

Advanced MATLAB Application Development

OEM: MathWorks • Duration: 2 Days (16 hrs) • Code: MW-ADVANCED-MATLAB-APPLICATION-DEVELOPME

COURSE MODULES & TOPICS

Day 1 of 2

Organizing Application Data in a Model Class

- Exploring models within the MVC framework
- Storing application data
- Avoiding unnecessary data copies
- Providing access to data for visualization
- Providing mechanisms for control operations on the data
- Communicating changes of state or data

Managing Application Layout

- Navigating the MATLAB graphics hierarchy
- Supporting light and dark app themes for enhanced user experience
- Creating, accessing, and modifying graphics and control objects
- Working with commonly used graphics objects
- Organizing application components using layout management objects
- Using predefined graphics callback functions

Visualizing Application Data with View Classes

- Views within the MVC framework
- The relationship of a view to a model
- The relationship of a view to its graphics objects
- Dynamic updates to views using listeners and callbacks
- The interaction between a model and its views

Day 2 of 2

Design Considerations for View and Controller Components

- Unifying common properties and methods in a component superclass
- Unifying common construction code
- Using abstract methods to create a common interface
- Creating a user-friendly component API

- Managing the lifecycle of component objects

Enabling Interactive User Control with Controller Classes

- Controllers within the MVC framework
- The relationship of a controller to a model
- The relationship of a controller to its graphics objects
- Hybrid components that are both a view and a controller
- The interaction between a model and its controllers

Integrating Components with an Application Launcher

- Creating the main application figure and layout
- Creating and storing the application components
- Designing applications with menus and toolbars

Application Deployment

- Overview of the deployment possibilities
- Creating a wrapper function to be used as the entry point for deployment
- Deploying as a MATLAB app
- Deploying as a standalone desktop app
- Deploying as a web app