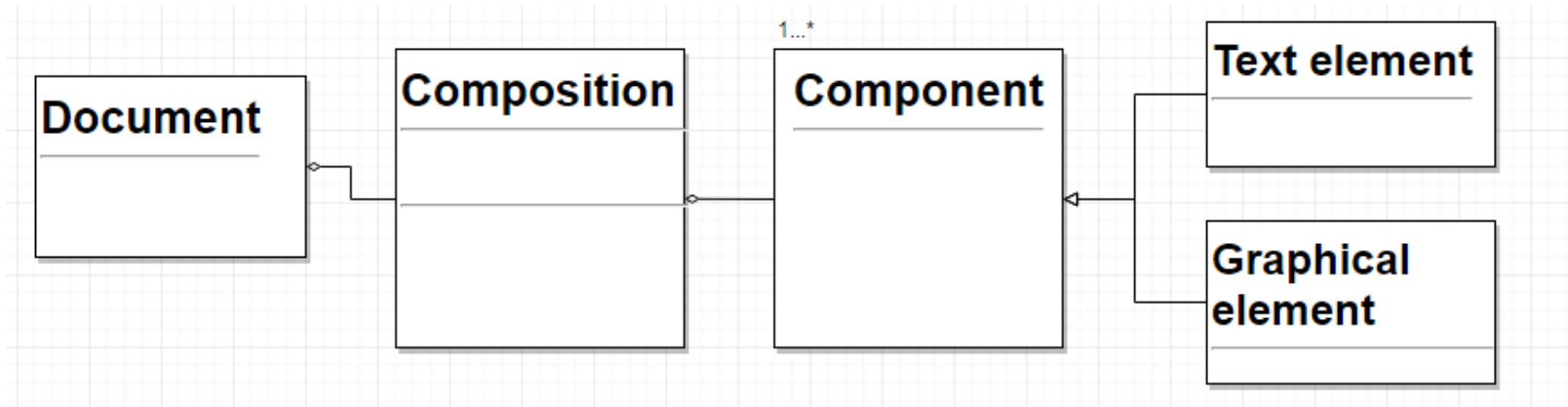


# Composition      Statements

- \* The Composition class maintains a collection of Component instances, which represent text and graphical elements in a document.
- \* A composition arranges component objects into lines using a line-breaking strategy.
- \* Each component has an associated natural size, stretchability, and shrinkability.
- \* The stretchability defines how much the component can grow beyond its natural size; shrinkability is how much it can shrink.
- \* When a new layout is required, the composition calls its compose method to determine where to place line-breaks.
- \* There are 3 different algorithms for breaking lines:
  - \* Simple Composition: A simple strategy that determines line breaks one at a time.
  - \* Tex Composition: This strategy tries to optimize line breaks globally, that is, one paragraph at a time.
  - \* Array Composition: A strategy that selects breaks so that each row has a fixed number of items. It's useful for breaking a collection of icons into rows, for example.

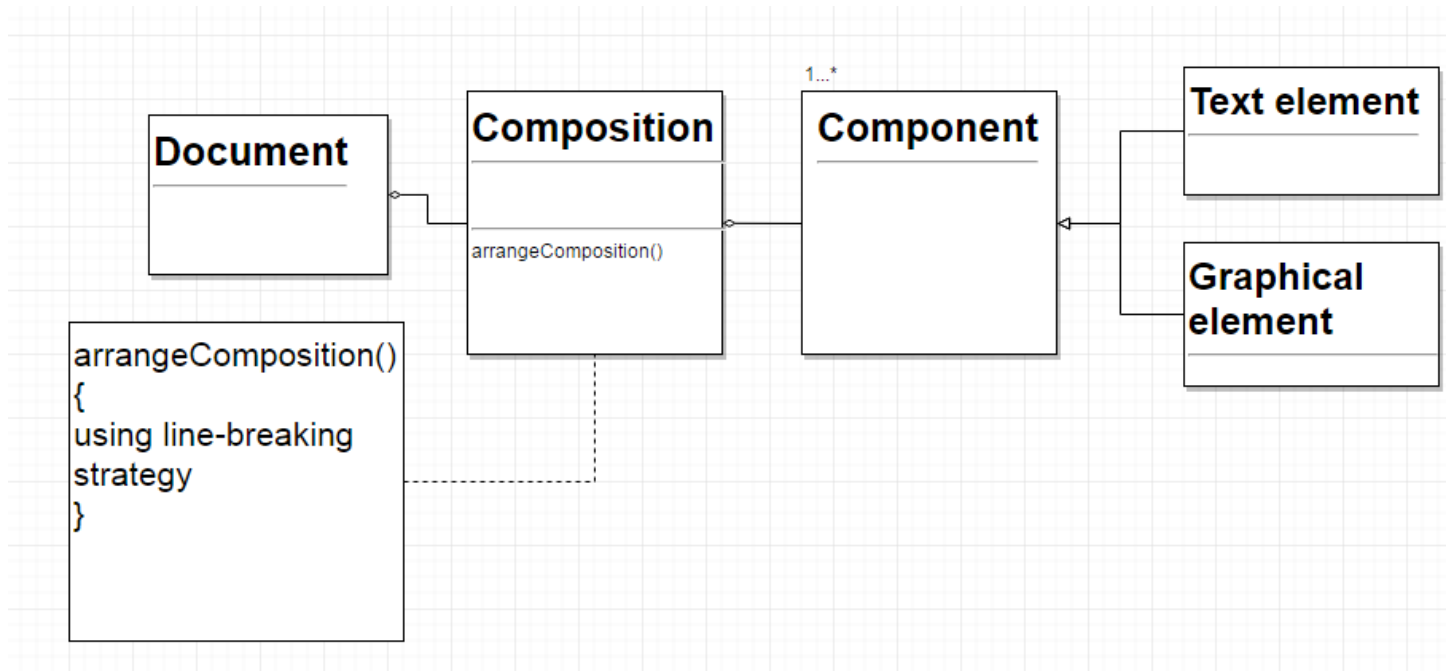
# Composition<sub>1</sub>

The Composition class maintains a collection of Component instances, which represent text and graphical elements in a document.



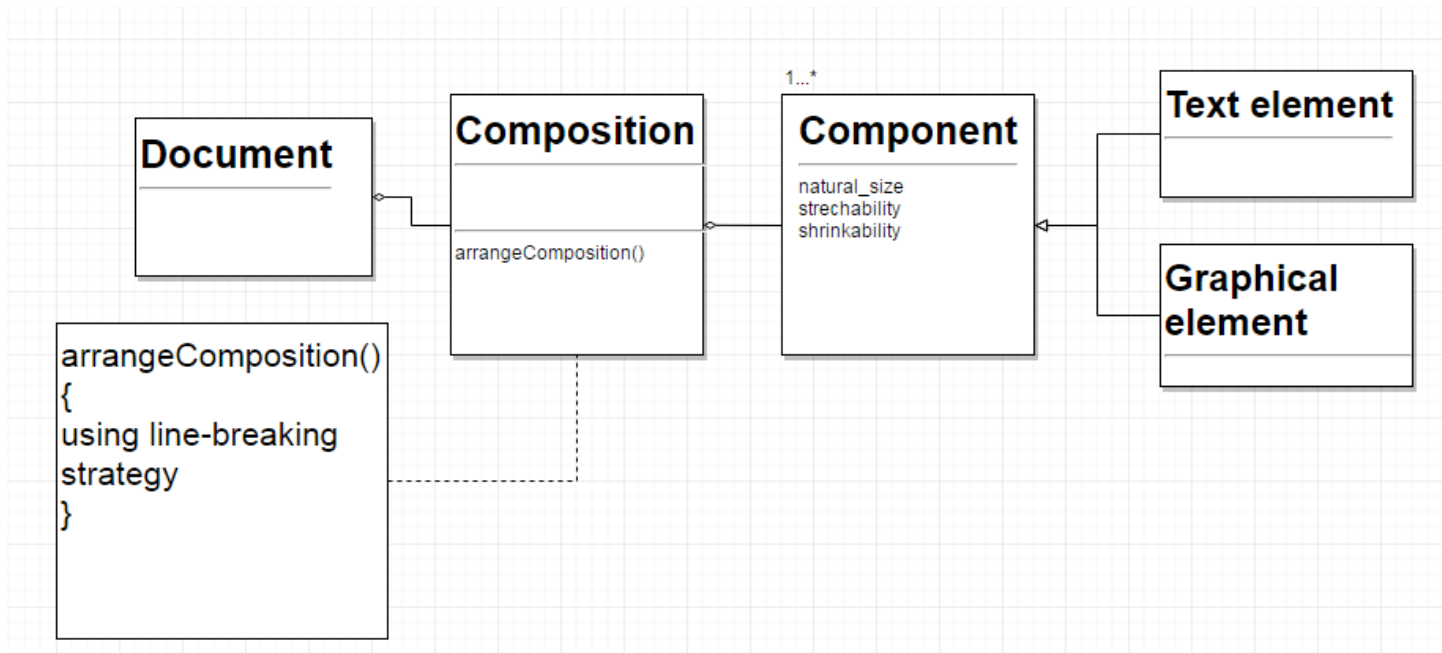
# Composition<sub>2</sub>

A composition arranges component objects into lines using a line-breaking strategy.



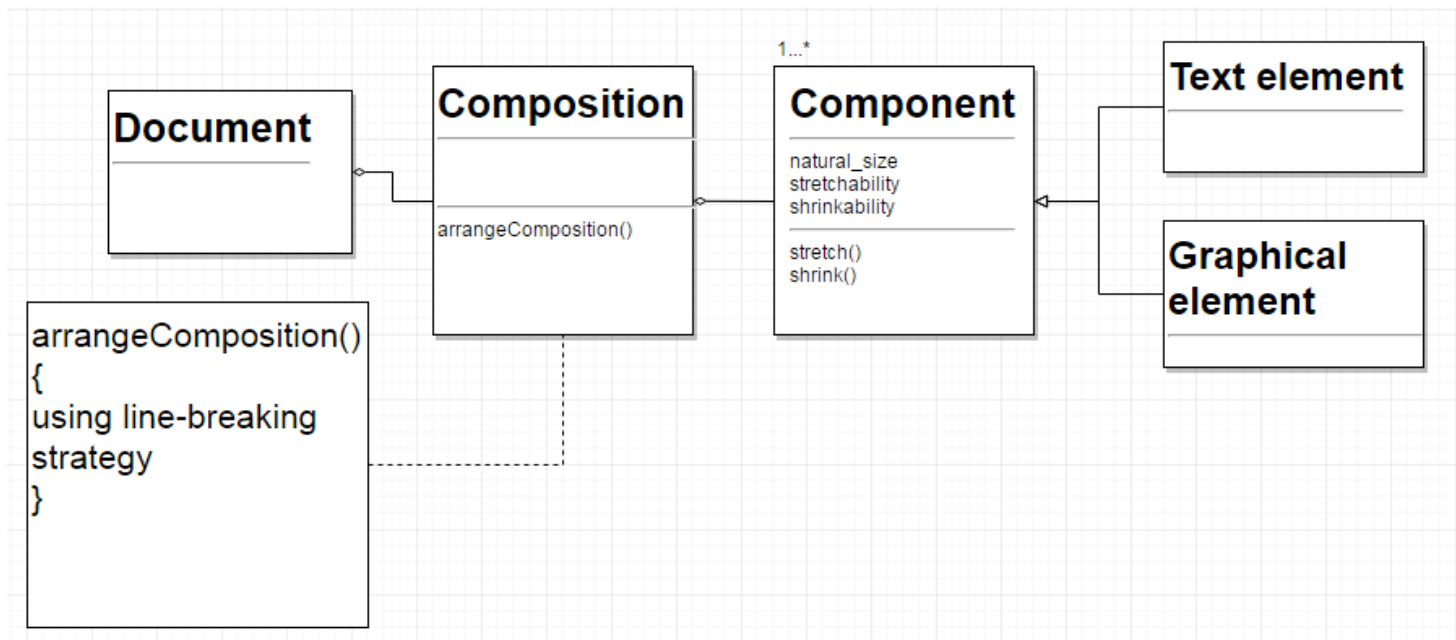
# Composition<sub>3</sub>

Each component has an associated natural size, stretchability, and shrinkability.



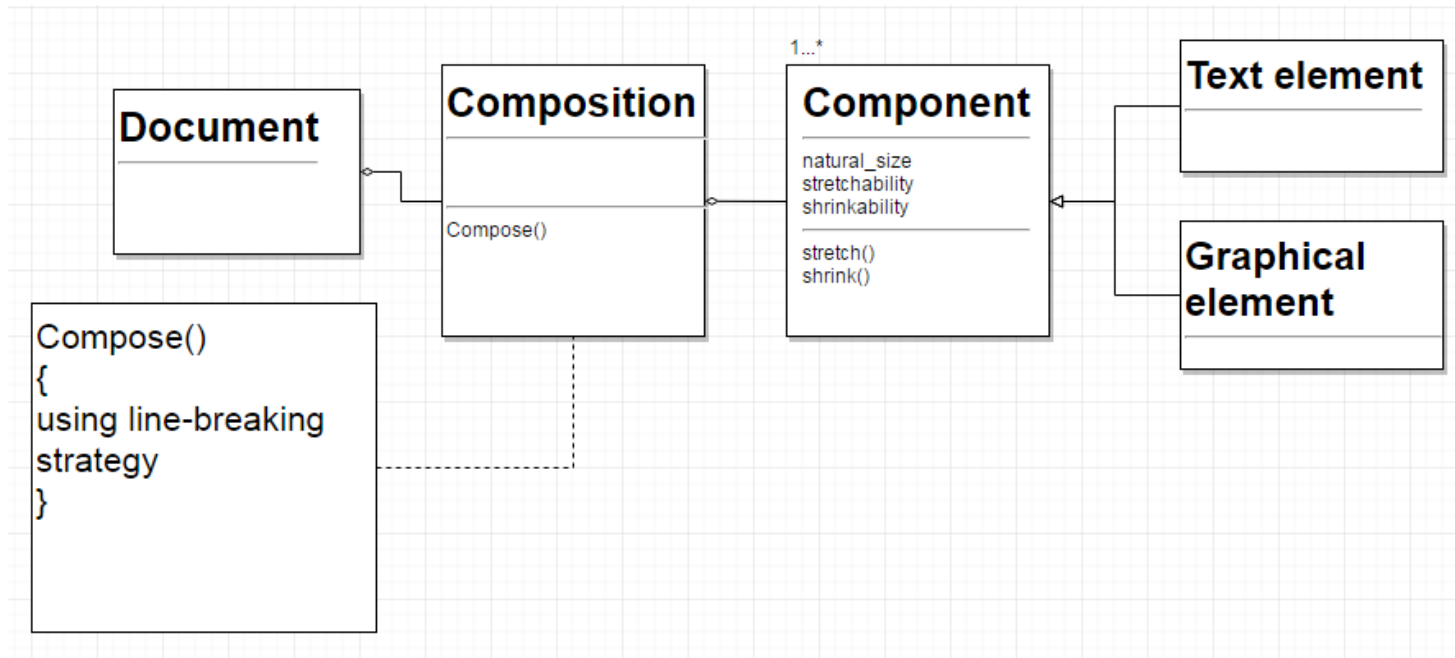
# Composition<sub>4</sub>

The stretchability defines how much the component can grow beyond its natural size; shrinkability is how much it can shrink.



# Composition<sub>5</sub>

When a new layout is required, the composition calls its compose method to determine where to place line-breaks.



# Composition<sub>6</sub>

There are 3 different algorithms for breaking lines:

- \* Simple Composition: A simple strategy that determines line breaks one at a time.
- \* Tex Composition: This strategy tries to optimize line breaks globally, that is, one paragraph at a time.
- \* Array Composition: A strategy that selects breaks so that each row has a fixed number of items. It's useful for breaking a collection of icons into rows, for example.

# Composition

# Final Diagram

