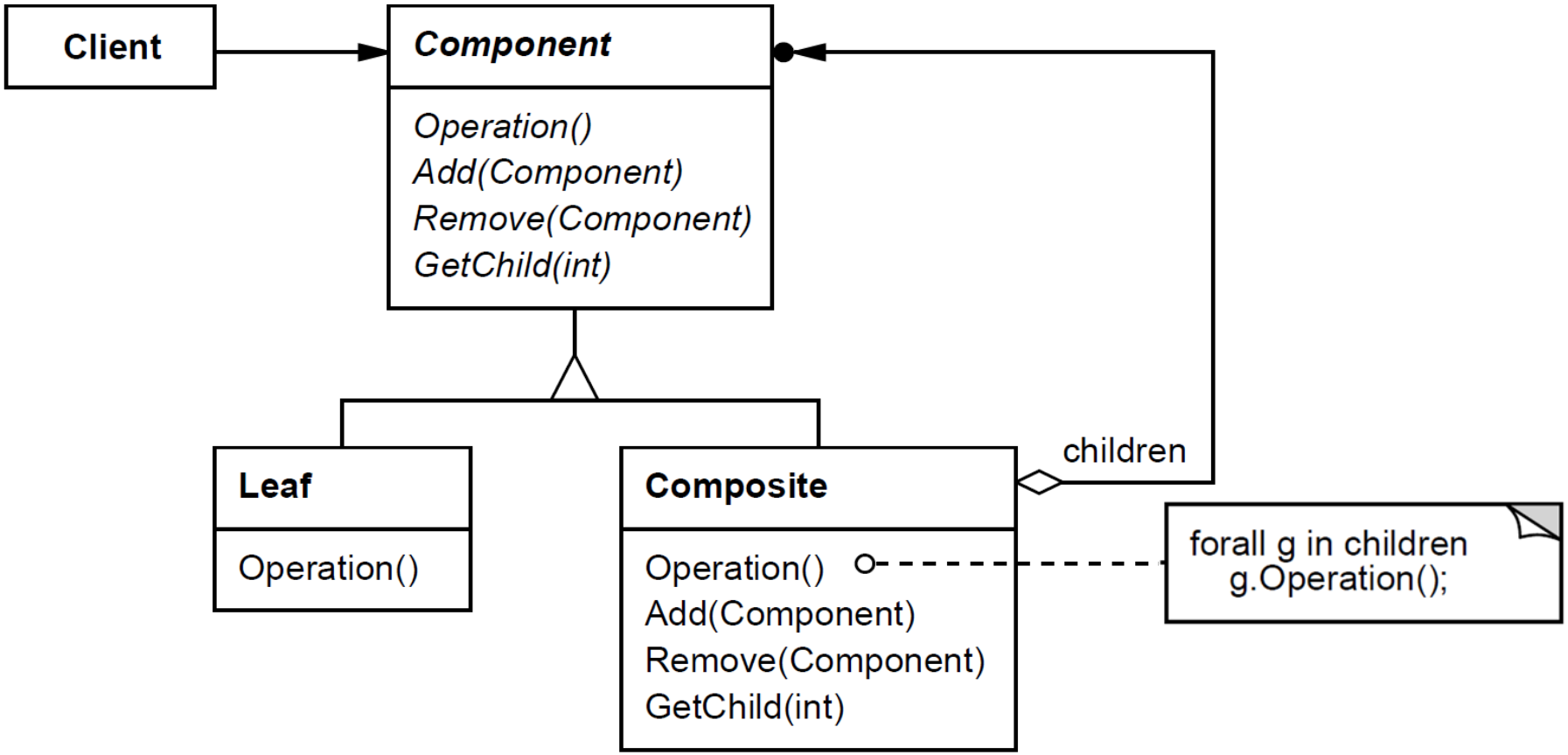
The Composite Pattern

Structure & Functionality

Douglas C. Schmidt

Learning Objectives in This Lesson

- Recognize how the *Composite* pattern can be applied to make the expression tree more uniform & extensible.
- Understand the structure & functionality of the *Composite* pattern.



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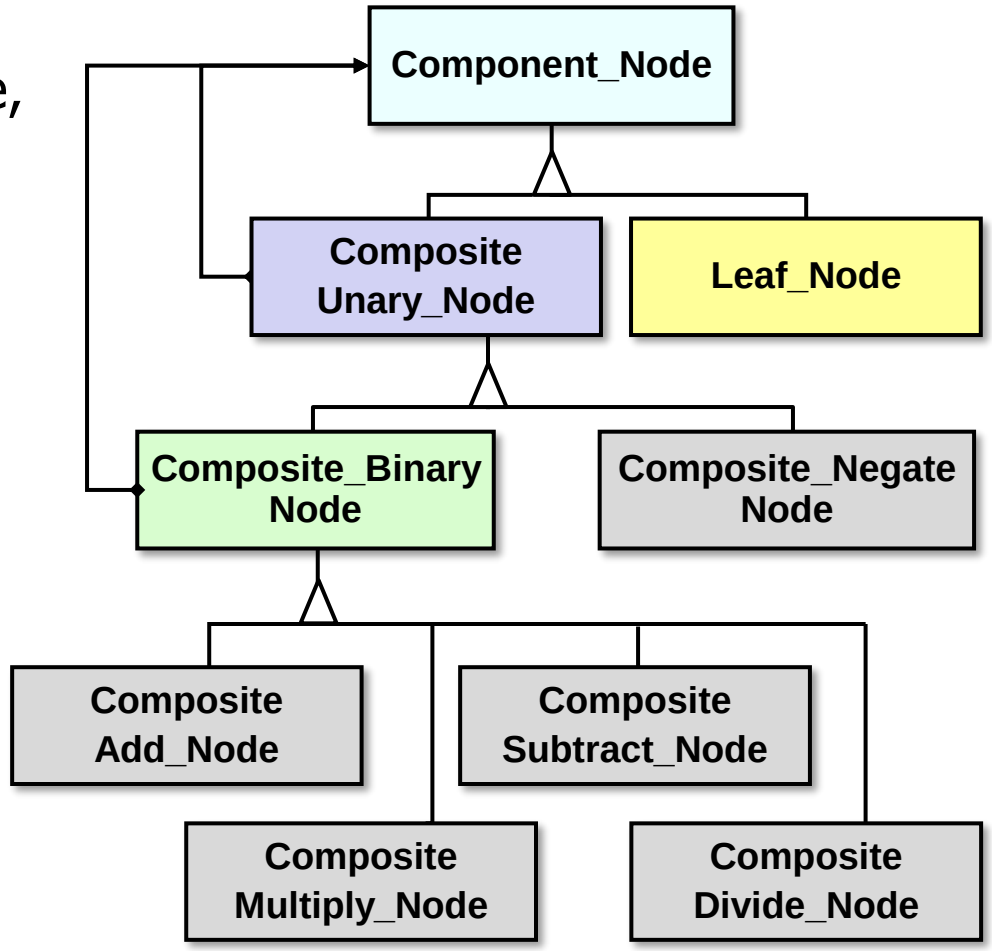
Structure & Functionality of the Composite Pattern

Composite GoF Object Structural

Intent

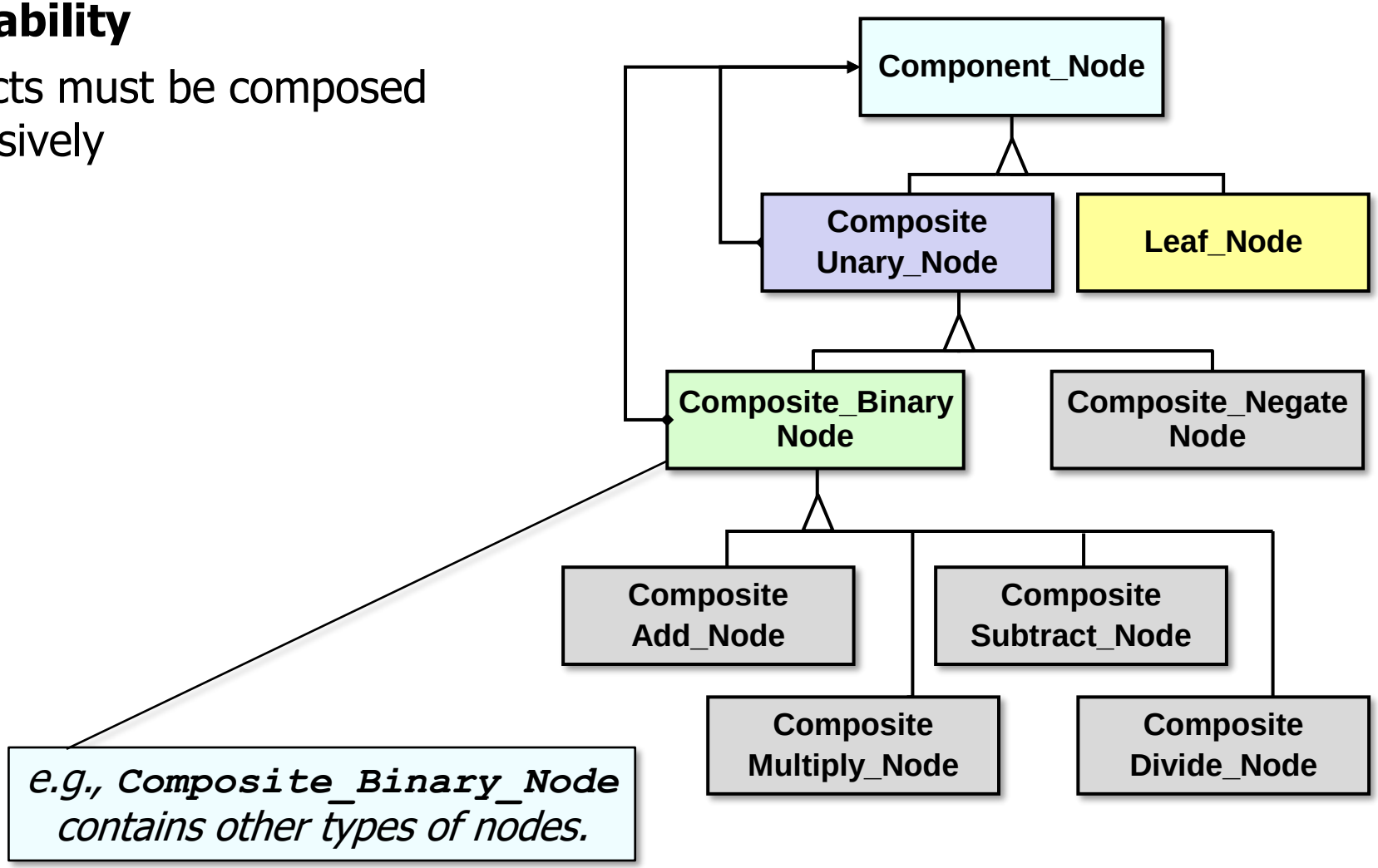
- Treat individual objects & multiple, recursively-composed objects uniformly



See en.wikipedia.org/wiki/Composite_pattern

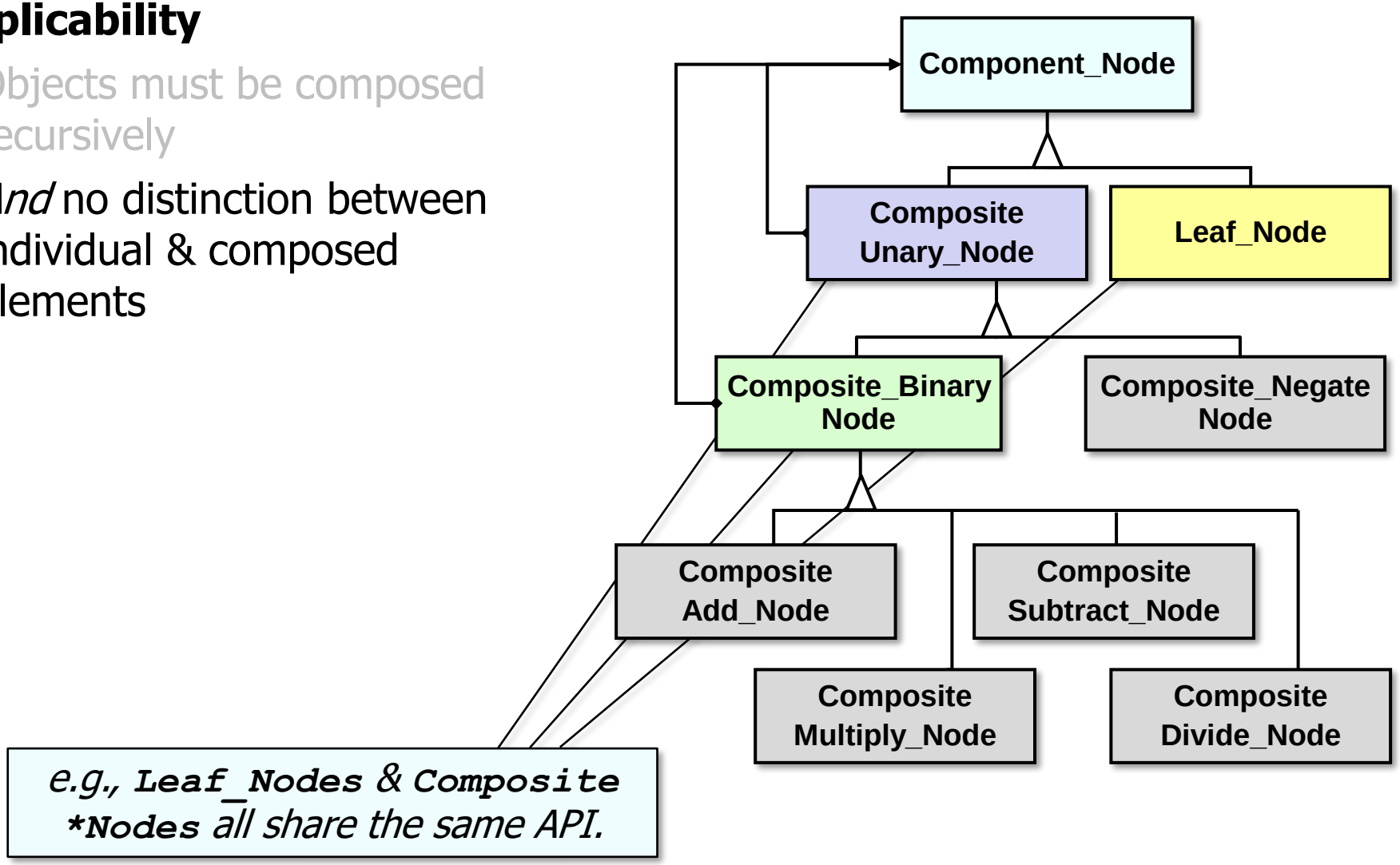
Applicability

- Objects must be composed recursively



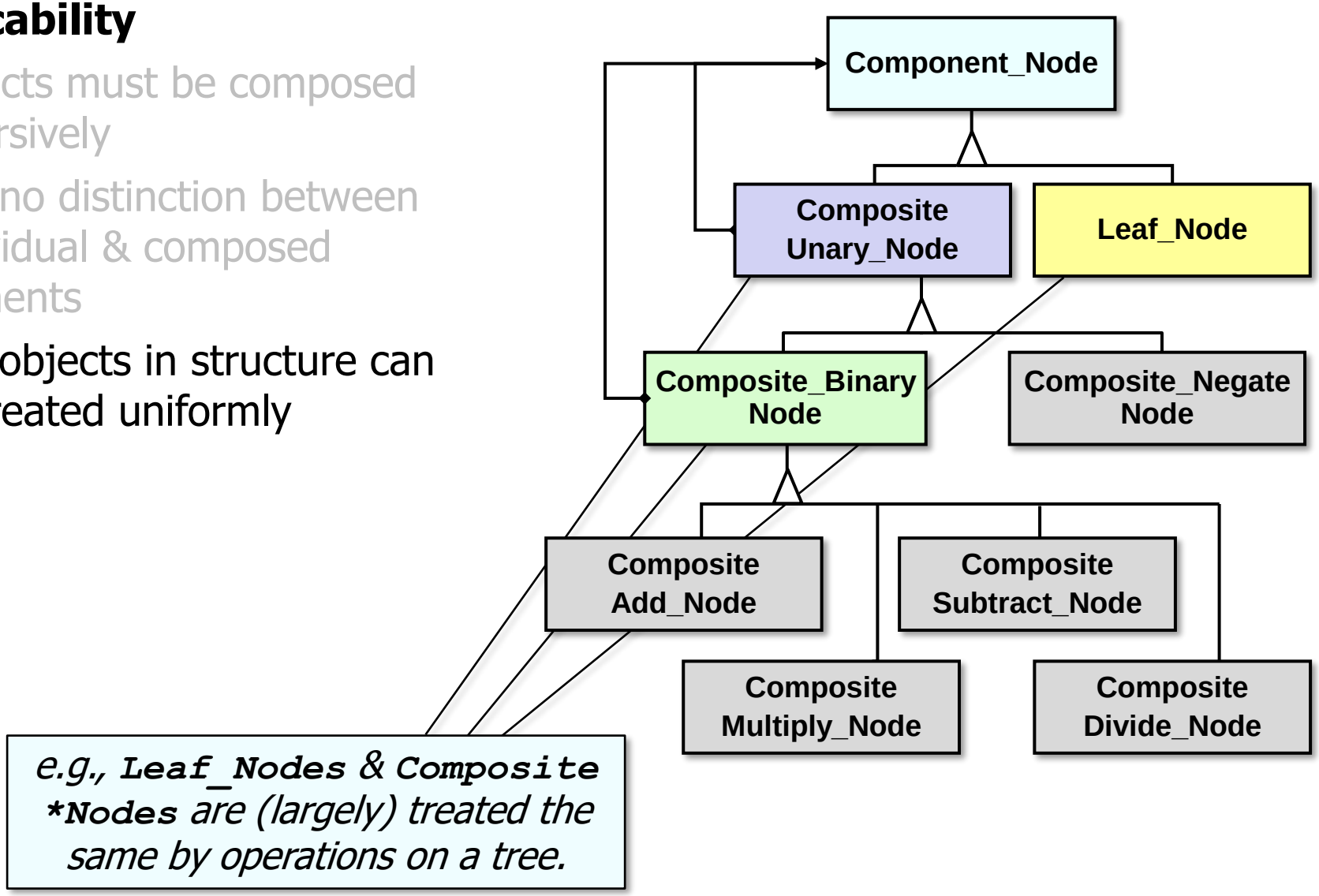
Applicability

- Objects must be composed recursively
- *And* no distinction between individual & composed elements

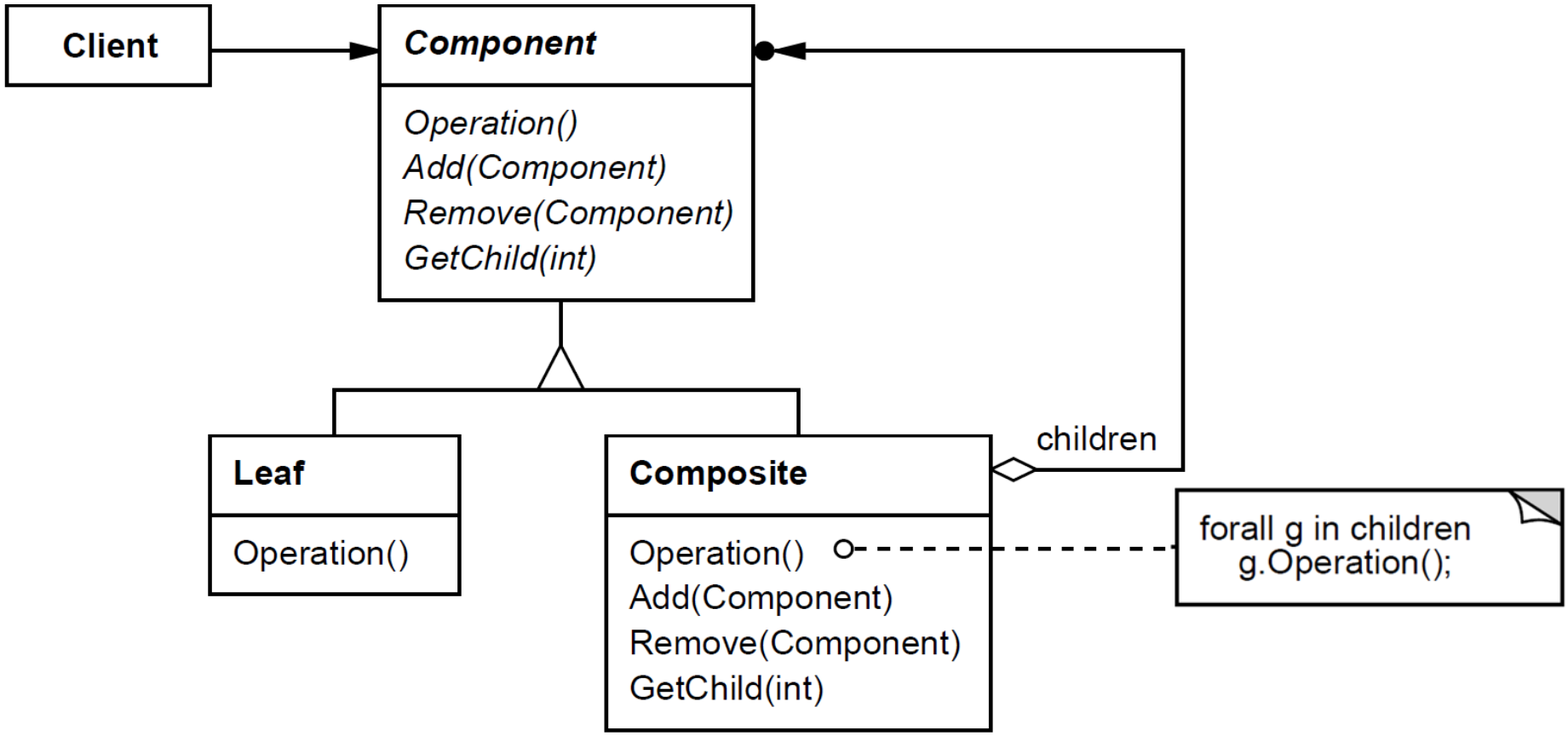


Applicability

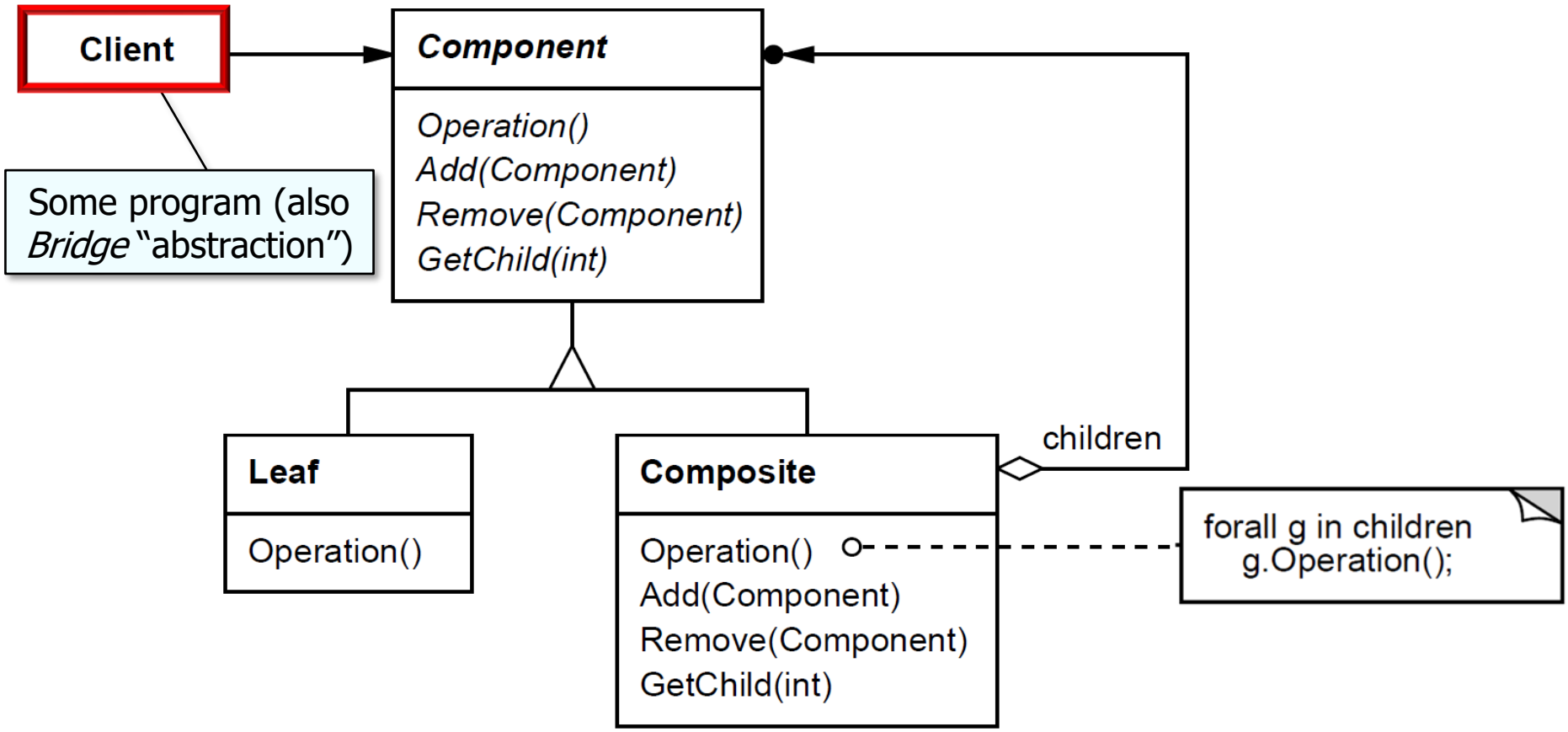
- Objects must be composed recursively
- *And* no distinction between individual & composed elements
- *And* objects in structure can be treated uniformly



Structure & participants

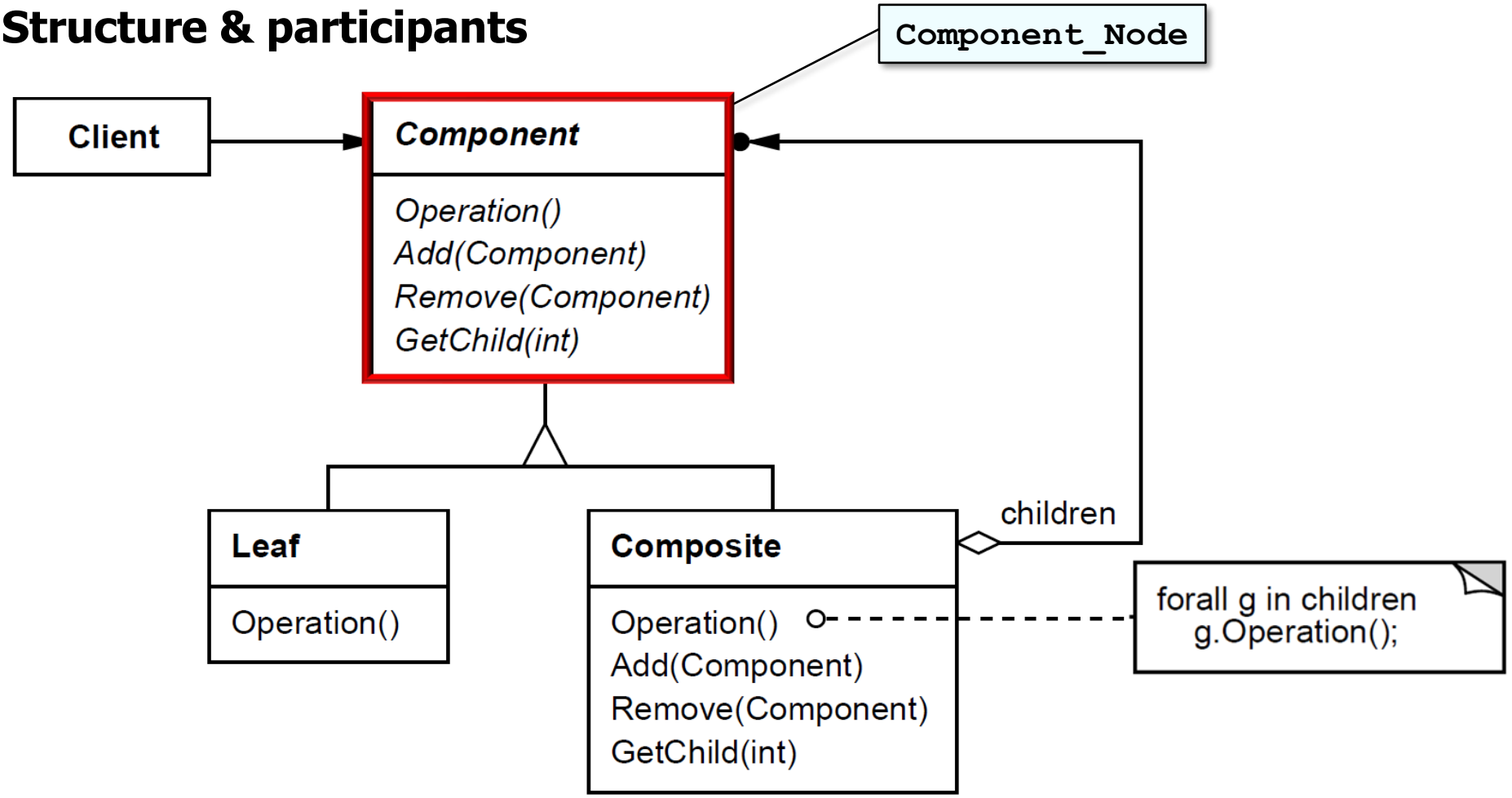


Structure & participants

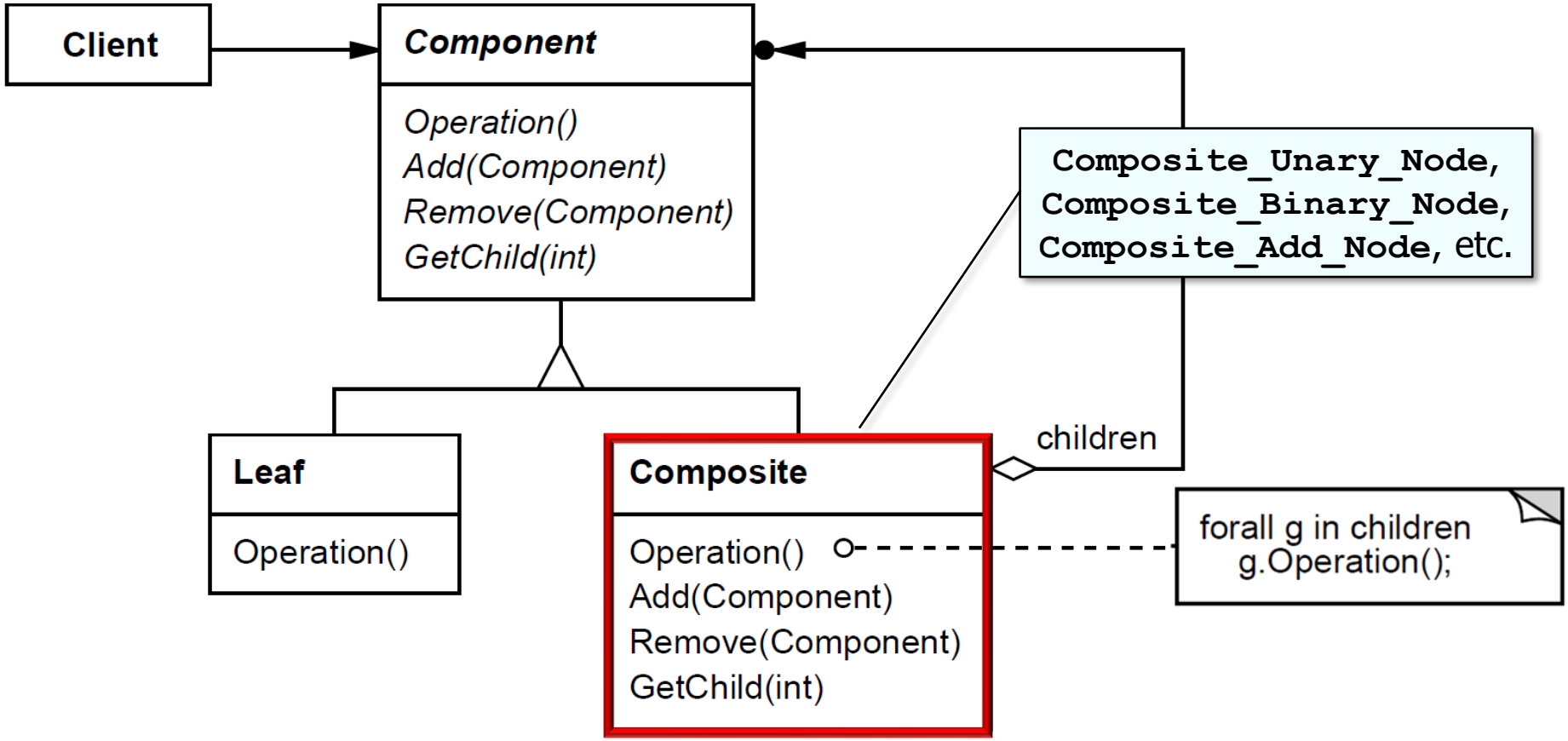


See upcoming lessons on the *Bridge* pattern.

Structure & participants



Structure & participants



Structure & participants