ADVANCED MATLAB GUI

COURSE OUTLINE

1. Advanced GUI topics
   a. The figure’s main menu
   b. Context menus
   c. Toolbars
   d. Passing information around the GUI
   e. Uitools: uitable, uitree, uitab, …
   f. Integrating ActiveX controls
   g. GUIDE vs. m-programming trade-offs
   h. Hidden undocumented properties
   i. Listening to action events
   j. Listening to property-change events

2. Using Java with Matlab GUI
   a. Matlab and Java Swing
   b. Integrating Java controls
   c. Compatibility aspects and trade-offs
   d. Safe programming with Java in Matlab
   e. Java’s EDT
   f. Containers & position – Matlab vs. Java
   g. Monitoring memory & CPU utilization
   h. GUI Look-and-Feel
   i. Using built-in Matlab controls/widgets
   j. Using JIDE
   k. Integrating 3rd-party Java GUI components: charts/graphs/widgets/reports

3. Advanced Matlab-Java GUI
   a. Using HTML
   b. Updating existing Matlab uicontrols
   c. Figure menu customization
   d. Figure toolbar customization
   e. Figure-level customization
   f. Handling Java events as Matlab callbacks
   g. Deployment issues

Summary

A 1 or 2 day advanced Matlab course.
You will learn:
- how to customize the figure’s toolbar and main menu
- how to use HTML for simple rendering
- how to integrate ActiveX and Java components in Matlab GUI
- how to customize your Matlab GUI using Java
- how to create a modern-looking professional GUI in Matlab

In the 2-day course, the topics will be expanded and a sample program will be analysed as a classroom exercise project.

Target audience

Matlab users with a solid experience using Matlab graphics and GUI, who wish to improve their program's quality, appearance and usability; Matlab users who wish to sell professional-looking Matlab-based software GUI.

Familiarity with Matlab GUI is assumed.

4. Where next? – topics and resources for further learning

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