

Visualizing Java Streams in Action

Douglas C. Schmidt

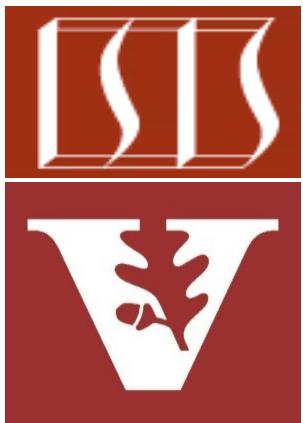
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Learning Objectives in this Part of the Lesson

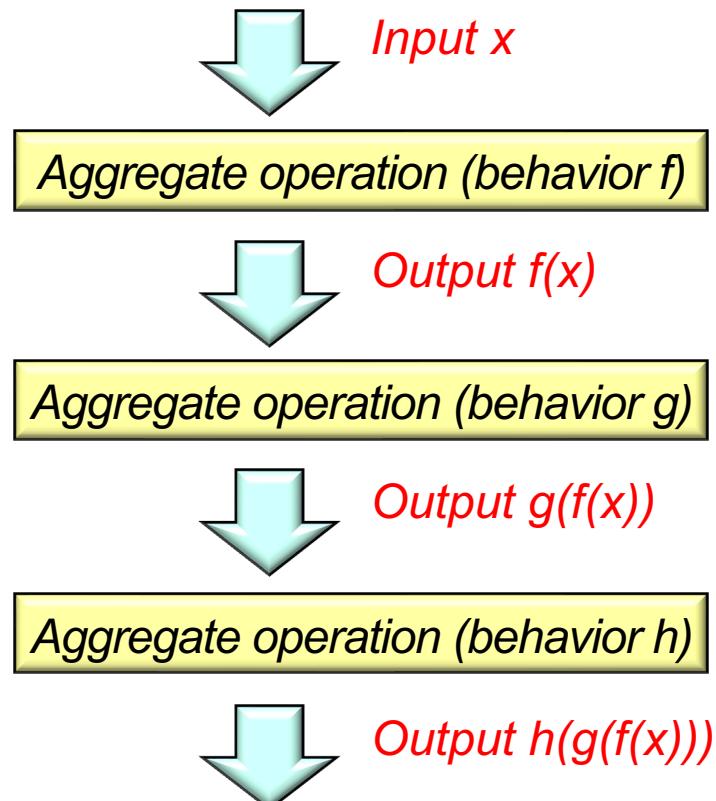
- Understand Java streams structure & functionality, e.g.
 - Fundamentals of streams
 - Three streams phases
 - Operations that create a stream
 - Aggregate operations in a stream
 - Visualizing streams in action



Visualizing Streams in Action

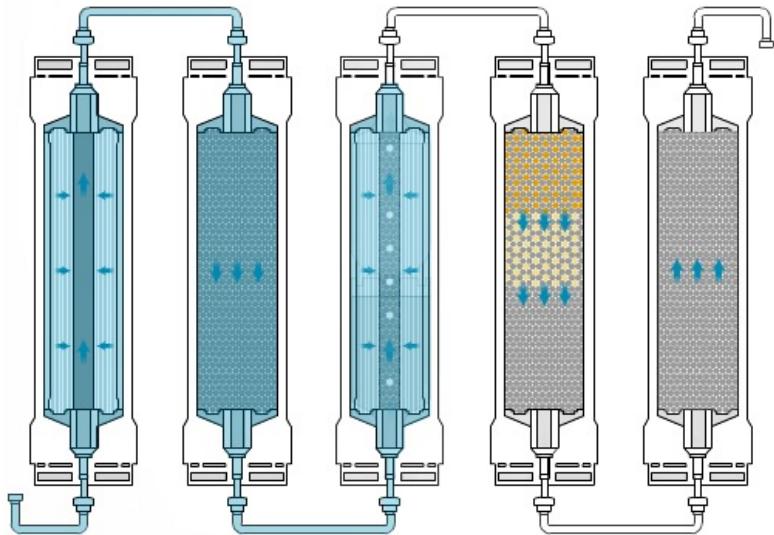
Visualizing Streams in Action

- Streams enhance flexibility by forming a “processing pipeline” that composes multiple aggregate operations together



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Each aggregate operation in the pipeline can filter and/or transform the stream.



Aggregate operation (behavior f)

Output $f(x)$

Aggregate operation (behavior g)

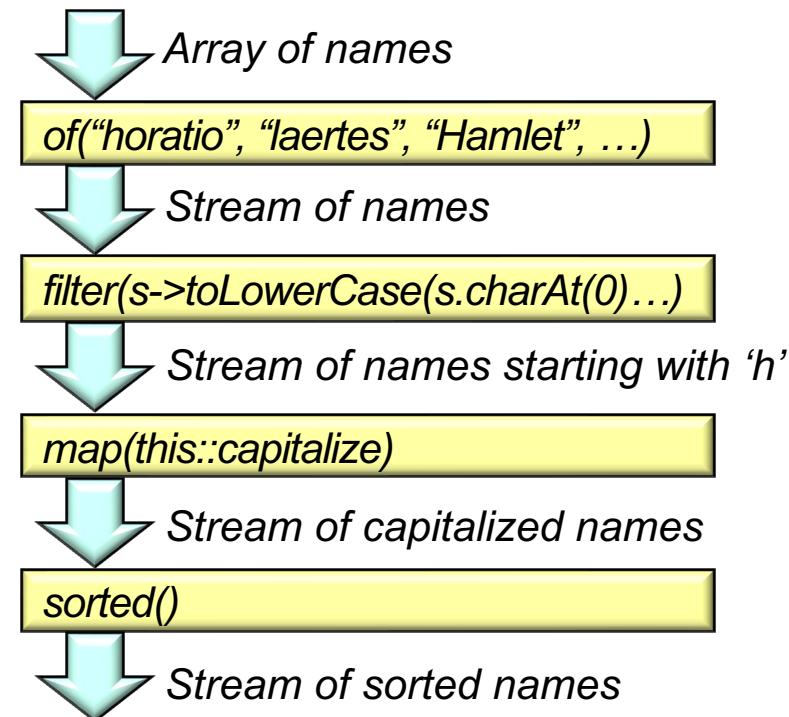
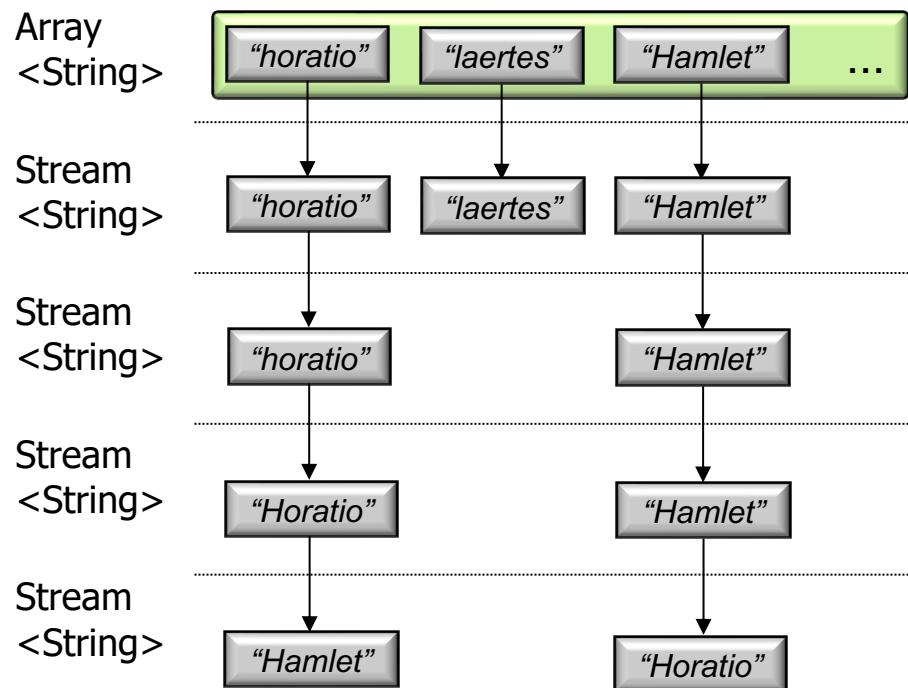
Output $g(f(x))$

Aggregate operation (behavior h)

Output $h(g(f(x)))$

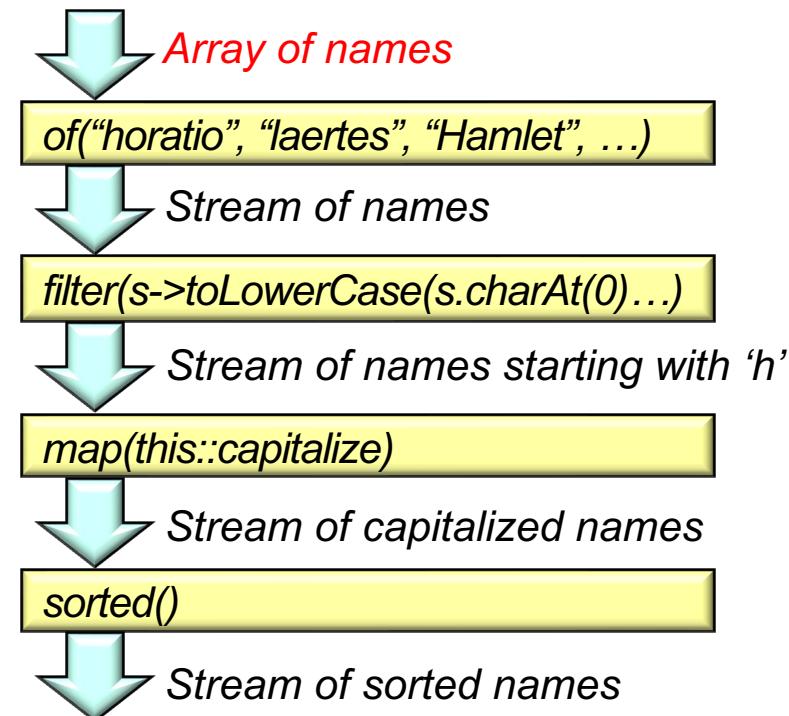
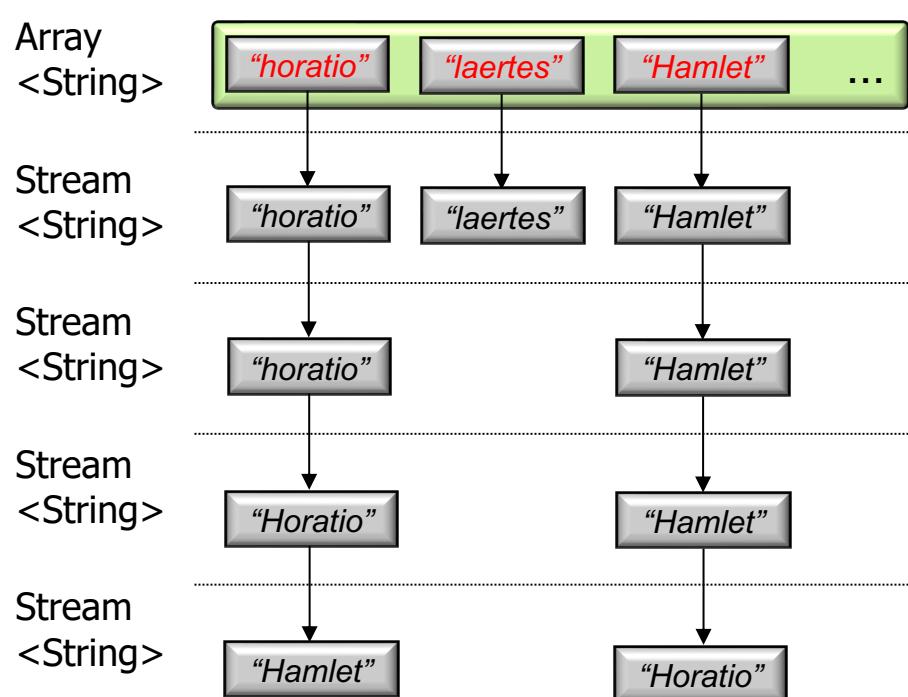
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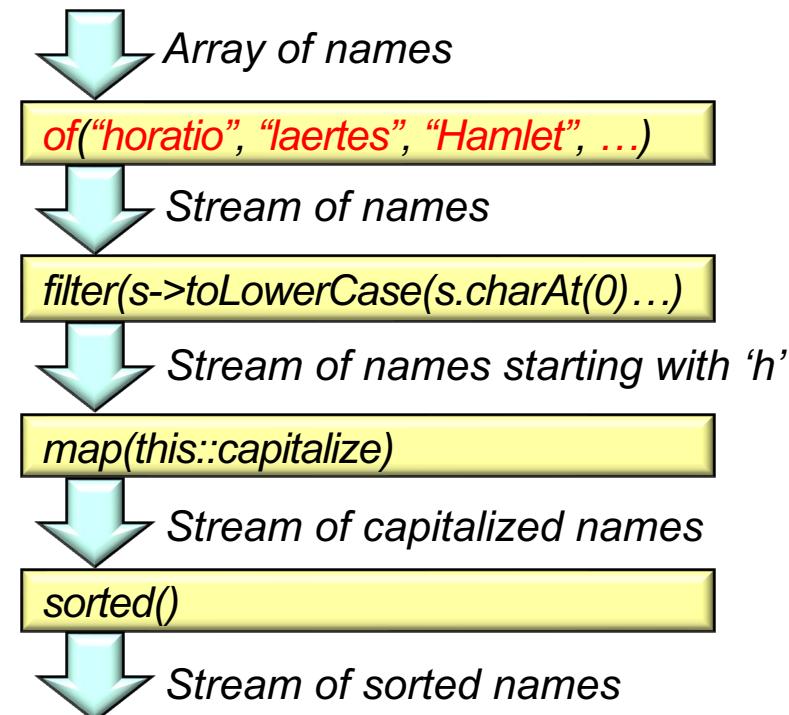
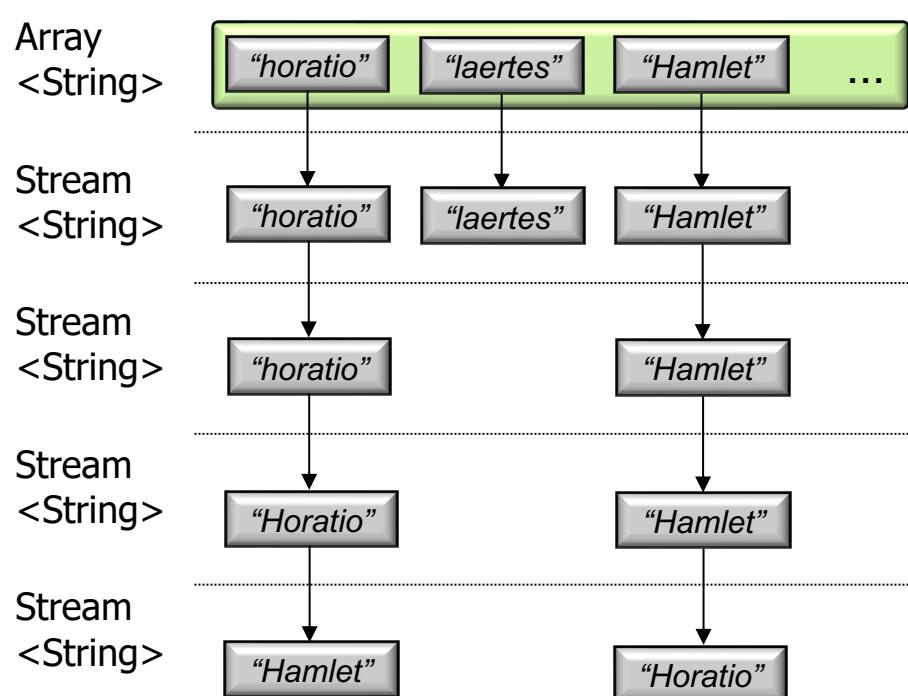
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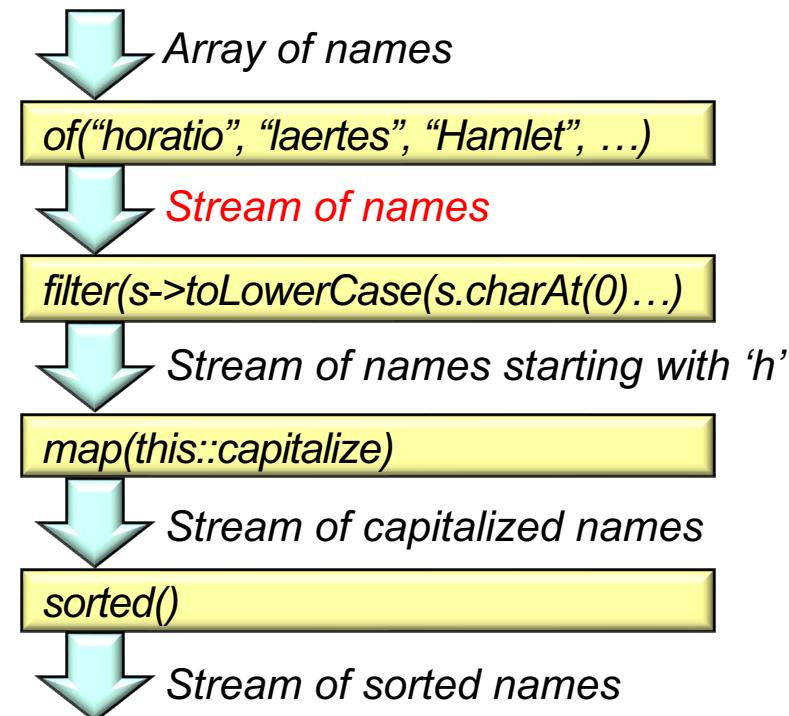
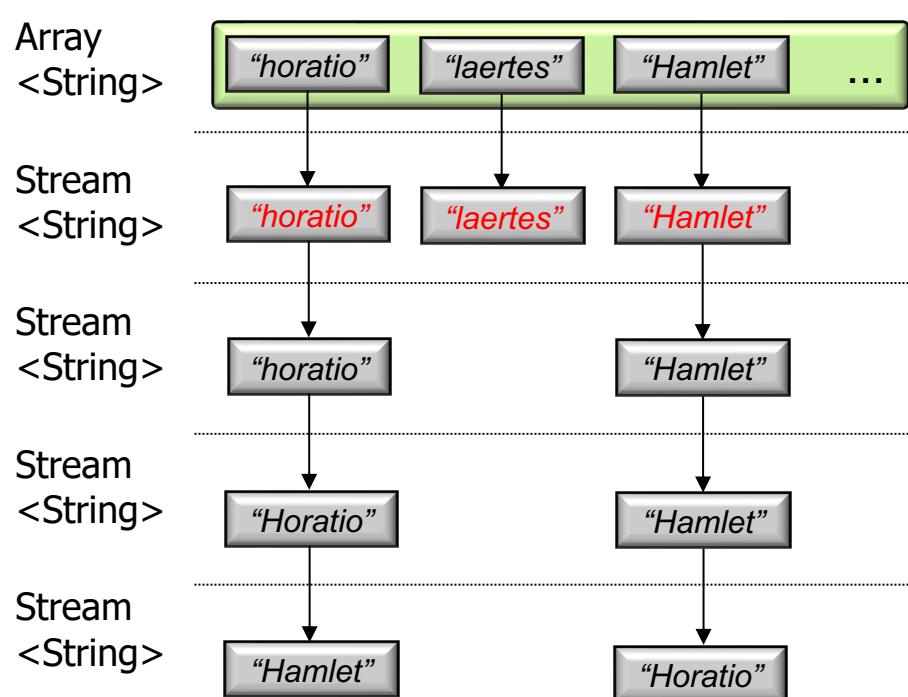
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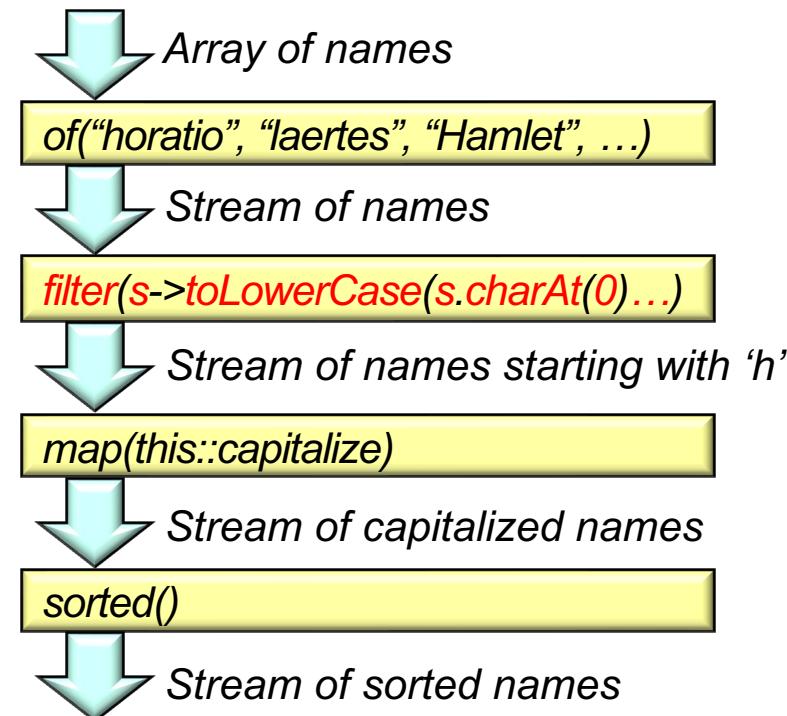
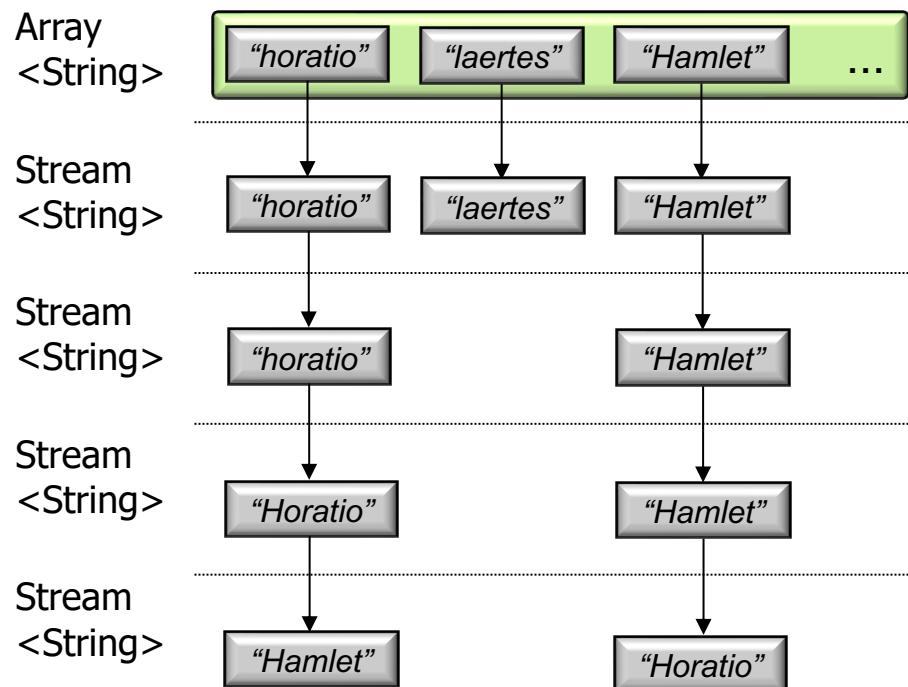
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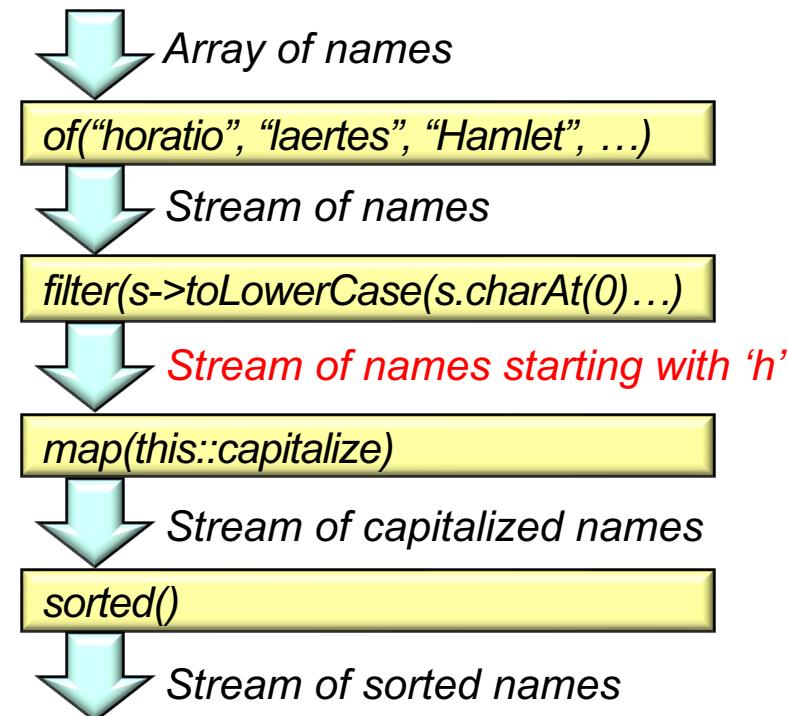
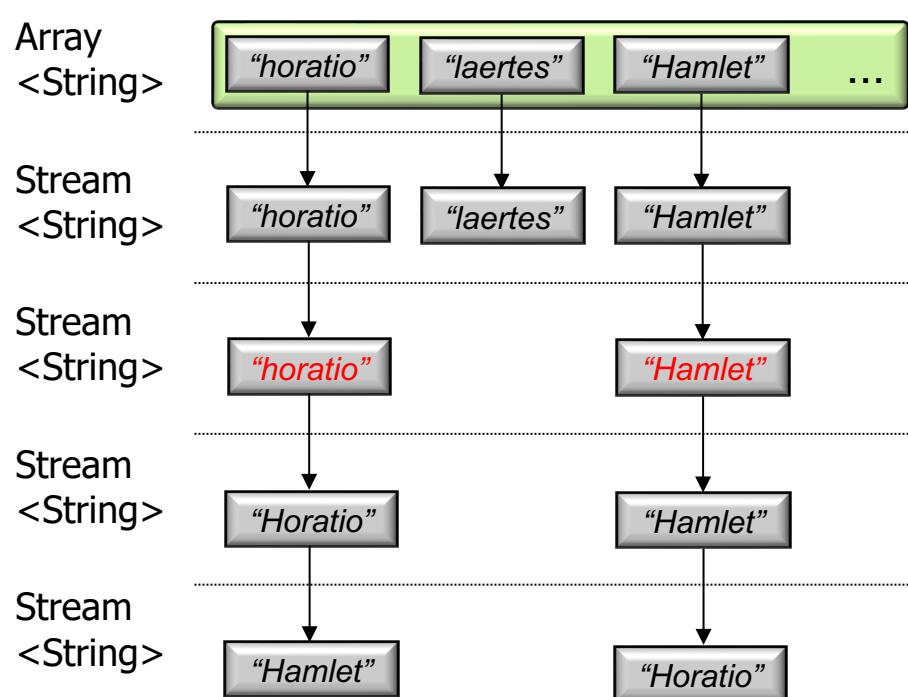
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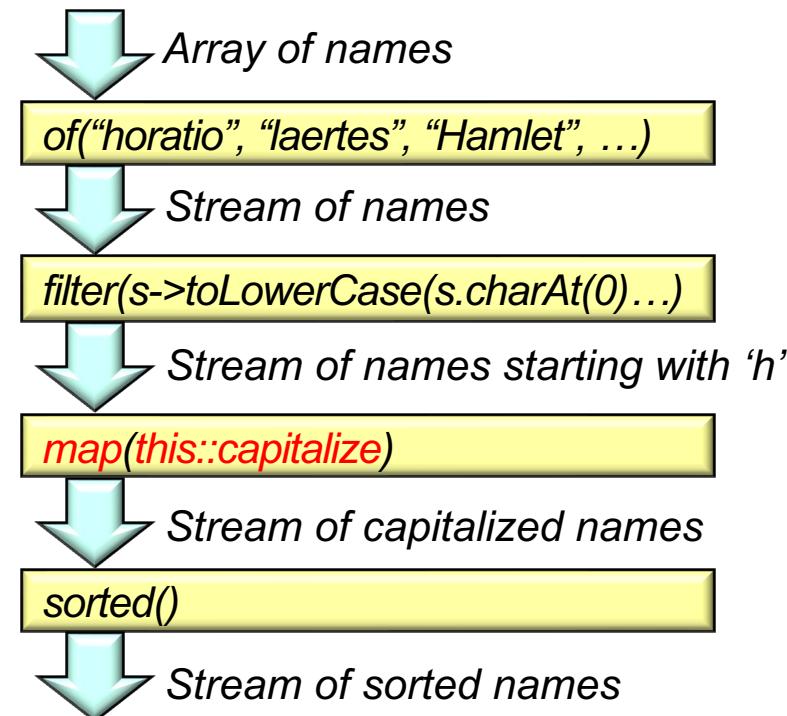
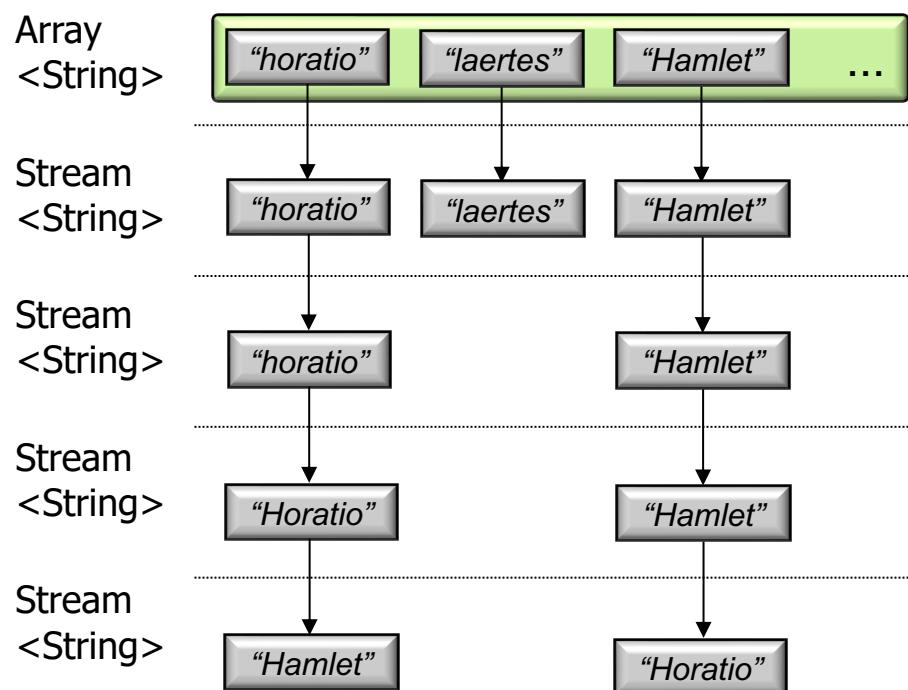
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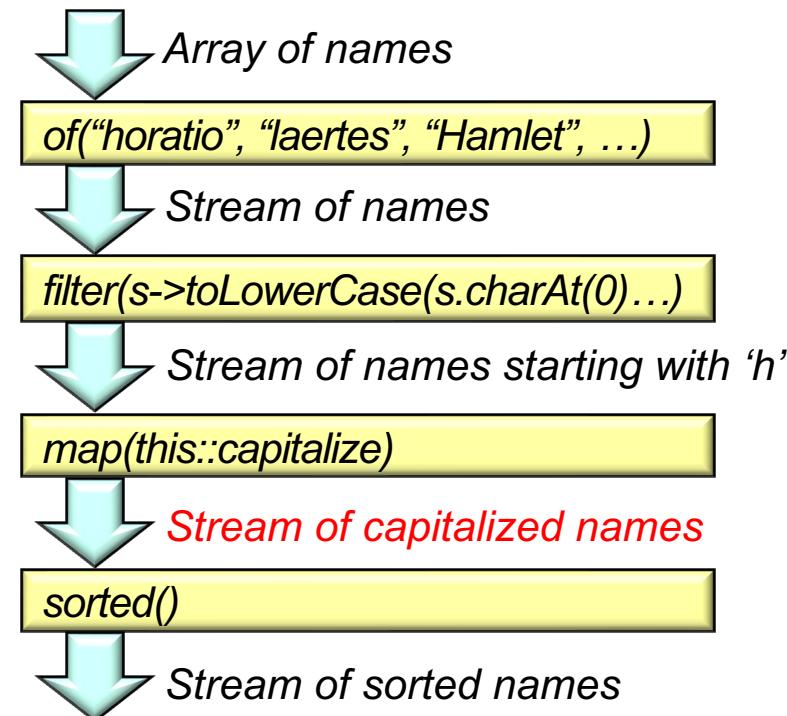
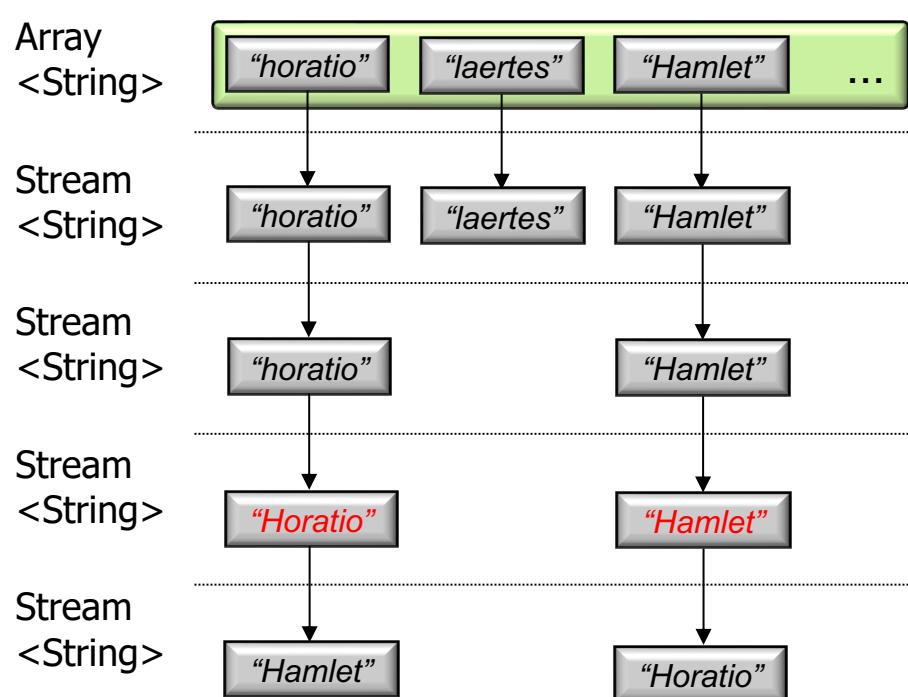
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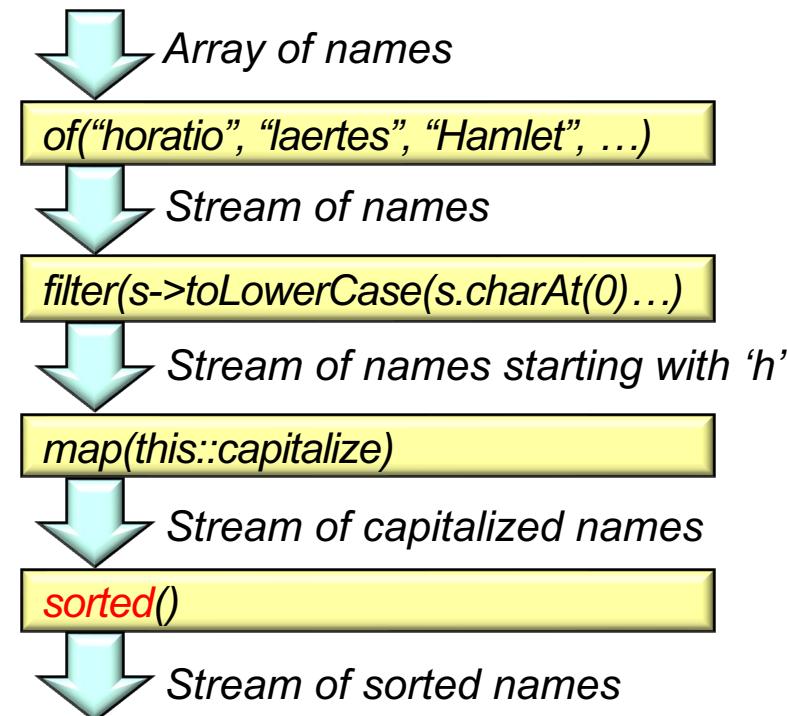
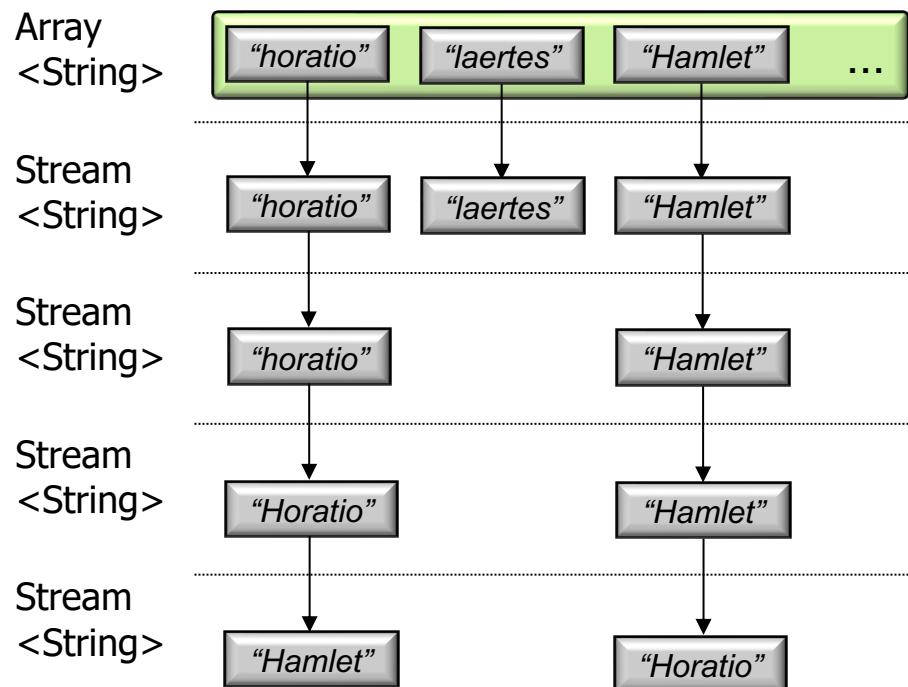
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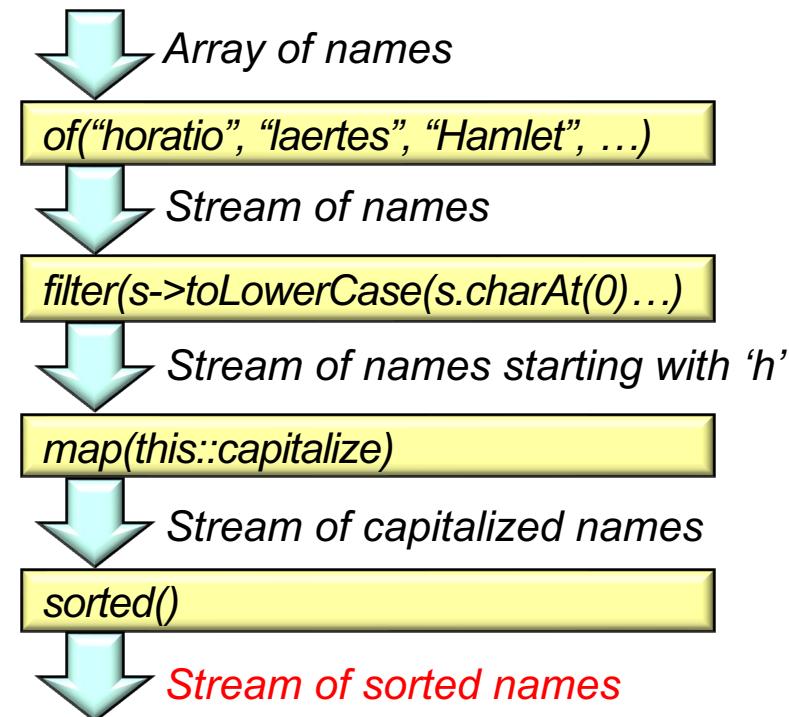
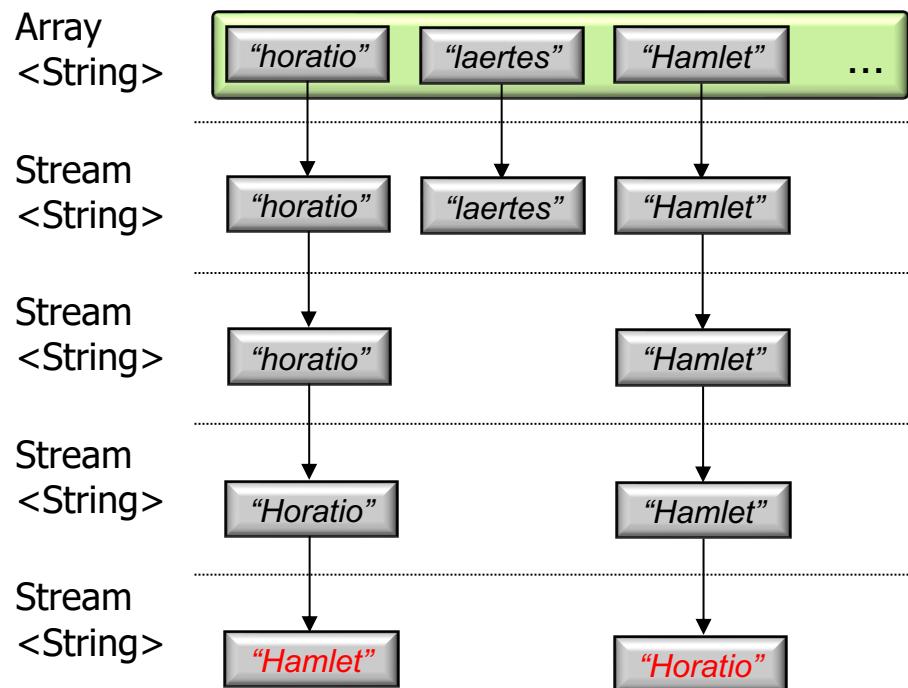
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End of Visualizing Java Streams in Action