Course objectives
The goal of this course is to train you to use the Abaqus GUI Toolkit to customize the Abaqus/CAE interface or build your own applications

- Learn how to build dialogs and issue commands from the GUI
- Learn how to create and modify GUI modules and toolsets
- Learn how to create custom applications

Targeted audience
Users interested in modifying and extending the capabilities of Abaqus by customizing their Abaqus interface

Prerequisites
This seminar assumes prior knowledge of the Python programming language and the Abaqus kernel commands. Thus, students must attend the Introduction to Abaqus Scripting seminar prior to attending this class. Experience with object-oriented programming and GUI toolkits is recommended, but not required.
Day 1

- Lecture 1: GUI Toolkit Introduction
- Lecture 2: Widget Library
  Workshop 1: Creating Widgets
- Lecture 3: Layout Managers
  Workshop 2: Using Layout Managers
- Lecture 4: Dialogs
- Lecture 5: GUI Messaging
  Workshop 3: Message Handling
- Lecture 6: Commands and Keywords (Part 1)
  Workshop 4: Using GUI Commands and Keywords (Part 1)
Day 2

- Lecture 7  Commands and Keywords (Part 2)
- Lecture 8  Modes (Part 1)
- Workshop 5 Using GUI Commands and Keywords (Part 2)
- Lecture 9  Modes (Part 2)
- Workshop 6 Modes Processing
- Workshop 7 Procedures
- Lecture 10 Modules and Toolsets
- Lecture 11 Building Applications
- Workshop 8 Creating an Application
- Workshop 9 Additional Exercises
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Lesson 1: GUI Toolkit Introduction

Lesson content:

- Types of Customization
- Background
- Abaqus GUI Toolkit
- Example
- Documentation and References
- Customization Services
- GUI Application Components
Lesson 2: Widget Library

Lesson content:

- GUI Application Overview
- Introduction
- Widgets
- Workshop Preliminaries
- Workshop 1: Creating Widgets
Lesson 3: Layout Managers

Lesson content:

- GUI Application Overview
- Layout Managers
- Layout Hints
- Example
- Workshop 2: Using Layout Managers

2 hours
Lesson 4: Dialogs

Lesson content:

- GUI Application Overview
- Dialogs
Lesson content:

- Messaging
- Workshop 3: Message Handling
Lesson 6: Commands and Keywords (Part 1)

Lesson content:

- GUI Application Overview
- Data Targets
- GUI Commands and Keywords
- AFX Targets
- Using Keywords and Targets with Widgets
- Workshop 4: Using GUI Commands and Keywords (Part 1)

1.5 hours
Lesson 7: Commands and Keywords (Part 2)

Lesson content:

- GUI Application Overview
- Data Targets
- Using Keywords and Targets with Widgets
Lesson 8: Modes (Part 1)

Lesson content:

- GUI Application Overview
- Modes
- Form Example
- Workshop 5: Using GUI Commands and Keywords (Part 2)
Lesson 9: Modes (Part 2)

Lesson content:

- GUI Application Overview
- Detailed Mode Execution
- Procedure Modes
- Procedure Example
- Workshop 6: Modes Processing
- Workshop 7: Procedures

2.5 hours
Lesson 10: Modules and Toolsets

Lesson content:

- GUI Application Overview
- Modules and Toolsets
Lesson 11: Application Overview

Lesson content:

- GUI Application Overview
- Applications
- The Main Window
- Customizing Abaqus/CAE
- Workshop 8: Creating an Application
- Workshop 9: Additional Exercises

3 hours
Lesson 12: Other Topics

Lesson content:

- Plug-ins
- Custom Data
- Internationalization
- Context Sensitive Help
- Miscellaneous
- Feedback
- Workshop 10: Using customData

1.5 hours