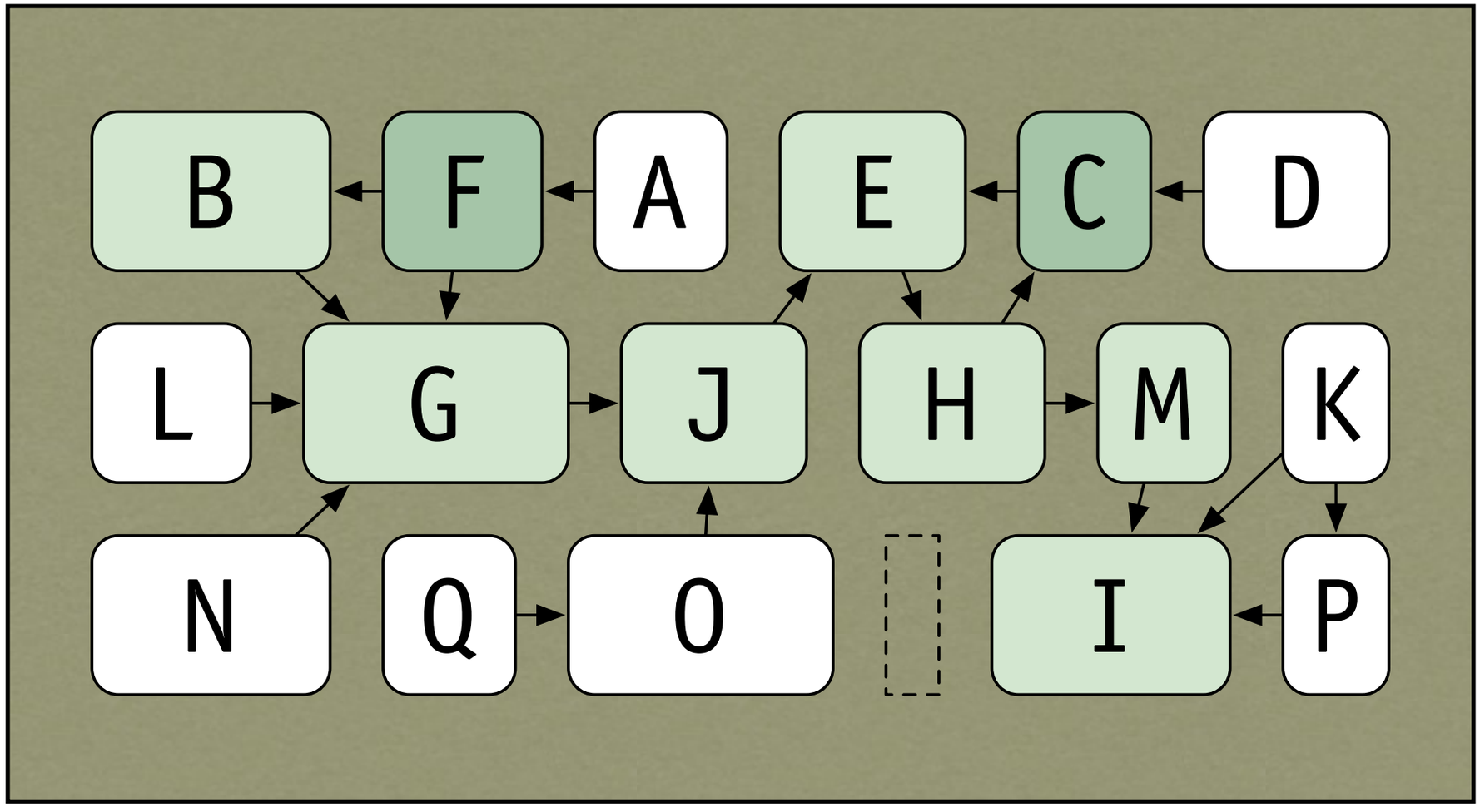

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