The Unified Modeling Language

When creating a diagram using the Unified Modeling Language (UML), there are two views that can be expressed. The first is the contents and components of an individual class itself, the internal view of the class. The second is the view reflecting relationships between classes, the external view of the class. Both parts are necessary for us to understand the internal structure and external relationships related to a class. Often, the two views will be shown separately, making it easier to focus on one or the other. In addition, this makes diagram creation simpler.

The External Class View

Here we define the components which represent the external class view.

Symbolic Structure	Corresponding Definition
Class	A rectangular block containing only the class name is used to represent the external class view without the internal view.
_____	A solid line connecting two classes shows that a relationship exists between the two classes. A verb phrase and/or other notational symbols are added to the line to further specify the exact relationship.
#, *, 1…10	A number, range, or asterisk placed along the line and next to a class is referred to as **multiplicity**. The number or range representing a specific value or interval of possible object connections. The asterisk represents any amount. The multiple always matches to the class listed nearest.
Verb Phrase ▶	The directional arrow and a verb phrase identify the object **association**. An arrow pointing to the right will read from left to right (the direction of the arrow).
Verb Phrase ◀	The directional arrow and a verb phrase identify the object **association**. An arrow pointing to the left will read from right to left (the direction of the arrow).
◆	The filled diamond represents **aggregation composition**, the exclusive ownership of one object by another. The diamond is placed next to the owning classification.
◇	The empty diamond represents only **aggregation**, the nonexclusive ownership of one object by another. The diamond is placed next to the owning classification.
——▷	A directed solid line shows **strong inheritance**. The arrow points from the subclass to the superclass.
- - - - - - - - - - ▷	A directed dashed line shows **weak inheritance**. The arrow points from the subclass to the interface.