OMG: Unified Modeling LanguageTitle (UML)

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Table 1: Data sheet for Unified Modeling Language (UML)

Title	Unified Modeling Language
Acronym	UML
Version	2.5.1
OMG Document Number	formal/2017-12-05
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About Specification	https://www.omg.org/spec/UML/2.5.1/About-UML/
Document	https://www.omg.org/spec/UML/2.5.1/PDF

> **Note**: The following is an excerpt from the actual document. It is provided here as a convenience and is not authoritative. Refer to the original document as the authoritative reference.

Scope

This specification defines the Unified Modeling Language (UML), revision 2. The objective of UML is to provide system architects, software engineers, and software developers with tools for analysis, design, and implementation of software-based systems as well as for modeling business and similar processes.

The initial versions of UML (UML 1) originated with three leading object-oriented methods (Booch, OMT, and OOSE), and incorporated a number of best practices from modeling language design, object-oriented programming, and architectural description languages. Relative to UML 1, this revision of UML has been enhanced with significantly more precise definitions of its abstract syntax rules and semantics, a more modular language structure, and a greatly improved capability for modeling large-scale systems.

One of the primary goals of UML is to advance the state of the industry by enabling object visual modeling tool interoperability. However, to enable meaningful exchange of model information between tools, agreement on semantics and syntax is required. UML meets the following requirements:

- A formal definition of a common MOF-based metamodel that specifies the abstract syntax of the UML. The abstract syntax defines the set of UML modeling concepts, their attributes and their relationships, as well as the rules for combining these concepts to construct partial or complete UML models.
- A detailed explanation of the semantics of each UML modeling concept. The semantics define, in a technology-independent manner, how the UML concepts are to be realized by computers.
- A specification of the human-readable notation elements for representing the individual UML modeling concepts as well as rules for combining them into a variety of different diagram types corresponding to different aspects of modeled systems.