



ENOLA

Automation Using Macros & Scripting in MagicDraw

October 2024

About US

LEAVE THE PAST IN THE PAST

IT'S TIME TO EVOLVE, DIGITALLY

WE ARE A TRAINING, COACHING, AND CONSULTING FIRM DEDICATED TO THE RAPID EVOLUTION OF OUR CLIENTS WITHIN THE DIGITAL UNIVERSE. OUR SERVICES ARE DIRECTED TOWARDS:

- DIGITAL ENGINEERING/TRANSFORMATION
- MODEL BASED SYSTEMS ENGINEERING
- ENTERPRISE ARCHITECTURE
- SOFTWARE ARCHITECTURE
- DATABASE ARCHITECTURE
- ONTOLOGIES
- COLLABORATION SERVER MANAGEMENT

MISSION

Enola WILL train, coach, and mentor your staff to be independently successful as quickly as possible.

Yes, our mission is to work ourselves out of a job!

COURSE DESCRIPTION

Automation Using Macros & Scripting in MagicDraw is a one-day course designed to teach how macros and scripts work inside MagicDraw and what they can be used for.

This course provides a mix of module-based lectures and live, hands-on, instructor led demonstration. Our trainers are all experienced practitioners who understand the balance of theory and practicality.

Prerequisites:

Applying SysML with MagicDraw

Required Software:

No Magic's MagicDraw (version 19.0+) with the SysML plugin or equivalent No Magic or Dassault Systèmes CATIA Magic products.

Take-Aways:

- Foundational understanding of capabilities and best practices for using macros and scripting in MagicDraw

AGENDA

- Course Introduction
 - Overarching Concepts
 - Introduction to the API
 - Common and Useful Classes
 - Where Does Code Go?
 - Examples and Hands-On Exercises
-

COURSE CONTENT



Overarching Concepts

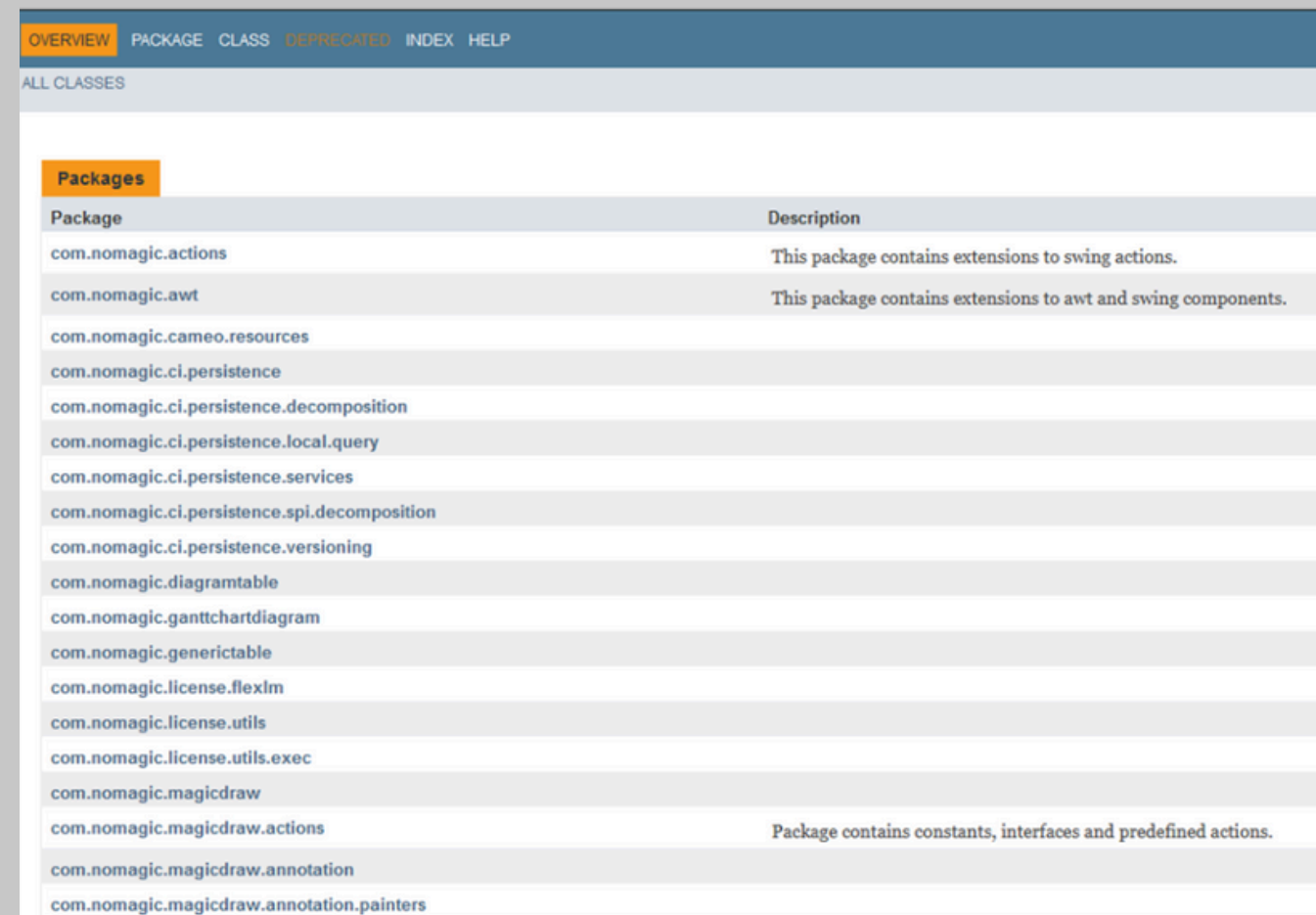
Macros and Scripts are written in a supported scripting language and perform some function within the model. Plugins are written in Java with an IDE and actually change or add functionality to MagicDraw.

This module covers:

- NoMagic vs CATIA Magic Branding
- Plugin vs Macro vs Script
- Supported Languages
- Using an IDE for Development
- Opaque Actions and Behaviors
- Structured Expressions



Introduction TO THE API



The screenshot shows a Java API documentation page with a navigation bar at the top containing links for OVERVIEW, PACKAGE, CLASS, DEPRECATED, INDEX, and HELP. Below the navigation bar, the text "ALL CLASSES" is visible. A section titled "Packages" is highlighted, containing a table with two columns: "Package" and "Description".

Package	Description
com.nomagic.actions	This package contains extensions to swing actions.
com.nomagic.awt	This package contains extensions to awt and swing components.
com.nomagic.cameo.resources	
com.nomagic.ci.persistence	
com.nomagic.ci.persistence.decomposition	
com.nomagic.ci.persistence.local.query	
com.nomagic.ci.persistence.services	
com.nomagic.ci.persistence.spi.decomposition	
com.nomagic.ci.persistence.versioning	
com.nomagic.diagramtable	
com.nomagic.ganttchartdiagram	
com.nomagic.generictable	
com.nomagic.license.flexlm	
com.nomagic.license.utils	
com.nomagic.license.utils.exec	
com.nomagic.magicdraw	
com.nomagic.magicdraw.actions	Package contains constants, interfaces and predefined actions.
com.nomagic.magicdraw.annotation	
com.nomagic.magicdraw.annotation.painters	

An Application Programming Interface (API) is a way for two computer applications to communicate with each other via software code.

This module covers:

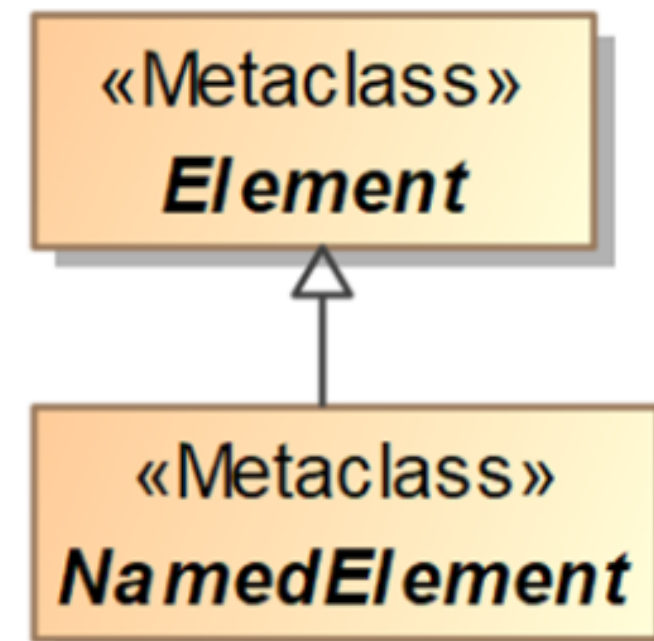
- What is an API?
- Understanding the JavaDocs
- Version Changes
- Imports

Common & Useful Classes

Classes are provided by the API to enable users to more easily create, read, update, and delete objects within the model.

This module covers:

- Element and NamedElement
- Application and Project
- Helpers
- Session Management
- Logging
- Selected Element



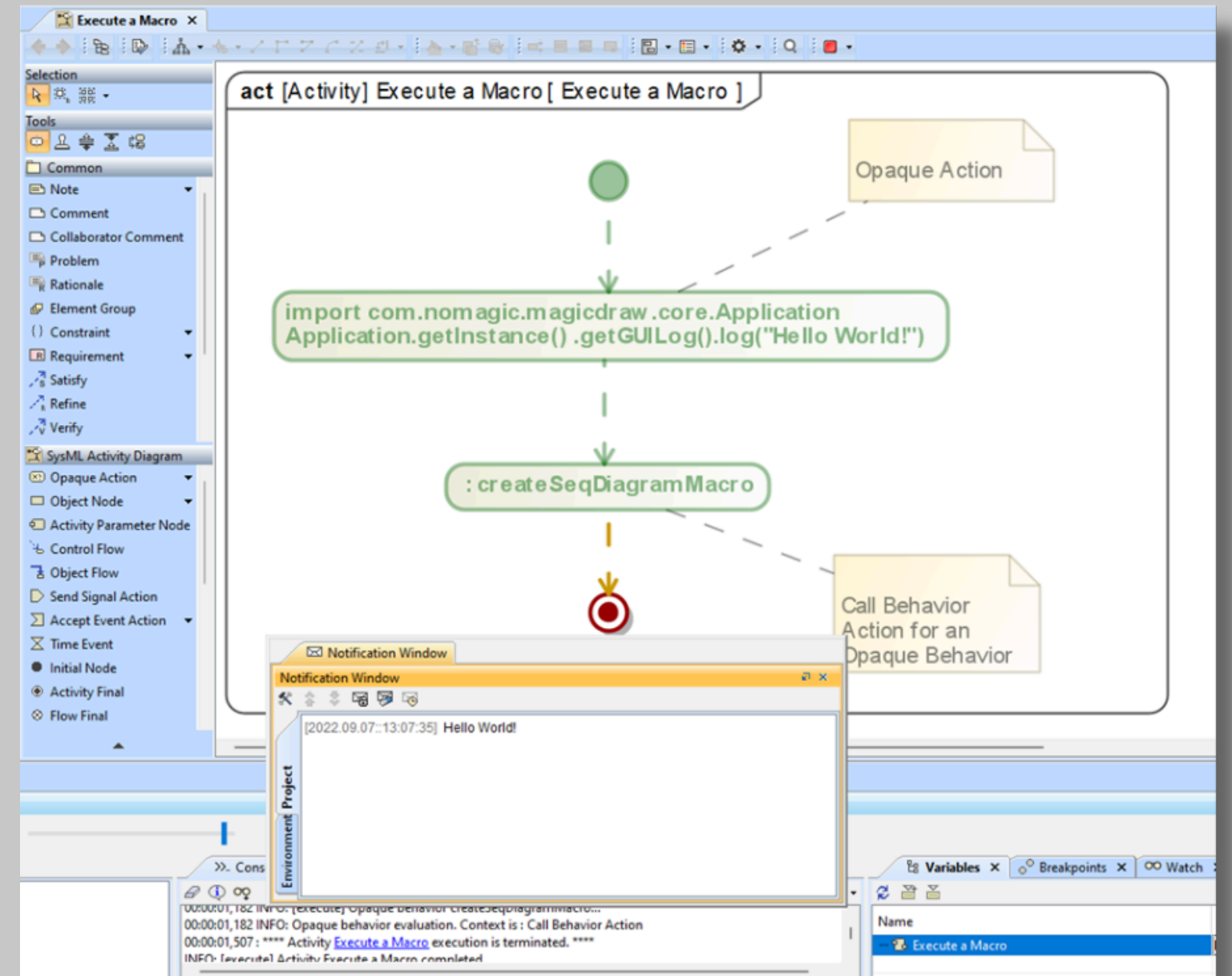
```
if(NamedElement.isInstance(myElement)){
    NamedElement myNamedElement = (NamedElement) myElement
}
```

Where Does Code Go?

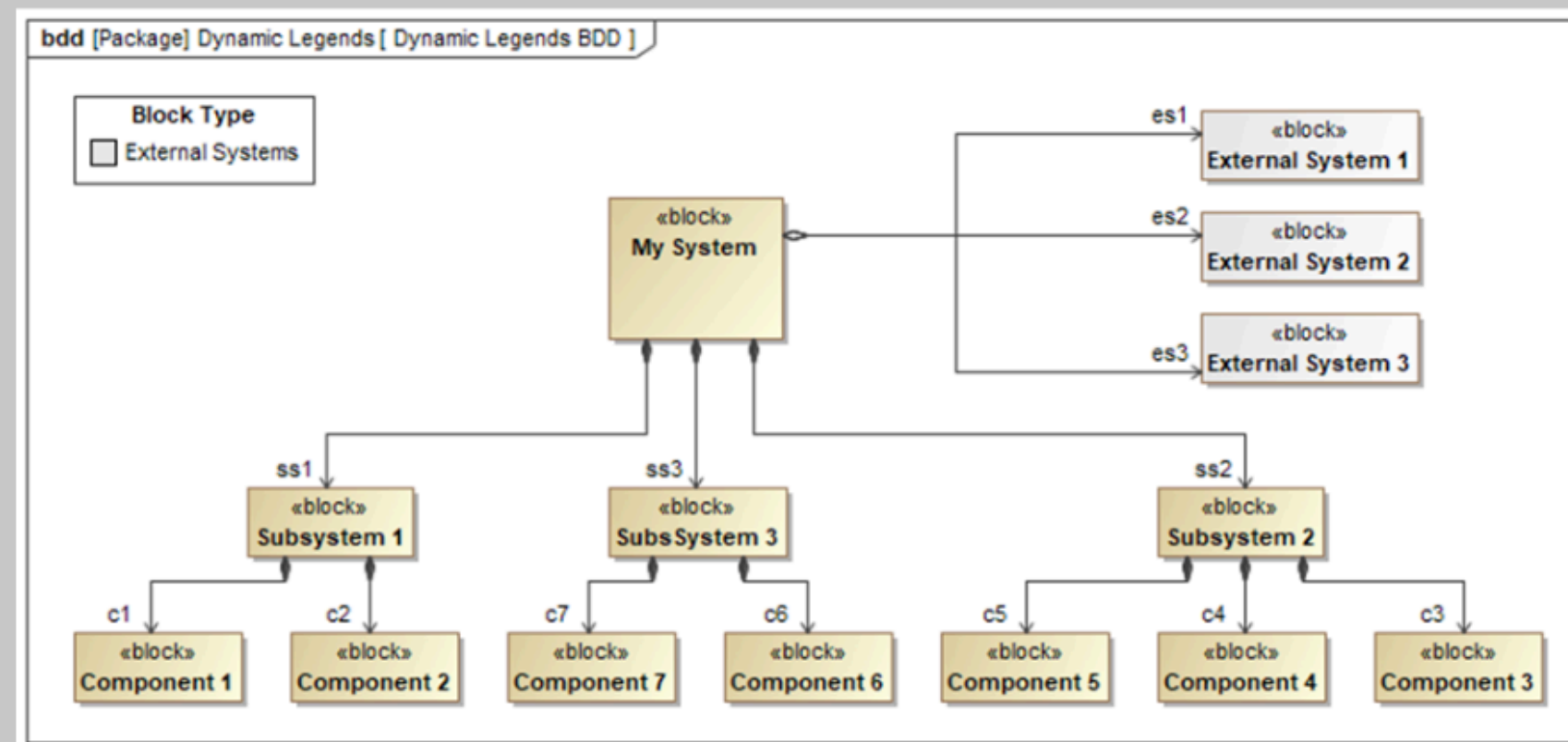
Macros can be saved in multiple ways, and the best option depends on how the macro will be executed.

This Module Covers:

- Saving Macros
 - Locally, in Macro Element, or in Opaque Behavior
- Executing Macros
 - Creation Dialogs
 - Simulating Behaviors
- Using Scripts



Examples & Hands-On EXERCISES



The hands-on labs consist of a live walkthrough of example Macros and Scripts that demonstrate common uses of them that can be built on for actual use in projects

Within this module we cover:

- Scripts
 - Hello World
 - Custom Column
 - Dynamic Legend
 - Smart Package
- Macros
 - Hello World+
 - Find and Print All Blocks
 - Rename Interface Blocks
- Creating Elements



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