Everything on Alloy Introduction

Formal specification is a software development technique, also known as formal methods. They are precise and unambiguous since they use mathematical and logical notations

Definition : Formal specification means using a formal notation to create an abstract model o a system and describe its required properties. It is costly and time consuming, often used in critical software

Formal specification provides early detection and correction of errors during software development

Advantages

Precision	Formula unambiquous
Conciseness	Formulas much more compact
Abstraction	Deal with large complex systems by hidding details and focusing on essentials
Language Independence	Mathematical languages not tied to any particular programming language
Allows Logical Analysis	Automated analysis of the logical properties, specification via tools

Alloy is used to build an abstract description of a system and explore its properties

Alloy specifications are not executable, they describe what the system does but not how it does it. Alloy is a model-based notation based on mathematical concepts to represent a systems state and behaviour

Alloy is a language and a tool. It’s flexible and provides abstraction. It is not a programming language